A cognitive-behavioral-based workshop intervention for perfectionism

Marcus T LaSota

University of Nevada, Las Vegas

Follow this and additional works at: https://digitalscholarship.unlv.edu/rtds

Repository Citation

https://digitalscholarship.unlv.edu/rtds/2847

This Dissertation is brought to you for free and open access by Digital Scholarship@UNLV. It has been accepted for inclusion in UNLV Retrospective Theses & Dissertations by an authorized administrator of Digital Scholarship@UNLV. For more information, please contact digitalscholarship@unlv.edu.
A COGNITIVE-BEHAVIORAL-BASED WORKSHOP INTERVENTION FOR
PERFECTIONISM

by

Marcus T. LaSota

Bachelor of Arts
Purdue University
1999

Master of Arts
University of Hartford
2001

Master of Arts
University of Nevada, Las Vegas
2006

A dissertation submitted in partial fulfillment
of the requirements for the

Doctor of Philosophy Degree in Psychology
Department of Psychology
College of Liberal Arts

Graduate College
University of Nevada, Las Vegas
November 2008
INFORMATION TO USERS

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleed-through, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.
The Dissertation prepared by

Marcus T. LaSota

Entitled

A Cognitive–Behavioral–Based Workshop Intervention for Perfectionism

is approved in partial fulfillment of the requirements for the degree of

Doctor of Philosophy in Psychology

Examination Committee Chair

Dean of the Graduate College

Examination Committee Member

Examination Committee Member

Graduate College Faculty Representative
ABSTRACT

A Cognitive-Behavioral-Based Workshop Intervention for Perfectionism

by

Marcus T. LaSota

Dr. Christopher Kearney, Examination Committee Chair
Professor of Psychology
University of Nevada, Las Vegas

Perfectionistic thinking, attitudes, beliefs, and behaviors can have negative influences on mental and physical health. Overly rigid and self-critical perfectionistic thinking also complicates treatment for people seeking to alleviate mental health and medical concerns. Several researchers have offered suggestions for treating perfectionism, but no empirical treatment studies with follow-up results have been published. Only DiBartolo, Frost, Dixon, and Almodovar (2001) conducted a brief manipulation of public speaking fears related to concern over mistakes and employed a control group. The current study expanded the research literature with the creation and evaluation of a 3-hour cognitive-behavioral workshop for perfectionism. The results indicate that this workshop was effective in specifically reducing maladaptive perfectionism, while also lowering depression and general distress ratings. Individuals with moderate and high pre-treatment levels of perfectionism maintained treatment gains at 3-week and 3-month follow-ups. Treatment gains in depression and general distress were maintained by women at 3-week and 3-month follow-ups while immediate treatment
effects in men appeared to slightly rebound at 3-months. The workshop thus provided an effective, brief treatment intervention for perfectionism and related psychopathology. The workshop is expected to favorably apply to clinical populations and those referred specifically for maladaptive perfectionism treatment. Adaptations of the workshop might also be beneficial in targeting those at risk for maladaptive perfectionism such as individuals routinely exposed to high pressure performance situations.
TABLE OF CONTENTS

ABSTRACT.......................................................................................................................................... iii

LIST OF APPENDICES................................................................................................................... vii

LIST OF FIGURES .......................................................................................................................... viii

LIST OF TABLES.............................................................................................................................. ix

CHAPTER 1 INTRODUCTION.................................................................................................1

CHAPTER 2 LITERATURE REVIEW ............................................... 6
    Conceptualizations of Perfectionism..................................................................................6
    Measuring Perfectionism.....................................................................................................16
    The Nature of Perfectionism: Etiology and Course......................................................23
    Psychopathological Relationships and Perfectionism .................................................28
    Perfectionism in the Treatment of Various Psychopathological Conditions...........47
    Theories of Perfectionism Treatment...........................................................................57
    Treatment Studies Solely Emphasizing Perfectionism ..............................................68
    Summary..............................................................................................................................76
    Hypotheses..............................................................................................................................78

CHAPTER 3 METHODOLOGY AND RESEARCH DESIGN ........................................79
    Participants..............................................................................................................................79
    Measures .................................................................................................................................80
    Procedures ...............................................................................................................................85
    Data Analyses ........................................................................................................................90

CHAPTER 4 RESULTS .....................................................................................................96
    Demographic Analyses ........................................................................................................96
    Analyses of Specific Hypotheses......................................................................................97
    Workshop Satisfaction and Follow-up Ratings of Usefulness ................................107
    Treatment Integrity .............................................................................................................108

CHAPTER 5 DISCUSSION.................................................................................................109
    Effectiveness of Workshop in Reducing Maladaptive Perfectionism ....................110
    Change in Groups Low, Moderate, and High in Perfectionism.............................112
    Workshop Impact on Depression Ratings.................................................................113
    Workshop Impact on Anxiety Ratings.......................................................................115
    Workshop Impact on General Distress Ratings .......................................................115
LIST OF TABLES

Table 1 Correlations for Individual Measures of Psychopathology at Pre-Treatment, Post-Treatment, and Follow-Up Assessments .....................................................139
Table 2 Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of Maladaptive Perfectionism ..............................................140
Table 3 Means and Standard Deviations for Low, Moderate, and High Perfectionism Groups at Pre-Treatment, Post-Treatment, and Follow-Up Measurements ...............................................................................................................141
Table 4 Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of Depression ...........................................................................142
Table 5 Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of Anxiety ..............................................................................142
Table 6 Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of General Distress ...............................................................143
Table 7 Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of Depression in Men ..........................................................143
Table 8 Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of Depression in Women ....................................................144
Table 9 Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of Anxiety in Men ................................................................144
Table 10 Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of Anxiety in Women .........................................................145
Table 11 Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of General Distress in Men ................................................145
Table 12 Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of General Distress in Women .........................................146
| Table 13 | Correlations between Initial Psychopathology Measures | 146 |
| Table 14 | Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Maladaptive Perfectionism | 147 |
| Table 15 | Repeated Measures ANOVAs for Perfectionism Groups at Pre-Treatment, Post-Treatment, and Follow-Up Measurements | 148 |
| Table 16 | Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Maladaptive Perfectionism in the Low Perfectionism Group | 149 |
| Table 17 | Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Maladaptive Perfectionism in the Moderate Perfectionism Group | 150 |
| Table 18 | Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Maladaptive Perfectionism in the High Perfectionism Group | 151 |
| Table 19 | Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Depression | 152 |
| Table 20 | Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Depression in Men | 153 |
| Table 21 | Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Depression in Women | 154 |
| Table 22 | Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Anxiety | 155 |
| Table 23 | Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of General Distress | 156 |
| Table 24 | Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of General Distress in Men | 157 |
| Table 25 | Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of General Distress in Women | 158 |
| Table 26 | Summary of Regression Analyses between Psychopathology Measures and Maladaptive Perfectionism Change from Pre-Treatment to Post-Treatment | 159 |
Table 27 Summary of Regression Analyses between Psychopathology Measures and Maladaptive Perfectionism Change from Pre-Treatment to 3-Weeks Following Treatment .................................................................160
Table 28 Summary of Regression Analyses between Psychopathology Measures and Maladaptive Perfectionism Change from Pre-Treatment to 3-Months Following Treatment .........................................................161
Table 29 Between-Subjects ANOVA for Psychopathology Groups at Pre- to Post-Treatment Change in Maladaptive Perfectionism ........................................162
Table 30 Between-Subjects ANOVA for Psychopathology Groups at 3-Weeks Change in Pre-Treatment Maladaptive Perfectionism ........................................163
Table 31 Between-Subjects ANOVA for Psychopathology Groups at 3-Months Change in Pre-Treatment Maladaptive Perfectionism ........................................164
Table 32 Means and Standard Deviations for Ratings of Perfectionism Workshop Components ........................................................................................................165
Table 33 Paired Samples T-Tests among Perfectionism Workshop Components ......166
CHAPTER 1

INTRODUCTION

The term "perfectionism" may be described in one of two distinct ways. The first is that perfectionism is a socially acceptable ideal, something to which individuals ought to strive. Individuals are rewarded for jobs well-done and flawless performances (Ferguson & Rodway, 1994). In work and academic situations, perfectionistic striving can help motivate individuals toward success and enhance one’s self-esteem (Rice, Ashby, & Slaney, 1998). This type of perfectionism can thus have many positive rewards. Hamachek (1978) described this aspect of perfectionism as "adaptive."

The second description of perfectionism involves the idea that unrealistic standards of perfection must be met or else one has failed (Flett & Hewitt, 2002). In this case, perceived benefits of striving for excellence are outweighed by great potential for distress. Individuals may be troubled by obsessive thoughts and thus strive to obtain perfect results (Burns, 1980). Those with this negative form of perfectionism have difficulty separating self-worth from performance outcomes (Preusser, Rice, & Ashby, 1994). Casual observers may have difficulty distinguishing these two descriptions of perfectionism because perfectionists often censor behavior and personality in public to appear adaptive and successful.
According to Adler (Ansbacher & Ansbacher, 1956), striving for excellence is adaptive and motivating. When striving is excessive, however, the toll on one’s self-worth and sense of accomplishment can be devastating. Burns (1980) stated that compulsive striving for unreachable goals at the expense of self-worth becomes a self-defeating cycle. A person repeatedly sets unrealistic standards to assess self-worth and, when performance inevitably does not measure up to perfection, internalizes this as personal failure. An individual thus believes that one can improve self-worth if only he obtains perfection on the next performance task. According to Hamachek (1978) three primary aspects separate maladaptive perfectionists from adaptive perfectionists: (1) ability to adjust expectations and goals necessary to satisfactorily complete a task, (2) distress in completion of tasks, and (3) capacity to enjoy results without ruminating over inevitable shortcomings. In addition, motivations of maladaptive perfectionists differ from those with adaptive perfectionism who strive for success. Success-oriented individuals strive to meet goals, using success and achievement as motivating factors, while individuals with maladaptive perfectionism are motivated less by success and more to avoid failure.

Fear of failure has been suggested as a primary explanation for procrastination in perfectionists (Ferguson & Rodway, 1994; Frost, Marten, Lahart, & Rosenblate, 1990). From a diathesis-stress perspective (see Chang, 2000; Chang & Rand, 2000), people with perfectionistic qualities may find that perfectionism only becomes noteworthy when they are in positions that require feedback from others. In contrast, other individuals with perfectionism may have a lower threshold for distress and experience negative effects of perfectionism vis-à-vis school, work, and relationships.
Many researchers suggest that people learn early in life that one way to receive approval from others is to be perfect (Ansbacher & Ansbacher, 1956; Hamachek, 1978; Hollender, 1965; Missildine, 1963; Timpe, 1989). Unfortunately, maintaining perfectionism can lead to aversive emotional and behavioral consequences (Driscoll, 1982; Hamachek, 1978; Hollender, 1965). Perfectionistic tendencies have been associated with depression (Blatt, 1995; Enns & Cox, 1999; Hewitt & Flett, 1991), anxiety disorders (Antony, Purdon, Huta, & Swinson, 1998), eating disorders (Bastiani, Rao, Weltzin, & Kaye, 1995; Shafran & Mansell, 2001), heart disease (Preusser, Rice, & Ashby, 1994), chronic headaches (Kowal & Pritchard, 1990), and stomach ulcers (Pacht, 1984). Several researchers believe that perfectionism contributes to the development and exacerbation of these conditions (Ferguson & Rodway, 1994; Shafran & Mansell, 2001; Timpe, 1989).

Perfectionism is also a clear impediment in the treatment of various conditions such as depression (Blatt, 1995; and colleagues listed below), anxiety (Antony & Swinson, 1998; Lundh & Öst, 2001; Rosser, Issakidis, & Peters, 2003), and eating disorders (Sutandar-Pinnock, Woodside, Carter, Olmstead, & Kaplan, 2003). Blatt and colleagues (Blatt, 1995; Blatt, Quinlan, Pilkonis, & Shea, 1995; Blatt, Zuroff, Bondi, Sanislow, & Pilkonis, 1998; Blatt, Zuroff, Quinlan, & Pilkonis, 1996; Shahar, Blatt, Zuroff, Krupnick, & Sotsky, 2004; Shahar, Blatt, Zuroff, & Pilkonis, 2003; Zuroff et al., 2000) noted that perfectionism interferes with vital aspects of therapy such as building and maintaining effective therapeutic alliances and adhering to medical and psychological treatment regimens. Those with perfectionism may also have difficulty benefiting from cognitive therapy and building supportive social relationships outside of therapy.
Lundh and Öst (2001) reported that perfectionistic traits impeded cognitive-behavioral treatment for social phobia, while Frost, Novara, and Rhéaume (2002) noted that perfectionistic tendencies interfered with exposure and cognitive therapy for obsessive-compulsive disorder. Sutandar-Pinnock and colleagues (2003) found that perfectionistic beliefs persisted in women with anorexia nervosa, even following weight restoration. Similar findings support the contention that perfectionism complicates and interferes with treatment outcome. Several authors (Blatt, 1995; Burns, 1980; DiBartolo et al., 2001; Ellis, 2002) argue that decreasing maladaptive perfectionistic qualities should be routinely addressed in therapy for depression and anxiety.

Few researchers have strategically addressed maladaptive perfectionistic thinking. Only one study (DiBartolo et al., 2001), a brief cognitive-behavioral intervention for perfectionistic fears related to making mistakes during a speech involved controlled treatment. Other researchers outlined specific treatment for individuals with perfectionism but presented only anecdotal evidence. For instance, Moore and Barrow (1986) and Ferguson and Rodway (1994) reported success using cognitive behavioral treatment to reduce perfectionistic thinking. Barrow and Moore (1983), Broday (1989), and Richards and Owen (1993) noted positive responses to primarily cognitive-behavioral group treatment for perfectionism.

The aim of the present study is to demonstrate therapeutic evidence for a brief cognitive-behavioral workshop to reduce problematic aspects of perfectionism. The primary hypothesis of this study is that brief psychoeducation, cognitive restructuring, and coping strategies will reduce problematic perfectionistic thinking. This study is intended to be a starting point from which other, possibly broader, specific treatments for
perfectionism might be developed. Similar workshops for perfectionism, targeting intervention or prevention, can thus be employed as effective, compact, and convenient treatments benefiting individuals with perfectionistic tendencies.
CHAPTER 2

LITERATURE REVIEW

Conceptualizations of Perfectionism

Perfectionism and related attitudes, beliefs, and behaviors have been the subject of much debate and scrutiny for more than a century. Albert Ellis defined perfectionism as "the idea that one should be thoroughly competent, adequate, intelligent, and achieving in all possible respects" (Ellis, 2002, p. 217). Hollender (1965) defined perfectionism as "the practice of demanding of oneself or others a higher quality of performance than is required by the situation" (p. 94). This idea was reflected by Frost and colleagues (1990), who conceptualized perfectionism as setting excessive performance standards and critically evaluating one's behavior. Other theorists suggest that perfectionists demand flawlessness across many, if not all, aspects of their lives (Flett & Hewitt, 2002). Given that the definition of perfectionism has been a point of contention in research, an historical picture of more noteworthy conceptualizations is highlighted. A comprehensive list of terms and theoretical subtypes of perfectionism is presented in Exhibit 1.

Freud (cited by Slade & Owens, 1998) considered perfectionistic striving to be a key feature of neuroticism and the result of an inappropriate progression through the anal stage of psychosexual personality development (Frager & Fadiman, 1998). Adler
Exhibit 1.
Perfectionism Terminology and Measurement Subscales

Adaptive/Healthy/Normal/Positive Perfectionism: Applying high standards as motivation for success that can lead to satisfaction and enhanced self-esteem.

Concern over Mistakes (CM – from FMPS): Excessive negative reaction to making mistakes or equating mistakes as failures.

Discrepancy (from APS-R): Perception of failing to meet one’s high standards.

Doubts about Actions (DA – from FMPS): Frequent wariness that one’s actions have been or will be incorrect.

Maladaptive Evaluative Concerns: Pathological aspects of perfectionism related to distress and comprised by CM, DA, PC, and PE from the FMPS and SPP from the HMPS.

Maladaptive/Neurotic/Pathological Perfectionism: Inflexible standards demanding perfection, motivated by fear of failure, and often resulting in psychological distress.

Order (from APS-R): Preference for organization, neatness, and orderliness.

Organization (O – from FMPS): Overemphasis on order, precision, and organization.

Other-Oriented Perfectionism (OOP – from HMPS): Demanding others meet one’s excessive standards.

Parental Criticism (PC – from FMPS): Disapproval and punishment from parents for less than perfect performance and behavior.

Parental Expectations (PE – from FMPS): High standards perceived as imposed by parents whose approval was believed contingent upon performance.

Perfectionism: Personality trait in which one strives to meet standards that are often unreasonable and inflexible, carrying risks for psychopathology and distress when one critically evaluates self-worth as contingent on flawless performance.

Personal Standards (PS – from FMPS): Setting excessively high and often unreasonable standards for performance.

Positive Achievement Strivings: Adaptive aspects of perfectionism related to an achievement orientation and enhanced self-esteem that are comprised by PS and O from the FMPS and SOP and OOP from the HMPS.

Self-Oriented Perfectionism (SOP – from HMPS): Holding oneself accountable to high standards and motivation to attain perfection.

Socially-Prescribed Perfectionism (SPP – from HMPS): Perception that one must meet externally imposed high standards.

Standards (from APS-R): Striving to reach high standards.

Note: FMPS is the Frost Multidimensional Perfectionism Scale (Frost et al., 1990), HMPS is the Hewitt and Flett (1991) Multidimensional Perfectionism Scale, and APS-R is the Almost Perfect Scale – Revised (Slaney et al., 2001).

* This exhibit was adapted from Flett and Hewitt (2002, p. 14).
(Ansbacher & Ansbacher, 1956) grounded his views of unhealthy or neurotic perfectionistic striving for superiority on the basis of overcompensation for perceived inferiorities. An individual attempts to overcome weakness in a particular area by improving this “defect” to the point of strength. According to Adler, feelings of inferiority are common and can be motivating if well-managed. When inferiority feelings lead to seeking personal superiority over other people, however, striving for success becomes counterproductive. Those with “neurotic striving” eventually feel overwhelmed rather than motivated or inspired to undertake the challenges of a task. Horney (1950) similarly described perfectionism as striving to create, project, and maintain a perfect self-image.

Hollender (1965) departed from Adler and Horney’s narcissistic construal of perfectionism by emphasizing acceptance via performance striving. Instead of approaching tasks as opportunities to obtain self-gratification or meet situational demands, perfectionists experience inordinate pressure to perform flawlessly on tasks. Hollender asserted that perfectionists typically have problems prioritizing and conceptualizing adequate proportional responses to the demands of tasks.

Because so much pressure is already internalized by a perfectionist, outside pressure is often poorly tolerated. Hollender (1965) suggested that perfectionists lose their autonomy to be compliant with the needs of others, particularly parental figures. This results in stunted emotional growth, over-controlled emotions, and anger. Mood problems such as depression can result from less than satisfactory performance. Shame can also occur when one feels he does not meet self-imposed ideals. Hollender characterized most of these reactions as short-lived, often resulting in a renewal of hope.
toward meeting future goals. He recognized, however, that hopelessness and depression can result when perfectionism is severe and long-standing.

Consistent with the Adlerian concept of neurotic striving, Hamachek (1978) described “neurotic” and “normal” perfectionism. This dichotomy may resemble more of a continuum where perfectionists vacillate between striving for a desirable goal and avoiding potential failure. In Hamachek’s view, normal perfectionists take satisfaction in their efforts and in meeting goals. Normal perfectionists are comfortable adjusting their level of precision to meet the needs of a situation. For these people, striving for perfection can be motivating. When an individual’s motivation is fear of failure rather than desire to succeed, however, perfectionistic striving becomes problematic. Individuals with neurotic perfectionism are more susceptible to distress and psychopathology. Neurotic perfectionists define self-worth by meeting goals, but often fail to celebrate successes. These individuals rarely acknowledge a job well done because they believe they could always try harder and perform better.

Pacht (1984) insisted that seeking perfection is an undesirable and debilitating goal. He contended that “normal perfectionists” should be labeled as “skilled artists or masters of their craft” (p. 387). If one were theoretically able to obtain perfection, this would deprive him of many human qualities such as spontaneity, charm, character, and vitality. Pacht believed that perfectionists are caught in a “no-win scenario” in which only perfect performance constitutes success. Realistic, near perfect successes remain uncelebrated because perfectionists demand perfect successes on all attempts.

Burns (1980) also contended that perfection becomes self-defeating because the goal of perfection cannot be reached. His view highlights the torment perfectionists experience
by appraising worth on an all-or-nothing attainment of impossible performance standards. According to Burns, perfectionists obsessively strive for flawless performance and fail to note when a task could be considered complete and sufficient. Perfectionists are likely to feel impaired or inadequate when comparing themselves to successful peers, who seem to confidently obtain goals with little required effort or distress.

Pathological and Nonpathological Perfectionism

Difficulties arise about what defines "perfectionism" and whether this construct implies troublesome and dysfunctional striving for success, a preference for order and exactness that can be a positive motivator, or some combination. Greenspon (2000) and Pacht (1984) believed that perfectionism always indicates distress and should not include positive attributes such as high achievement orientation and conscientiousness. Greenspon suggested the term "moderately perfectionistic" to refer to individuals motivated to excel and to continually seek self-improvement but who can focus on realistic standards and tolerate mistakes without internalizing them.

Other researchers suggest a normal-excessive continuum for perfectionism. Adler (Ansbacher & Ansbacher, 1956) believed striving for one's best to be a normal aspect of development that can become problematic when one's goal is superiority over others. Rice, Ashby, and Slaney (1998) concluded that normal perfectionists experience positive feelings about themselves because of high achievement strivings, but neurotic perfectionists are defined by maladaptive evaluative concerns and continually experience negative feelings about themselves.

Antony and Swinson (1998) suggested red flags that indicate when healthy striving becomes pathological striving. These include excessive achievement standards, personal
costs that outweigh benefits of imposing standards, and preferences for high achievement that are equated with absolute demands. A clear difference between healthy and pathological striving is when a person can recover easily when high standards are not met. Timpe (1989) noted that pathological perfectionism exists when one's approach toward meeting goals is rigid and inflexible.

A distinguishing feature of pathological perfectionism is excessive expectations about what one should and ought to accomplish to a substantial degree of success. Perfectionism appears to become problematic when expectations mix with one's attributed self-worth, which seems to hinge upon one's abilities – particularly most recent successes or failures. Higgins' self-discrepancy theory (1987) can be applied to inner conflicts faced by perfectionists. An individual's self-concept can be negatively affected when actual-self, an objective and reality-based view of oneself, fails to meet a personal ideal. For perfectionists and high-achievement-oriented non-perfectionists, ideal-self (what an individual imagines as the best, most satisfying version of himself) and ought-self (personal attributes one believes he should possess) do not match the reality of the actual-self. This discrepancy often leads to emotional distress. Given the rigidity of perfectionistic standards and unrealistic goals, this conflict seems unlikely to end unless one adjusts expectations.

Normal perfectionism. "Normal" or "non-pathological" aspects of perfectionism denote setting high, exacting standards and maintaining orderliness meet demands of a given task. Many of these characteristics are valued in work and school situations, and include competence, order, dutifulness, achievement striving, self-discipline, and careful deliberation (Hill, McIntire, & Bachrach, 1997). Certain jobs and tasks do demand some
degree of perfectionism and exactness (e.g., surgery, air traffic control) but a similar approach in other areas (e.g., relationships) may become self-defeating and detrimental.

When goals of perfectionistic striving are reasonable and realistic, the result can include self-satisfaction and appreciation, pride in a job well-done, and enhanced self-esteem (Hamachek, 1978). Those with adaptive perfectionism are aware of their strengths and weaknesses and can estimate amount of effort for sufficient performance. According to Hamachek, people with normal perfectionism can derive pleasure from their efforts, and a high performance goal is viewed as a challenge more than a threat. For some individuals, these traits can be considered healthy. Some degree of healthy perfectionism may actually promote resilient self-worth. Realistic striving for personal success can help buffer against depression and increase self-esteem (Preusser et al., 1994).

Pathological perfectionism. Given the disparity of views on what comprises pathological perfectionism, various terms will be used interchangeably regarding this construct. Hamachek (1978) characterized neurotic perfectionism as striving for excessively high standards, fear of failure, and heightened concern about disappointing others. The outlook of a neurotic perfectionist includes a tense and deliberate style of thinking about work. Normal perfectionists, however, are more likely to approach tasks with a relaxed and careful style.

Preusser and colleagues (1994) added that people with problematic perfectionism will be highly sensitive to real or exaggerated social sanctions for failure. These individuals are more likely to experience low self-esteem than more adaptive counterparts. Instead of facing tasks as challenges, many dysfunctional perfectionists avoid situations that illustrate their need to meet excessive standards (Shafran & Mansell, 2001). Perhaps
these individuals correctly recognize the amount of effort and stress they exert to prevent imperfection and failure.

A critical component of pathological perfectionism is attitudinal and attributional style. According to Campbell and Di Paula (2002), psychological and behavioral consequences of perfectionism hinge upon perfectionistic self-beliefs one chooses to follow. To prevent failure, a perfectionist may believe that striving for perfection is an effective strategy. Although this may lead to greater conscientiousness and attention to detail, this belief can also lead to lower levels of self-esteem and problems redirecting goal-related behavior when facing challenges. These authors suggested that a motivational distinction exists between perfectionists and non-perfectionists. The perfectionist’s motivation of avoiding failure (versus achieving success) initiates self-defeating attitudes that detrimentally affect self-esteem. If motivation were success and not fear of failure, there would be little concern about rejection, less pressure attached to completing tasks, more certainty regarding goals, higher efficiency, more positive mood toward actively pursuing goals, and greater satisfaction with progress and results. This may lead to more efficient and successful performance outcomes and improved self-esteem.

Because perfectionists juxtapose their achievements against high and unrealistic standards, the range of outcomes deemed as failures is also expanded (Tangney, 2002). According to Tangney, perfectionists immerse themselves in vigorous self-evaluation. Although regular reflection on one’s work is common, perfectionists dedicate inordinate time to self-evaluation. Such intense evaluation may occur because perfectionists develop
inflexible, concrete notions of success and failure and are inclined to demand superior performance across multiple areas, even where superior performance is unnecessary.

Perfectionists overestimate the seriousness of errors, ruminate upon them, and believe others negatively evaluate them. Disproportionate judgment of the severity of mistakes was found among college students scoring high on the Concern over Mistakes (CM) subscale of the FMPS. Students in high and low CM groups were judged to have made the same number and severity of mistakes (Frost et al., 1997). However, the high CM group demonstrated much more negative reactions to these mistakes. Frost and colleagues (1995) also found that undergraduates with high CM reported lowered self-confidence. Those leaning toward perfectionism thought their performance was insufficient and were concerned that others would view them as less intelligent than their low CM peers.

Frost and Marten (1990) examined perfectionism in response to an evaluative writing task among college females. Those with higher perfectionism estimated the task as more important than non-perfectionistic counterparts. The former also experienced stronger negative affect prior to and throughout the task, were more likely to feel they should have done better, and were judged to have lower quality work compared to peers with less perfectionism. Because participants reported negative affect before and during the task, the authors considered performance anxiety to be a possible concomitant or alternative factor to perfectionism.

Perfectionists are highly concerned about evaluation and are thus sensitive to feelings of shame and embarrassment (Tangney, 2002). Individuals with perfectionism may not acknowledge contextual complexities of performance and believe that mistakes represent
personal failure (Hewitt & Flett, 1991). This focus on one’s failure as a person, and not context-specific behaviors, epitomizes shame perfectionists feel when repeatedly failing tasks. Tangney noted that perfectionists do not focus on unsuccessful behaviors but rather implications of the behaviors on their sense of self.

Ellis (2002) suggested that perfectionists engage in unhealthy conditional self-acceptance because of competition with others and an irrational thought process he called “musterbation.” Because one’s desired goals are equated with “shoulds” and “musts” instead of realistic preferences, perfectionists become disappointed and frustrated when demands are not met. Such “musterbation” can lead to depression, anger, anxiety, and other forms of stress. This thought process is self-defeating for the perfectionist, who constantly scrutinizes and strives to improve self-efficacy, but who suffers from lowered self-esteem.

Perfectionists master what Horney (1950) termed “tyranny of the shoulds.” According to Burns (1980), perfectionists routinely employ “should” statements (e.g., “I should complete my work flawlessly and quickly”) that, if milder and more realistic, might otherwise serve as motivation (e.g., “I’ll do my best and meet the challenge of this task”). Perfectionists also catastrophize minor setbacks and cannot tolerate realistic imperfections. According to Burns, perfectionists overgeneralize specific instances as overall patterns.

Many of these conceptualizations have shaped how perfectionism is viewed and measured. Several instruments have thus been created based on one or more of these theories. Assessment has thus been based on unidimensional and multidimensional
concepts of perfectionism. The next section explicates various instruments to quantify and categorize perfectionism.

Measuring Perfectionism

Several researchers have devised subscales and comprehensive full scales to quantitatively measure perfectionism. Weissman and Beck (1978) devised the Dysfunctional Attitudes Scale, a measure of self-defeating attitudes associated with clinical depression and anxiety (Enns & Cox, 2002). This measure comprises nine factors (Beck, Brown, Steer, & Weissman, 1991), two of which relate to perfectionism: Success-Perfectionism and Disapproval-Dependence. Burns (1980) adapted his 10-item scale, the Burns Perfectionism Scale, from this earlier measure. Burns' scale measures maladaptive components of perfectionism associated with mood problems, decreased life and career satisfaction, and lowered productivity. This self-report instrument emphasizes personal standard setting and heightened concern over making mistakes (Frost et al., 1990). Each item is anchored by a “0” at the “neutral agreement” point and allows for “somewhat agree” (+1) to “agree very much” (+2) as well as “slight” (-1) and “strong” (-2) disagreement. A total score can range from -20 to +20, with higher positive scores representing more severe perfectionism. Burns suggested that roughly half the population is in the +2 to +16 range, so many people tend toward degrees of perfectionism.

Perfectionism Relative to Eating Disorders Measurement

The Eating Disorders Inventory (Garner, Olmstead, & Polivy, 1983) contains a perfectionism subscale that includes six statements regarding high personal standards and parental pressures/expectations (Frost et al., 1990). The Setting Conditions for Anorexia
Nervosa Scale (Slade, Phil, & Dewey, 1986) features an 8-item perfectionism subscale based on a theory that perfectionism and dissatisfaction with oneself are precursors to excessive bodily control. A similar self-report instrument, the Neurotic Perfectionism Questionnaire (Mitzman, Slade, & Dewey, 1994) taps maladaptive perfectionism and emphasizes thoughts associated with eating disorders.

**Multidimensional Perfectionism Scales**

Perfectionism was initially viewed and measured as a unidimensional construct regarding cognitive factors such as irrational beliefs (Hewitt & Flett, 2002) or dysfunctional attitudes (Burns, 1980). Two identically named scales of perfectionism were subsequently published: the Multidimensional Perfectionism Scale by Frost et al. (1990) and the Multidimensional Perfectionism Scale by Hewitt and Flett (1991). These scales are distinguished by adding the first letter of the lead author’s last name to the instrument (i.e., FMPS and HMPS). Each scale is based on a multidimensional conceptualization of perfectionism with degrees of positive and negative attributes. Both scales also emphasize interpersonal and personal expressions of perfectionism.

**Frost Multidimensional Perfectionism Scale.** Frost and colleagues (1990) emphasized excessively high standards and self-critical evaluation components of perfectionism. Most of the original 47 items were created by the authors, but some items were drawn from previous perfectionism scales (Burns, 1980; Garner et al., 1983) as well as the Maudsley Obsessive-Compulsive Index (Rachman & Hodgson, 1980). After refinements in factors and items, the FMPS now contains 35 items in six factors: Personal Standards (PS), Concern over Mistakes (CM), Doubts about Actions (DA), Parental Expectation (PE), Parental Criticism (PC), and Organization (O).
The Personal Standards (PS) subscale is related to unrealistically high standards and excessive striving, while Concern over Mistakes (CM) items measure overly critical self-analysis about making mistakes. The Doubts about Actions (DA) subscale measures uncertainty and doubt regarding the quality of one’s performance. The Parental Expectation (PE) subscale taps perceived parental expectations of perfect performance, while the Parental Criticism (PC) subscale represents criticism or punishment when tasks are completed unsatisfactorily. High PE and PC scores suggest a childhood environment in which parental approval was conditional upon performance. The Organization (O) subscale, which is not calculated in the total FMPS score, contains items regarding orderliness, neatness, precision, and organization.

Frost and colleagues (1990) found that Concern over Mistakes (CM) and Personal Standards (PS) demonstrated highest overlap with existing perfectionism measures, while CM and Doubts about Actions (DA) displayed strongest correlations with measures of psychopathology and compulsivity. CM appears most central to pathological perfectionistic strivings, whereas high scores on PS and Organization (O) are related to adaptive aspects of high striving. When people score high on PS and O as well CM subscales, however, striving to meet high personal performance standards may be problematic. Frost and colleagues found that people who endorsed perfectionistic characteristics also experienced more and various psychopathological symptoms than those with little or no perfectionism.

Hewitt and Flett Multidimensional Perfectionism Scale. Hewitt and Flett’s MPS (1991) is a 45-item self-report questionnaire representing three major dimensions of perfectionism: Self-Oriented Perfectionism (SOP), Other-Oriented Perfectionism (OOP),
and Socially-Prescribed Perfectionism (SPP). SOP, which is similar to Frost and colleagues’ (1990) Personal Standards (PS) subscale, measures personal exacting standards motivated by desire for success and fear of failure. Hewitt and Flett also believe this subscale taps self-critical evaluations and self-censure to maintain flawless appearances. The OOP dimension involves high expectations and demands for unrealistic performance standards from others. This dimension of perfectionism may be related to interpersonal problems in relationships, such as difficulties with trust or anger. Finally, SPP is linked to the perception that one’s perfectionism is in response to others’ evaluative demands and pressures.

Comparison of the Multidimensional Perfectionism Scales. Factor analyses reveal the FMPS and HMPS to be closely related and overlap considerably (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993). Frost and colleagues suggested that two overarching factors, “Maladaptive Evaluative Concerns” and “Positive Striving,” distinguish negative and positive aspects of perfectionism. The Positive Striving factor reportedly taps healthy, success-driven aspects of perfectionism. This factor consists of the Personal Standards (PS) and Organization (O) subscales of the FMPS and the Self-Oriented (SOP) and Other-Oriented (OOP) Perfectionism subscales of the HMPS. The authors suggested that people who score high on Positive Striving possess highly demanding standards and organizational skills. Refer to Exhibit 1 (p. 7) for definitions of these factors and subscales.

Frost and colleagues (1993) suggested that the Maladaptive Evaluative Concerns factor represents pathological aspects of perfectionism that do not contribute to success. Instead, this factor is related to stress, mood disorders, and other negative aspects of
perfectionism. This factor is comprised of Concern over Mistakes (CM), Parental Criticism (PC) and Expectations (PE), and Doubts about Actions (DA) of the FMPS in addition to the Socially-Prescribed Perfectionism (SPP) subscale from the HMPS. People with maladaptive evaluative concerns have a strong need to maintain a flawless image of themselves, as if under constant evaluation. These people actively try to prevent and correct potential errors. With the exception of the parental scales (PC and PE) of the FMPS, which are retrospectively linked to one’s childhood and parents, other subscales (CM, DA, and SPP) of Maladaptive Evaluative Concerns appear subject to state changes (Shafran & Mansell, 2001).

Expansion from the Multidimensional Perfectionism Scales. Frost and colleagues and Hewitt, Flett, and colleagues have recently published additional perfectionism scales as new measures or addendums to their prior scales. Flett, Hewitt, Blankstein, and Gray (1998) developed the 25-item Perfectionistic Cognitions Inventory to specifically assess underlying cognitions associated with perfectionism. Hewitt, Flett, and colleagues (2001) also created a 27-item self-report measure, the Perfectionistic Self-Presentation Scale (Flett & Hewitt, 2002). This scale specifically assesses drive to publicly promote, portray, and conceal flaws from others.

Frost and colleagues recently developed the Contingent Self-Worth Scale (CSWS; DiBartolo, Frost, Chang, LaSota, & Grills, 2004). This scale was developed to decipher the puzzling relationship of the Personal Standards (PS) subscale of the FMPS with healthy and pathological conditions. The CSWS consists of the PS subscale and six new items of self-worth tied to successful performance. Three personal standards factors were derived from the CSWS: Pure Personal Standards, Success-Based Self-Worth, and
Activity-Based Self-Worth. Pure Personal Standards is related to adaptive, healthy striving to meet goals. The other two factors are related to maladaptive functioning in which one defines self-worth by attaining success (Success-Based Self-Worth) and working toward a goal (Activity-Based Self-Worth). The CSWS better specifies and measures the relationship between healthy/adaptive, aspiration-based perfectionism and problematic perfectionism that can lead to psychopathology.

Other Measures of Perfectionism

The Multidimensional Perfectionism Scales are the most widely employed measures of perfectionism. Other instruments have been created, however, to address specific elements of perfectionism, including positive elements. The Almost Perfect Scale (Slaney, Ashby, & Trippi, 1995), later revised (Slaney, Rice, Mobley, Trippi, & Ashby, 2001), is a 32-item self-report measure of three factors of perfectionism: Standards, Order, and Discrepancy. The discrepancy factor measures the extent to which one's standards have been met. Standards (striving to reach high standards) and Order (preference for organization, neatness, and orderliness) are related to adaptive perfectionism, but Discrepancy is strongly associated with psychopathology.

The Positive and Negative Perfectionism Scale (Terry-Short, Owens, Slade, & Dewey, 1995) consists of 40 items of four subtypes of perfectionism: positive, negative, personal, and socially prescribed perfectionism. These subtypes form two larger factors: Positive Perfectionism (Positive and Personal Perfectionism Subscales) and Negative Perfectionism (Negative and Socially Prescribed Perfectionism Subscales). Terry-Short and colleagues described these factors in terms of positive and negative behavioral
reinforcement: Positive Perfectionism is a desire to approach tasks and achieve success, while Negative Perfectionism behavior is driven by avoidance of aversive outcomes.

Hill and colleagues (2004) found supportive psychometric evidence for their Perfectionism Inventory, which was designed to consolidate perfectionism scales. This 59-item instrument consists of eight subscales. Two subscales, Rumination (tendency to worry about past events and future mistakes) and Planfulness (tendency to plan ahead and deliberate over decisions), are original. The Perfectionism Inventory comprises two factors that reflect adaptive and maladaptive aspects of perfectionism: Conscientious Perfectionism (adaptive) and Self-Evaluative Perfectionism (maladaptive).

Conscientious Perfectionism is related to adaptive striving and holding high standards and consists of four subscales: Organization (from the FMPS), Planfulness, Striving for Excellence (PS from the FMPS and SOP from the HMPS), and High Standards for Others (OOP from the HMPS). Self-Evaluative Perfectionism captures problematic aspects of perfectionism and is comprised by four subscales: Rumination, Need for Approval (DA from the FMPS and SPP from the HMPS), Concern over Mistakes (CM from the FMPS), and Parental Pressure (PC and PE from the FMPS).

Two perfectionism measures have been developed for use with children. Flett, Hewitt, Boucher, Davidson, and Munro (1997; Enns & Cox, 2002) adapted the Hewitt and Flett (1991) Multidimensional Perfectionism Scale to create language more appropriate for children and adolescents. This 22-item measure is the Child-Adolescent Perfectionism Scale. The other measure of perfectionism designed for children is the Adaptive/Maladaptive Perfectionism Scale (Rice, Kubal, & Preusser, 2004). This is a 27-item self-report of four factors: Sensitivity to Mistakes (similar to the Concern over
Mistakes subscale of the FMPS), Contingent Self-Esteem (similar to the Discrepancy measure of the Almost Perfect Scale-Revised and the Contingent Self-Worth Scale), Compulsiveness (similar to Personal Standards and Organization subscales on the FMPS), and Need for Admiration (believed unique to this instrument). Both child perfectionism measures have been sparingly used in research.

Research on perfectionism measurement has been impacted by possible causal factors such as parental criticism and expectations on the FMPS. Better understanding of how perfectionism develops might enhance measurement and inform treatment strategies. Various theories of perfectionism’s etiology have been offered and are described next.

The Nature of Perfectionism: Etiology and Course

Psychodynamic Theorization

Several theorists have attempted to decipher how people become perfectionistic and whether distress precedes or follows perfectionistic attitudes and behaviors. Many theorists agree that perfectionism is not innate but occurs in response to environmental stimuli in childhood. According to Hollender (1965), perfectionism is related to unresolved dependency issues at the oral stage. Perfectionists likely had parents who were over-responsive or under-responsive to their needs as infants and this leads to difficulties distinguishing needs from desires in adulthood. Timpe (1989) placed the age at which perfectionism occurs in late preschool following resolution of the oedipal complex. Perfectionism represents the effect of an overdeveloped superego, which is an unhealthy imbalance of psychic energy overemphasizing the conscience at the expense of one’s realistic sense of self.
Timpe (1989) suggested that a child develops a negative image that leads to low self-esteem. By striving to obtain characteristics of an idealized self, a child attempts to counter anxiety from this intrapsychic conflict. A child is motivated to overcome struggles with inferiority feelings by improving the perceived weakness to the extent that the defect can be eventually considered a strength (Ansbacher & Ansbacher, 1956). An example is a child with a speech impediment who, via speech classes and efforts to excel at language and communication, eventually speaks articulately. Timpe’s application of Adlerian theory asserts that striving for perfection is an attempt to overcome perceived inadequacies by striving for superiority.

Ashby and Kottman (1996) employed the Comparative Feeling of Inferiority Index (Strano & Dixon, 1990) and the revised Almost Perfect Scale (APS-R; Slaney et al., 2001) to quantify inferiority in those with perfectionism. The top third of APS-R scorers were defined as “neurotic perfectionists.” The authors found higher than normal levels of inferiority and higher ratings of anxiety, procrastination, and intimacy difficulties for neurotic perfectionists compared to those with lower levels of perfectionism.

Psychosocial explanations of perfectionism have garnered more recent attention as external factors, such as parenting and various developmental characteristics, appear to interact. Timpe (1989) noted that perfectionistic tendencies first become noticeable during elementary school years when children must complete schoolwork and other tasks. When children reach pre-adolescence, where mastery of self-control is expected, healthy development includes a desire to please significant others by performing tasks with competence and quality. Some of these children cannot separate self-esteem from performance on expected tasks. These children may develop perfectionistic striving and
be hypersensitive to imperfections. For some children, performance expectations impact their self-worth. How these perceptions originate is debatable, though parental pressures and conditional approval have been indicated.

**Conditional Approval**

Adler (Ansbacher & Ansbacher, 1956) theorized that perfectionism arises out of a need to please significant others. Harsh and demanding parenting styles have been suggested as key factors for the development of perfectionism (Driscoll, 1982). Missildine (1963) argued that perfectionistic parents give children the message that approval depends on meeting unrealistic standards. Other theorists (Barrow & Moore, 1983; Hamachek, 1978; Hollender, 1965) suggest that inconsistent and conditional parental approval leaves a child unsure of how to find acceptance and love from significant others, except through performance. A child may thus pursue excessive standards of performance in the hope that perfection would be sufficient to meet the demands of others.

Two theorists considered conditional approval and parental inconsistencies to be salient causal factors in perfectionism. Hollender (1965) contended that perfectionism is more likely to occur in dispositionally sensitive and insecure children. He suggested that a predisposed insecurity motivates a child to seek reassurance of acceptance. When children have parents who are particularly demanding, they may complete tasks adequately but receive feedback that the task could have been done better. Hollender suggested a child infers that, if he does better, eventual acceptance will follow. A child’s ego-ideal adopts an internalized version of the perceived ideals of the parents, so he strives to create a better and more consistent self-image to obtain approval and feelings of
worthiness. As an adult, the perfectionist struggles with self-doubts and excessive demands, believing his value is determined by what he does instead of who he is. Without a clear sense of self-adequacy, a perfectionist views performance situations as opportunities to judge his worth. Measuring self-worth by one’s actions is a key feature that differentiates neurotic from normal perfectionism.

Neurotic versus Normal Perfectionism Development

Hamachek (1978) theorized that neurotic perfectionism begins in one of two ways: (1) an environment of non-approval or inconsistent approval, and (2) an environment of conditional positive approval. In the former, an individual feels ambiguous about what can be considered sufficient. Because a person lacks feedback regarding external standards, he instead assumes that standards set very high should be enough to satisfy anyone, including himself. Hamachek’s second pathway of conditional positive approval illustrates mixed messages a child receives, where approval appears to be withheld pending successful completion of tasks. An individual learns that praise is given by others based on performance.

Hamachek (1978) cited two antecedents of normal perfectionism. The first is positive modeling. A child identifies closely with significant others and notes, primarily through example, that better, more preferred ways exist to accomplish tasks. Hamachek suggested that this individual eventually exhibits a preference for neatness and orderliness. For this individual, tasks must be done properly and correctly and not simply adequately. A key difference from neurotic perfectionists is that normal perfectionists can enjoy their accomplishments and derive satisfaction from a job done well. Less than perfect performance is not seen as failure and so feelings of positive self-worth are retained. The
second precursor to normal perfectionism is negative modeling, where one reacts to and becomes the opposite a significant other who displayed imperfections such as extreme disorganization and difficulty accomplishing tasks. This enhances one’s self-esteem and preserves the close relationship with the significant other. Perfectionism can thus be reactionary and function as a coping strategy.

**Perfectionistic Striving as a Coping Strategy**

Burns (1980) cited Harry Stack Sullivan as a key theorist who described perfectionism as a coping strategy to endure uncertain parental demands and to elicit approval and love. Frost, Novara, and Rhéaume (2002) believed that perfectionistic striving may represent an attempt to gain control over unpleasant situations in unpredictable environments. Perfectionists hope to exert influence over negative future outcomes by being as immune as possible to threats such as criticism, disaster, uncertainty, or lack of control. Such preparation might provide tentative security. However, some theorists believe that perfectionism is not an attempt to cope with and control uncertainty. Rather, perfectionism may contribute to uncertainty about one’s environment. Perhaps the etiology of perfectionism is better explained by an interaction of underlying predisposition and environment.

**Diathesis-Stress Model**

An interaction of conditions may help establish perfectionism in those already sensitive, insecure, or more likely to internalize external messages. Not all persons with perfectionism come from a background of inconsistent or conditional parental approval, and not everyone with harsh, demanding, and vacillating parents becomes a perfectionist. A diathesis-stress model may help explain why some individuals may be predisposed, via
innate and early environmental experiences, to respond more or less favorably to external conditions such as parental, cultural, and social factors. Although perfectionism may not be genetically transferred from parent to child, some evidence suggests that genetics may influence a temperamental predisposition that leaves a child vulnerable to developing perfectionism (Chang, 2000).

Chang and Rand (2000) suggested that perfectionism only becomes problematic in highly stressful situations. A perfectionistic, or perhaps socially-anxious, temperament may affect stress tolerance. One’s reactions to stress and evaluative situations are likely a combination of predisposition, learning, and observing others. Dormant perfectionistic thinking may be triggered by stress as one reacts to challenging social and emotional situations. Chang (2000) noted that stress mediates perfectionism and positive (e.g., life satisfaction) and negative (e.g., negative mood and worry) psychological outcomes. Negative outcomes were believed caused by stress from perfectionism. Without this perfectionism-driven stress, higher life satisfaction is likely to occur. One’s perfectionistic tendencies are likely exacerbated by stressful situations. When severe, this can lead to various forms of psychopathology, which are discussed next.

Psychopathological Relationships and Perfectionism

Perfectionism may help create or exacerbate DSM-IV-TR (American Psychiatric Association, 2000) mental disorders as well as other medical, health, and stress-related conditions. Perfectionism has been connected to various forms of psychopathology, especially depression (Blatt et al., 1995; Hewitt & Flett, 1991), anxiety disorders (Frost &
Frost and Steketee (1997) believed that perfectionism is not bound to any one particular disorder but extends across diagnostic categories. Perfectionism has also been associated with other mental health and medical conditions such as alcoholism, Munchausen syndrome, irritable bowel syndrome, obsessive-compulsive personality disorder, abdominal pain, headaches, ulcerative colitis, and Type-A coronary-prone behavior (Pacht, 1984). Frustration from failure to achieve perfect and idealized goals may contribute to the link between perfectionism and health problems (Preusser et al., 1994) such as substance abuse, chronic pain, and coronary heart disease. Emotional disturbances and health concerns can be stress-related byproducts of perfectionism. In the following section, links between perfectionism and prominent psychopathological conditions are examined in more detail.

**Depression and Perfectionism**

Depressive symptoms are a common outcome for those with perfectionism. Among 145 patients diagnosed with major depressive disorder (Enns & Cox, 1999), several perfectionism subscales (socially-prescribed [SPP], Concern over Mistakes [CM], and Doubts about Actions [DA]) correlated strongly with Beck Depression Inventory and Hamilton Depression Scale scores. FMPS subscales of positive and adaptive aspects of perfectionism (Personal Standards [PS] and Organization [O]) were uncorrelated or inversely related to depression. The authors concluded that Concern over Mistakes and Doubts about Actions from the FMPS, along with Socially-Prescribed and Self-Oriented
Perfectionism scales from the HMPS, assess aspects of perfectionism that may exacerbate depression.

According to several prominent researchers, people with perfectionism are particularly vulnerable to experiencing depression. For example, constant self-criticism, common among perfectionists, lowers self-esteem and can lead to depression (Burns, 1980; Enns & Cox, 1999; Ferguson & Rodway, 1994; Flett, Russo, & Hewitt, 1994; Hewitt & Flett, 1993). The perfectionistic belief that minor mistakes indicate failure may lead one to evaluate self-esteem based on recent performance. As performance inevitably fails to reach perfection, some individuals will see this as evidence of personal failure.

One popular theory suggests that underlying dimensions of perfectionism become activated when everyday stressors surpass a distress threshold and help create depression (Hewitt & Flett, 2002). Hewitt and Dyck (1986) found that perfectionists have more frequent experiences of stressful life experiences and depressive symptoms. Chang and Rand (2000) found that, for individuals driven to adhere to external performance demands (socially-prescribed perfectionism), previously modest perfectionistic tendencies were exacerbated by stress. An interaction of stress with socially-prescribed perfectionism predicted scores on measures of well-being better than perfectionism or stress alone.

Perfectionists often vigilantly scan, compare, and evaluate themselves and their environment. Unreasonable striving with constant negative self-evaluation can lead to rumination and depressive thinking (Flett et al., 1998). Flett and colleagues assessed clinical and non-pathological clients with perfectionistic tendencies for ruminative thinking. Increased frequency of perfectionistic thinking was found for those aware of an
ideal- versus actual-self discrepancy. For these people, excessive negative and ruminative thoughts were elicited beyond that predicted by measures of automatic cognitions or trait levels of perfectionism.

Other elements of perfectionism that can create or exacerbate stress, helplessness, hopelessness, and depression include fear of making mistakes and worry of disapproval from others (Shafran & Mansell, 2001). Flett and Hewitt (2002) surmised that perfectionists are prone to interpret depressive symptoms as evidence of failure. This self-critical admonition over feeling depressed can further induce a prolonged depressive state and limit capacity for recovery.

Blatt (1995) noted that the negative impact of perfectionism may become so intense and desperate in some individuals that they commit suicide. Many prominent individuals who completed suicide seemed to base the quality of their lives on their performances, while their decisions to end their lives were shocking. These individuals were characterized as overachievers but had no other obvious psychopathology. Hewitt and Flett (1993) suggested that suicidal ideation may be mediated by recent failure experiences in some perfectionists. Of particular note, the HMPS Socially-Prescribed Perfectionism (SPP) subscale has been related to hopelessness in college students (Chang & Rand, 2000) and displays tenuous links with suicidal feelings. Hewitt, Flett, and Turnbull-Donovan (1992) noted that SPP was associated with increased suicide risk, compounding this risk even beyond what was accounted for by measures of depression and hopelessness.

Adkins and Parker (1996) suggested that “passive perfectionism,” or high scores on the Concern over Mistakes and Doubts about Actions subscales from the FMPS, were
associated with suicidal preoccupation. Other-oriented perfectionists (OOP from the HMPS), however, may be somewhat shielded against suicide attempts because blame is shifted to others for negative life events. Perfectionism focused inward produces greater suicide risk, while perfectionism directed outward, though stressful for the other-oriented perfectionist and those around him, may serve as a protective factor. However, much more research in this area is needed. Perfectionism thus appears to be a risk factor for depression and may have strong implications for coping with depression.

Individuals scoring high on the FMPS Organization subscale tend to score low on depression measures (Flett, Hewitt, Blankstein, & Mosher, 1991; Lynd-Stevenson & Hearne, 1999). This may be due to an increased sense of control by employing organization as a coping strategy. People who feel they can control their environments may have less severe negative emotional responses such as hopelessness and despair. Such action-oriented strategies can help people better manage unpredictable situations. These organization skills may also be utilized by those with anxiety to exert control over fearful situations and appraise worries as manageable.

Anxiety and Anxiety Disorders in Relation to Perfectionism

Anxiety and perfectionism seem to share an inherent connection. Given that anxiety may be a predictor of perfectionism (Saboonchi & Lundh, 1997), people with perfectionism often show elevated scores on measures of anxiety. Correlational studies have demonstrated a strong association between maladaptive perfectionism and anxiety disorders (Antony et al., 1998). In particular, fear of failure and fear of negative social evaluation are key features of maladaptive perfectionism (Frost et al., 1993).
Perfectionism's likely causal role in anxiety seems intuitive considering the pressures and stresses faced by many perfectionists.

*Studies of perfectionism in anxious conditions.* Kawamura, Hunt, Frost, and DiBartolo (2001) examined overlap between depression and anxiety in perfectionism. Three factors among anxiety scales were found to be related to perfectionism: obsessive-compulsive disorder (OCD), social anxiety/trait anxiety/worry, and posttraumatic stress disorder (PTSD). After controlling for depression, only the social anxiety/trait anxiety/worry factor remained significantly correlated with maladaptive perfectionism. Fears related to social evaluation seem uniquely tied to general and social anxiety independent of depression.

Antony and colleagues (1998) examined perfectionism among people with panic disorder (*n* = 44), obsessive-compulsive disorder (*n* = 45), social phobia (*n* = 70), and specific phobias (*n* = 15) as well as 49 volunteers without clinical diagnoses. Participants were given the two MPS instruments. Social phobia was significantly associated with Concern over Mistakes (CM), Doubts about Actions (DA), Parental Criticism (PC), and Socially-Prescribed Perfectionism (SPP). Participants with OCD were also distinguished by high DA, whereas people with panic disorder showed moderate elevations on CM and DA. The authors noted unexpectedly strong correlations of SPP in those with panic disorder, OCD, and social phobia, and surmised that these individuals believe others have high expectations of them. Those with anxiety disorders, with the exception of specific phobia, scored significantly higher than non-anxious controls on measures of perfectionism. The researchers suggested that people with anxiety disorders exert control
to prevent unforeseen dangers. This underscores the common perfectionistic belief that making mistakes can leave one vulnerable to losing control over situations and events.

Saboonchi, Lundh, and Öst (1999) examined perfectionism in people with social phobia, agoraphobic panic disorder, and non-clinical controls. Social phobia correlated highest with perfectionism on Concern over Mistakes (CM) and Doubts about Actions (DA). When controlling for public self-consciousness, however, those with panic disorder were no longer significantly different from those with social phobia. Both clinical groups significantly outscored the control group on Parental Criticism (PC). The authors suggested that those with social phobia tend are over-concerned with how they appear to others and display more perfectionism when their performance is readily observed and potentially judged by others.

Specific fears. Blankstein, Flett, Hewitt, and Eng (1993) found SOP (self-oriented) and SPP (socially-prescribed) subscales to be associated with negative social evaluation fears, which included fears of failure, making mistakes, losing control, and feeling angry. The SPP subscale was most strongly related to fears of public speaking, dating, being criticized, and looking foolish. The OOP (other-oriented) subscale was not associated with specific fears. This finding matched prior research (Shafran & Mansell, 2001) that shifting responsibility to others for perfection can protect one from blame and lowered self-worth.

Saboonchi and Lundh (1997) investigated the relationship between perfectionism and several fears among non-clinical adults in Sweden. Significant correlations were found for Concerns over Mistakes (CM), Doubts about Actions (DA), and Socially-Prescribed Perfectionism (SPP) with measures of social anxiety, agoraphobic fears, fears of bodily
injury, and fears of death and illness. Self-consciousness, a trait linked to private and public insecurity, mediated perfectionism and anxiety. Public self-consciousness, a tendency to focus on external qualities such as appearance and behavior, was found in people scoring high on CM, DA, and SPP. People who are privately self-conscious (focused more on inner thoughts, feelings, and attitudes) did not score significantly high on any perfectionism measure or subscale. After controlling for relevant perfectionism dimensions (CM, DA, and SPP), however, a relationship between public self-consciousness and anxiety disappeared. These results question the actual role of public self-consciousness as a unique mediator of perfectionism and anxiety.

Worry. Few research studies have evaluated perfectionism with everyday, non-perfectionistic worries or concerns. Stöber and Joormann (2001) employed the Worry Domains Questionnaire (Tallis, Eysenck, & Mathews, 1992) to measure common, non-pathological worrying. Individuals with greater worry reported significant amounts of perfectionism, especially procrastination. Excessive worriers reported that their standards were lower during stressful than less stressful conditions. After degree of worry was partialled out, perfectionism and procrastination were no longer significantly correlated with depression or anxiety. The authors surmised that the future-directed nature of worry is largely responsible for linkages between (1) anxiety and depression and (2) perfectionism and procrastination. Because the Worry Domain Questionnaire draws heavily on social and evaluative concerns, a link between worry and perfectionism may be considerably weighted by social concerns.

Social phobia. Social anxiety/social phobia appears to have much in common with perfectionism. Given that excessive maladaptive evaluative concerns (Frost et al., 1993)
are trademarks of pathological perfectionism as well as extreme shyness or social phobia (Antony & Swinson, 2000), considerable overlap exists between excessive anxiety experienced in social situations and a strong desire to appear flawless in public. Individuals with extreme shyness and social phobia typically have expectations that embarrassment will be highly likely and unbearable (Antony & Swinson, 2000). Antony and Swinson also noted that such individuals are prone to committing cognitive errors such as overgeneralization, catastrophizing, and mindreading. Individuals with social phobia will often acknowledge their inability to maintain perfect appearances in given settings and avoid feared social stimuli (Juster et al., 1996).

Social phobia is clearly related to the Socially-Prescribed Perfectionism (SPP) subscale of the HMPS. This subscale taps social pressure for performance in perfectionists, so socially-prescribed perfectionism may play a key role in the development and maintenance of social phobia. Flett, Hewitt, Endler, and Tassone (1994-1995) found that exposure to a socially threatening situation led to high levels of worry and autonomic arousal that differentiated people high or low on the SPP subscale. Flett, Hewitt, and De Rosa (1996) noted that high levels of SPP were related to greater loneliness, shyness, fear of negative evaluation, and lower levels of social self-esteem. Further, participants responded to anticipated criticism from others by withdrawing or becoming isolated. The authors speculated that maladaptive coping strategies were employed to maintain an image of emotional control.

Juster and colleagues (1996) evaluated FMPS perfectionism among individuals with social phobia as well as non-anxious community volunteers. Those who endorsed pathological perfectionism items (Doubts about Actions and Concerns over Mistakes)
experienced greater social anxiety, trait anxiety, and general psychopathology compared
to non-anxious controls. Those with social phobia scored significantly greater than
controls on Concern over Mistakes, Doubts about Actions, and Parental Criticism.
Controls scored higher on Organization. The authors concluded that individuals with
social phobia expect to make devastating errors and have little faith in their ability to
participate satisfactorily in social interactions.

Bieling and Alden (1997) found people with social phobia to score higher on the
Socially Prescribed Perfectionism subscale of the Hewitt and Flett Multidimensional
Perfectionism Scale compared to controls. These individuals also rated themselves as less
skilled in general social abilities. Most of those with social phobia said they must be
perfect to meet expectations imposed by others, yet did not demand perfection of
themselves. The authors speculated that low social self-efficacy, when paired with
perfectionistic high standards, likely leads to increased social anxiety and social
avoidance. LoCicero, Ashby, and Kern (2000) found individuals with adaptive
perfectionism (i.e., Self-Oriented Perfectionism, Personal Standards, and Organization) to
report significantly higher appraisals of social self-efficacy, as well as general self-
efficacy, than individuals with maladaptive perfectionism (i.e., Socially-Prescribed
Perfectionism, Concern over Mistakes, and Doubts about Actions). This was also true
compared to those reporting no perfectionistic attitudes and beliefs. While maladaptive
elements of perfectionism may detrimentally impact social efficacy, potentially to the
point of pathological fear and avoidance, adaptive aspects of perfectionism enhance one’s
perceived social adeptness.
Obsessive-compulsive disorder (OCD). OCD and perfectionism involve meeting unrealistic demands in an urgent and potentially obsessive manner. Anxiety or distress accompanying each disorder is, to some extent, temporarily relieved by adhering to a specific routine such as attaining a flawless work product (for perfectionists) or flawless ritual performance to counter obsessive thoughts (for people with OCD). Similar to perfectionists, people with OCD do not allow imperfections and cannot ignore obsessive thoughts about meticulous completion of compulsive rituals (Shafran & Mansell, 2001).

Questions remain as to the true nature of perfectionism in individuals with OCD. The Obsessive Compulsive Cognitions Working Group (1997) asserted that perfectionism may be a risk factor for OCD. Janet (1903, cited in Pittman, 1987) assigned perfectionism a central role in the early stages of OCD development. Janet’s first stage of OCD is associated with frustration and difficulties performing actions in exact manners. The second stage involves adopting perfectionistic perceptions and behaviors to cope with uncertainty. According to Guidano and Liotti (1983), need for certainty combines with perfectionism and develops into OCD. Rhéaume, Freeston, Dugas, Letarte, and Ladouceur (1995) also considered perfectionism to be a trait necessary, but only partially responsible, for the development of OCD.

Ferguson and Rodway (1994), however, believed that perfectionism and OCD are not synonymous. Perfectionists may be compulsive and people with OCD may be perfectionistic, but the two conditions are not the same. One clear distinction posed by Flett and Hewitt (2002) is that individuals with OCD demand that some thing be perfect, rather than some person such as oneself or others as is the case for perfectionists.
People with OCD, obsessive-compulsive personality disorder, and perfectionism have similar dysfunctional assumptions that include beliefs in perfect solutions, excessive attempts to avoid mistakes, and equating mistakes with failure (Frost & Shows, 1993). Such pathological thought patterns are captured by the Concern over Mistakes (CM) and Doubts about Actions (DA) subscales of Frost’s MPS. Indeed, Antony and colleagues (1998) found these two dimensions of the FMPS to be elevated in people with OCD. High DA differentiated OCD groups from other anxious groups on perfectionism items.

Concerns over Mistakes (CM) and Doubts about Actions (DA) have consistently been associated with obsessive-compulsive symptoms among students (Frost et al., 1990; Frost et al., 2002; Frost, Steketee, Cohn, & Greiss, 1994; Rhéaume et al., 1995). Shafran and Mansell (2001) noted that doubting one’s actions (DA) may be linked more to OCD phenomenology than perfectionism. In fact, Frost and colleagues (1990) depended heavily on prior OCD scale items to develop their measure of perfectionism, and doubting one’s actions is considered to be a hallmark of OCD (Frost & Steketee, 1997).

Frost and Shows (1993) noted that only maladaptive evaluative concerns dimensions of the FMPS (Concern over Mistakes, Doubts about Actions, Parental Criticism, and Parental Evaluation) were associated with compulsive indecisiveness. The authors considered indecisiveness to be concomitant with DA and CM. People who set high personal standards (PS) were more decisive than those with lower standards, as long as they did not endorse high concerns over making minor mistakes (CM).

Frost and Steketee (1997) conducted a clinical study examining perfectionism in people with OCD, panic disorder with agoraphobia, and non-clinical controls. The authors noted that OCD patients endorsed significantly more total perfectionism, Doubts
about Actions (DA), and Concern over Mistakes (CM) on the FMPS than controls. Elevated DA scores distinguished those with OCD from those with panic disorder. However, perfectionism was not exclusive to OCD because elevated perfectionism was also found among those with panic disorder. Frost and Steketee concluded that perfectionism potentially influences the development of various forms of psychopathology but does not govern a disorder's specific expression. Given perfectionism's strong associations across anxiety disorders (Antony & Swinson, 1998), depression (Blatt, 1995), eating disorders (Bastiani et al., 1995), and other forms of psychopathology, the construct may be a precursor to several forms of psychopathology that include obsessive-compulsive disorder.

Eating Disorders

A key struggle for individuals with eating disorders is attaining an unrealistic physical ideal, so aspects of perfectionism may be evident (Goldner, Cockell, & Srikameswaran, 2002). Perfectionism may be apparent in individuals striving to realize optimal beauty or athletes struggling to achieve desired weight for superior athletic performance. Slade (1982) proposed that perfectionism is essential to the development of anorexia nervosa. Similarly, Lilenfeld and colleagues (2000) asserted that perfectionism is a risk factor for anorexia and bulimia that may be partially genetic. The Eating Disorder Inventory (Garner et al., 1983), now in its second revision, contains a 6-item Perfectionism subscale that emphasizes setting high personal standards and excessive parental expectations. Frost and colleagues (1990) adopted some of these questions for the FMPS. Perfectionism and eating disorders thus seem to share many commonalities such as a similar thinking style. Fairburn (1997) contended that perfectionism and dichotomous
thinking errors mediate the relationship between severe, rigid dieting and binging behaviors.

Concern over Mistakes (CM) and Doubts about Actions (DA) scales of the FMPS (Minarik & Aherns, 1996) and Self-Oriented Perfectionism (SOP) and Socially-Prescribed Perfectionism (SPP) scales of the HMPS (Hewitt, Flett, & Ediger, 1995) are associated with symptoms consistent with eating disorders. Terry-Short and colleagues (1995) found individuals diagnosed with eating disorders to score significantly higher on negative aspects of perfectionism than depressed patients, athletes, and controls. People with eating disorders, however, who scored similarly to athletes, also displayed more positive aspects of perfectionism than controls and individuals with depression.

Halmi and colleagues (2000) conducted a large-scale study of perfectionism in 322 women with anorexia nervosa. Women were given the Eating Disorder Inventory and the FMPS. Women with anorexia had significantly greater FMPS scores than controls. Of the FMPS subscales, women with anorexia were differentiated from controls on five of six subscales (PC, PE, DA, PS, and DA). Women with anorexia were distinguished from controls by excessive preoccupation and efforts to avoid making mistakes.

Perfectionism may be a trait-like feature found in people with eating disorders because high levels of perfectionism persist even after recovery from anorexia nervosa (Srinivasagam et al., 1995). Bastiani and colleagues (1995) examined perfectionism among 19 women with anorexia before and after recovery of normal weight and 10 healthy volunteers. Eleven females with anorexia were assessed when underweight (pre-recovery of normal weight) and 8 were assessed within four weeks of healthy body weight restoration. Underweight women with anorexia reported significantly higher
FMPS scores than controls on all subscales except for Parental Evaluation (PE). Among weight-restored women with anorexia, FMPS subscales were significantly higher than controls except Parental Evaluation (PE), Personal Standards (PS), and Doubts about Actions (DA). Although the authors used relatively small groups and examined each at different stages of treatment, the results support the idea that perfectionism impacts individuals with anorexia even after weight restoration.

*Other Psychopathological Conditions*

*Personality disorders.* The personality disorder with perhaps strongest ties to perfectionism is obsessive-compulsive personality disorder (OCPD). OCPD differs from OCD in that people with OCD have more extreme and detrimental obsessions and compulsions (American Psychiatric Association, 2000). In addition, people with OCPD do not typically view their thoughts and ideas as foreign, intrusive, or disturbing, but normal and often desirable aspects of thinking and motivation (Penzel, 2000).

OCPD encompasses several features (e.g., hoarding, inability to delegate, adherence for social conventions, and stubbornness) in addition to perfectionism (Shafran & Mansell, 2001). Perfectionism is included as one of eight OCPD characteristics in the DSM-IV-TR (American Psychiatric Association, 2000). OCPD is typified by excessive orderliness, perfectionism, and need to control one’s environment as well as poor flexibility, interpersonal openness, and efficiency. Perfectionism is thus a key component of OCPD. However, OCPD also resembles conditions such as Type A personality, where one is highly competitive, impatient, and overly invested in matters of time and money.

The DSM-IV-TR also highlights interpersonal aspects of OCPD related to Hewitt and Flett’s (1991) other-oriented perfectionism. People with OCPD are frequently miserly,
stubborn, resistant to constructive criticism and authority, and morally inflexible, which likely impairs interpersonal relationships. These individuals may also engage in hoarding, a condition commonly found in OCD. Although OCPD traits are sometimes found with perfectionists, they are not clear indicators of perfectionism. OCPD traits consistent with positive perfectionism include dutifulness and preoccupation with orderliness. OCPD traits associated with problematic perfectionism include rigid thinking, harsh performance standards that interfere with task completion, and uncertainty about defining successful completion of tasks (American Psychiatric Association, 2000; Shafran & Mansell, 2001). Although perfectionism may be an essential criterion for OCPD and most individuals with OCPD are perfectionistic, OCPD is not perfectionism. Perfectionistic tendencies are instead one of several components of OCPD. Unfortunately, scant research exists to further clarify perfectionism’s relationship with OCPD.

Other personality disorders may also overlap with perfectionism. Hewitt, Flett, and Turnbull (1994) noted that patients diagnosed with borderline personality disorder, a condition marked by patterns of unstable self-identity, relationships, and mood (American Psychiatric Association, 2000), display significantly higher Socially-Prescribed Perfectionism (SPP) than patients with schizophrenia and controls. Perhaps borderline personality disorder and perfectionism overlap with respect to rigidity and pressure to meet and maintain externally-derived expectations.

Hewitt and Flett (1991) found Socially-Prescribed Perfectionism (SPP) scores to be higher for those with schizoid, avoidant, passive aggressive, schizotypal, and borderline personality disorders. Positive elevations on Other-Oriented Perfectionism (OOP) were found with histrionic, narcissistic, and antisocial personalities, while OOP was inversely
correlated with schizotypal personality. These groups have difficulties relating to others, forming healthy relationships, and adapting to social norms and expectations. Such difficulties may be captured as well by the SPP subscale. Difficulties in relationships for these people may be related to unstable self-esteem and identity distress.

*Somatic symptoms and physical health.* Perfectionism and concomitant stress negatively impact physical health and well-being. Shafran and Mansell (2001) noted that perfectionism has been linked to ailments such as exhaustion, fatigue, aches and pains, and chronic headaches. Stress or other mediators may account for the impact of perfectionistic symptoms on physical health. Saboonchi and Lundh (2003) found that somatic complaints, particularly tension and fatigue, were correlated with socially-prescribed and self-oriented perfectionism. Those scoring high on the Other-Oriented Perfectionism dimension, compared to other HPMS dimensions, underwent more medical treatments. Perfectionists thus seem to demand perfection from others, including doctors.

Shafran and Mansell (2001) believed that physical symptoms may function as self-handicapping factors to prevent one from meeting unreasonable standards. For example, one may justify imperfect work because of headaches or other physical ailments. This may occur in response to several events that threaten one’s sense of accomplishment. Organista and Miranda (1991) found people with high perfectionism to report greater somatic symptoms following stressful events and less-than-ideal performances. Individuals with little or no perfectionism did not experience somatic symptoms in relation to stressful events. Physical symptoms may thus be side effects of a self-defeating perfectionistic thinking style.
Academic perfectionism and procrastination. Positive perfectionism traits such as organization and striving for excellence can be beneficial when applied to academics (Slaney, Rice, & Ashby, 2002). However, perfectionism as a strategy to enhance academic success likely has limits. Brown and colleagues (1999) assessed 90 undergraduate females at six different times across a semester: (1) when first in class, (2) one week before midterm, (3) the day of the midterm (immediately prior to the exam), (4) one week after the midterm (after receiving grades), (5) one week before the final exam, and (6) the day of the final (immediately prior to taking the exam). Assessment included the FMPS, BDI, Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988), and ratings of classroom academic behaviors and performance.

Perfectionistic behaviors were apparent throughout the semester, as earlier perfectionism ratings and midterm scores (relative to expectations) predicted higher grades on the final (Brown et al., 1999). High Personal Standard (PS) scores were correlated with higher GPA as well as number of hours spent studying. Those with elevated PS scores were highly invested in getting good grades and employed features consistent with adaptive perfectionism (high PS) to do so. The Concern over Mistakes (CM) subscale was unrelated to GPA but associated with negative affect. CM was also associated with anxiety related to the course grade. When combined with negative beliefs about one’s abilities, high CM scores were associated with more hours studying for the midterm, perceptions of the course as “very difficult,” and greater anxiety and negative mood prior to the exam.

Frost and Marten (1990) compared individuals with high and low degrees of perfectionism on the Frost version of the MPS before, during, and after an assigned
writing task. Participants were randomly assigned to one of two groups based on pressure ascribed to having to rewrite a paragraph from an introductory text. Manipulating the evaluative pressure of the task was accomplished by telling the higher-evaluative-threat group that their work would be compared to other students across the country. Those with higher levels of perfectionism rated the task as more important and expressed more negative affect before and during the task than those with lower perfectionism. The actual writing of the perfectionistic group, compared to the low-perfectionism group, was rated poorer in quality by college professors. Although the more perfectionistic group reported that they should have done better, these individuals did not report less satisfaction with their performance and said they probably could not have done much more work to improve their essays.

Personal Standards (PS) may reflect a beneficial trait for academic success that includes studying, perceiving courses as meaningful, and receiving better grades. Negative perfectionism traits, however, may negate positive effects of high standards and expectations for academic performance. The CM subscale seemed to best measure maladaptive aspects of academic perfectionism. Though associated with increased frequency of studying, people high on CM also perceived greater course difficulty and higher anxiety and negative mood prior to exams. Perhaps most importantly, high CM was not associated with better grades, which is likely in contrast to expectations of these perfectionistic individuals.

Academic success can also be negatively impacted by procrastination (Flett, Blankstein, Hewitt, & Koledin, 1992), which affects one’s study habits and quality of work. Perfectionists often delay the beginning of tasks with regularity and proclivity.
Horney (1950) described procrastination as an ineffective coping strategy for perfectionists because these individuals find the idea of starting tasks particularly tormenting. Perfectionists avoid this pernicious cycle of obsessing over details required to meet their goals by simply avoiding tasks. Frost and colleagues (1990) similarly considered procrastination to be a coping strategy for avoiding stress from less than perfect performance. Even though one may feel significant pressure by delaying tasks, the stress of getting started and staying on task may be difficult to overcome.

Ferguson and Rodway (1994) reported that six of nine clients with perfectionism evidenced at least some difficulty with procrastination. These clients overworked themselves by accepting too many tasks and obligations. Relatedly, they extended themselves beyond reasonable means by overscheduling their time. Perfectionists may be prone to procrastinate on tasks, which can create even more pressure to complete high quality work under time constraints. Given that many psychopathological, health, and academic problems are associated with perfectionism, the next section discusses perfectionism’s impact in the treatment of various conditions.

Perfectionism in the Treatment of Various Psychopathological Conditions

*Treatment Impediments*

Researchers have found that the need to appear flawless also impacts therapy sessions. Perfectionism has been associated with difficulties establishing a good therapeutic working relationship and poor treatment response (Flett & Hewitt, 2002). Perfectionism is also predictive of nonadherence to medical regimes and undermines various forms of medical and mental health treatment (Blatt et al., 1998). According to
Flett and Hewitt, perfectionists cling to excessively high standards, even in therapy. In fact, entering therapy to receive help from others may be perceived as admission of failure (Nadler, 1983). Perfectionists are thus less likely to seek assistance for mental health concerns.

People do not generally seek treatment for perfectionism per se but for other psychological or relationship difficulties that may be heavily influenced by perfectionism (Halgin & Leahy, 1989). Once in therapy, perfectionists may still uphold an image of high standards and striving to reach perfection. Perfectionists may present themselves somewhat disingenuously as the “ideal patient” (Hollender, 1965) and avoid honest and open self-disclosures. According to Sorotzkin (1998), such individuals try to appear as “perfect emotional specimens” with no anxiety, fears, conflicts, or other blemishes. Kawamura and Frost (2004) noted that the person to whom disclosures are made is important. Individuals are less willing to share their personal difficulties with family and friends than with a counselor. Kawamura and colleagues (2001) similarly noted that those scoring higher on maladaptive aspects of perfectionism concealed personal information that could be construed as negative or embarrassing. Perfectionists tend to remain in therapy longer than non-perfectionists (DiBartolo et al., 2001). This may be related to a perfectionistic desire to be perceived as striving for excellence, even in treatment. Blatt and colleagues (1995, 1998) noted, however, that staying in therapy longer does not necessarily translate to desirable treatment responses.

Perfectionistic standards and goals can limit what an individual considers successful treatment (Sorotzkin, 1998). When presented with challenging feedback in therapy, perfectionists may have difficulty acknowledging constructive criticisms (Ferguson &
Rodway, 1994) and become frustrated that their imperfections are discernable to others. Perfectionists who are highly self-critical may feel vulnerable on matters of self-control and self-worth. These issues can be particularly sensitive when they inevitably arise in therapy and may lead to resistance (Blatt, 1995).

Blatt (1995) found that high degrees of perfectionism disrupted effective therapeutic response during brief treatment for depression. Perfectionism Subscale scores of the Dysfunctional Attitudes Scale were related to poorer treatment outcome at termination and 18-month follow-up (Blatt et al., 1995, 1998). Furthermore, pretreatment perfectionism predicted significantly lower improvement at posttreatment (Zuroff, Blatt, Krupnick, & Sotsky, 2003). Perfectionists were vulnerable to depression in response to stress during the 18-month follow-up period.

**Treating Perfectionism in Other Psychological Conditions**

**Perfectionism in the treatment of depression.** Maladaptive perfectionism is commonly associated with depression. Whether this relationship is causally determined or interactive is unknown (Shahar et al., 2003). Perfectionistic styles of thinking, as quantified by the Perfectionism Subscale of the Dysfunctional Attitudes Scale (Weissman & Beck, 1978), have been shown to be disruptive factors in cognitive-behavioral therapy, interpersonal therapy, imipramine antidepressant with clinical management, and placebo medication with clinical management for depression (Blatt et al., 1995).

Blatt and colleagues (1995) conducted 12-16 weeks of treatment using one of the four aforementioned techniques. Treatment conditions were randomly assigned using a double-blind strategy to counter demand effects. Those with depression and elevated perfectionism at pretreatment evinced poorer improvement throughout and at the
conclusion of all treatment conditions compared to those with lower levels of perfectionism. Elevated perfectionism predicted poorer general functioning and social adjustment. This effect was upheld at 18-month follow-up by patients, therapists, and clinical evaluators (Blatt et al., 1998).

Two mitigating factors were offered by Blatt and colleagues regarding negative effects of perfectionism on depression treatment: client contribution to the therapeutic alliance and quality of the client’s social relationships (Zuroff et al., 2000). Pretreatment perfectionism predicted a less positive social network and difficulties developing and maintaining a good therapeutic relationship (Shahar et al., 2004). Shahar and colleagues (2003) surmised that those with less satisfactory social relationships will have trouble beginning and contributing to the therapeutic process. According to Shahar and colleagues (2004), the client’s skill at navigating and positively contributing to a therapeutic relationship will directly impact social relationships with friends and family. Improved social support will likely lead to better coping and decreased perfectionistic thinking and depression.

Blatt’s research group offered several explanations why perfectionistic tendencies interfere with therapeutic alliance. Shahar and colleagues (2003) noted that perfectionistic thinking may represent an underlying cognitive vulnerability for later depression. Interpersonal problems of perfectionists that affect strong working relationships with therapists may be due to negative internal schemas. Perfectionists with depression may affix negative self-critical valences to their own efforts and become frustrated when others do not meet perfectionistic expectations. Shahar (2001) believed
that negative expectations cultivate a perfectionist’s “depressogenic” social environment that maintains a negative worldview and contributes to relationship difficulties.

Blatt (1995) argued that effective therapy with perfectionists with depression requires substantial time before deeply rooted negative and self-critical mental representations can change. Blatt thought perfectionists had an “introjective” form of psychopathology that encompasses problems of self-definition, self-control, and self-worth. Long-term psychodynamic therapy was recommended to effectively address and modify perfectionistic attitudes. The author estimated that long-term psychodynamic therapy will be more effective than brief therapy such as CBT, interpersonal therapy, and medication, which appeared ineffective in early studies (Blatt et al., 1995). Long-term psychodynamic therapy, compared to other brief treatments, may allow a well-developed therapeutic relationship to be a central factor in reducing self-critical perfectionism.

Progress of sessions and degree of perfectionism are critical to quality of the therapeutic relationship and overall success of treatment (Blatt, 1995; Blatt et al., 1996; Blatt et al., 1998; Zuroff et al., 2000). Blatt (1995) noted that individuals benefited differentially from therapeutic alliance depending on degree of perfectionism. Ratings of quality of the therapeutic relationship given by individuals after the second session predicted outcome. For those with high and low degrees of perfectionism, quality of the therapeutic relationship only marginally predicted therapeutic gains. Those with moderate perfectionism had gains that were significantly linked to quality of therapeutic relationship.

Individuals with lower perfectionism are likely to demonstrate improvement independent of therapeutic relationship (Blatt, 1995; Blatt et al., 1996). People with high
perfectionism may have persistent negative mental representations of self and others that likely limit benefits of the therapeutic relationship. Moderate levels of perfectionism, however, appear more amenable to the impact of a strong therapeutic alliance. However, the effects of such an alliance on treatment outcome may be time sensitive.

Blatt and colleagues (1998) found that negative effects of perfectionism became apparent after the midway point of 16-week treatment. Progress waned between weeks 9-12 for individuals with moderate and high degrees of perfectionism. People with lower perfectionism demonstrated continual improvement. The authors hypothesized that, as therapy was ending, those with higher levels of perfectionism experienced disappointment and a sense of failure that their distress had not decreased as much as expected. Compared to non-perfectionists or those with low levels of perfectionism, individuals with higher perfectionism may find periodic disruptions in therapy to be particularly difficult. These individuals may interpret normal fluctuations in the flow of therapy as signs that the therapist does not understand them.

Social phobia treatment and perfectionism. Few researchers have measured and attempted to change perfectionism among individuals with social phobia. Rosser and colleagues (2003) did not explicitly address perfectionistic beliefs in social phobia treatment, but perfectionism was measured. CBT-oriented groups were conducted for 61 outpatients with symptoms of social phobia. A manualized treatment was employed that included psychoeducation, individual exposure hierarchies for practice and in vivo tasks, and adjusting estimations of negative probabilities in social situations. The groups were fairly successful in treating social phobia over seven weeks.
Concern over Mistakes (CM) and Doubts about Actions (DA) dimensions were associated with pretreatment social phobia symptom severity (Rosser et al., 2003). After controlling for depression and neuroticism, pretreatment social anxiety and DA were significant predictors of posttreatment social anxiety. The authors surmised that CM and social phobia may overlap because intense fear of negative evaluation may be common to both. On the other hand, DA was independent of social phobia. Individuals who experience excessive doubts about their actions try to promote a good impression on others, while people with social phobia doubt their ability to do so.

Lundh and Öst (2001) recruited 24 patients with social phobia and randomly assigned each to one of three cognitive-behavioral treatment conditions: 12 individual sessions ($n = 9$), 12 group sessions ($n = 10$), and a self-treatment manual for three months ($n = 5$). For all groups, level of perfectionism decreased. Treatment responders' perfectionism was reduced to that of normal controls. Those who did not respond significantly to treatment had higher pretreatment perfectionism scores. However, these people showed decreased perfectionism to levels matching pretreatment ratings in the treatment responsive group.

Two dimensions of the MPS differentiated responders from non-responders. These included Personal Standards and Parental Expectations, two aspects of perfectionism that are not typically elevated among people with social phobia. The Parental Criticism dimension of the MPS also decreased following CBT, another atypical result because people were not expected to change opinions about their parents following brief treatment. The authors noted that those non-responsive to treatment might have unique aspects of perfectionism such as inflexible standards that made treatment more difficult.
for them. Unfortunately, Lundh and Öst (2001) did not specify which cognitive-behavioral treatment conditions reduced social phobia or perfectionism. Instead, data were grouped broadly into treatment responders versus non-responders. Still, cognitive-behavioral strategies for treating social fears also clearly affected aspects of perfectionism. These results support the idea that aspects of perfectionism and social phobia overlap as well as use of CBT to reduce perfectionistic thinking.

Perfectionism related to the treatment of OCD and obsessive-compulsive spectrum disorders. Perfectionism appears to be a factor that complicates OCD treatment (Shafran & Mansell, 2001). Frost and colleagues (2002) contended that perfectionism may interfere with one’s endurance during exposure tasks and cognitive therapy. These authors recommended that successful treatment of OCD should target perfectionistic thinking. Sookman and Pinard (1999) utilized integrative cognitive therapy to address nine domains of OCD, including perfectionism. Among treatment-resistant cases, integrative therapy decreased OCD symptoms, depression, and dysfunctional thoughts. However, specific changes in perfectionism were not reported.

An intervention component addressing perfectionistic tendencies has been suggested to treat obsessive-compulsive spectrum disorders such as trichotillomania (excessive hair pulling), skin picking, and nail biting (Penzel, 2000). A single case study of trichotillomania specifically involved perfectionism as a treatment component (Pélisser & O’Connor, 2004). A 23-year-old female college student with excessive hair pulling was treated for 18 sessions via habit reversal training and modification of perfectionistic expectations. Habit reversal training included education sessions, video and self-monitoring of hair pulling to foster increased self-awareness, identifying specific high-
and low-risk situations, relaxation and breathing exercises, and discussing short- and long-term advantages and disadvantages of pulling hair. Perfectionism was targeted via thought tracking, psychoeducation about how perfectionistic thoughts increase frustration and impatience, and challenging excessive needs for personal organization. Hair pulling decreased from an average of 24 hairs pulled per day to one hair per week at posttreatment. In addition, the client was able to decrease subjective tension following appropriate identification and challenging of perfectionistic thoughts.

*Eating disorders treatment and impact of perfectionism.* Perfectionism may be a predictor of eating disorder symptoms and severity (Bardone, Vohs, Abramson, Heatherton, & Joiner, 2000). In addition, perfectionism is one factor of anorexia nervosa that remains significantly elevated following weight restoration (Bastiani et al., 1995; Srinivasagam et al., 1995). Pliner and Haddock (1996) examined women highly concerned with their weight and women unconcerned about weight. These groups were asked to describe numerous uses for everyday objects (e.g., brick, ashtray). Over ten trials, women were given false feedback regarding success or failure of the task. Compared to women unconcerned about weight, women concerned about weight displayed excessively high standards of themselves and others and were more sensitive to positive and negative feedback. Sutandar-Pinnock and colleagues (2003) examined perfectionism in 73 women who had undergone four weeks of inpatient treatment for anorexia nervosa. Women with lower pretreatment perfectionism scores on the Eating Disorder Inventory-2 (Garner, 1991) had better treatment response than those with higher perfectionism. This effect continued to be evident at 16-week follow-up. Those with higher perfectionism responded poorly to treatment, especially in a group format where
individuals were expected to share imperfections with others. The authors hypothesized that perfectionistic standards impair one’s ability to shed treatment-resistant beliefs about perfect appearance and disordered eating behavior.

Goldner and colleagues (2002) noted that perfectionism severely limits the development of a therapeutic alliance necessary for effective treatment. A perfectionistic “all-or-nothing” thinking style (e.g., even a minor blemish or normal skin pocket is equated with physical ugliness) and proneness to seek and find evidence of personal failure may also interfere with treatment. Goldner and colleagues recommended teaching individuals to direct perfectionistic demands away from weight and onto more constructive school or work tasks. Similarly, Bardone et al. (2000) discouraged perfectionism as a main goal of treating individuals with eating disorders. Because perfectionism has a potential benefit in achievement striving, eliminating this drive might lower striving to meet healthy goals in areas other than physical perfection. Instead, Bardone and colleagues suggested using CBT or interpersonal therapy to address body dissatisfaction and low self-esteem, while redirecting perfectionistic standards toward more healthy endeavors.

Perfectionism was largely addressed as an adjunct to treatment in many studies. Some strategies aimed at perfectionism, however, were tailored to each specific condition, such as self-critical perfectionism in depression, fears of social evaluation in social phobia, and physical standards with eating disorders. The next section will discuss prominent theories of perfectionism treatment.
Theories of Perfectionism Treatment

Pharmacological Treatment

Blatt (1995) noted that pharmacological and psychological interventions do not generally reduce self-critical perfectionistic tendencies. Reda, Carpiniello, Secchiaroli, and Blanco (1985) examined perfectionism in 60 people receiving medication for depressive symptoms. Many dysfunctional attitudes were reduced following medication for depression but perfectionistic beliefs, particularly fear of making mistakes, remained up to one year following treatment. Blatt and colleagues (1998) also noted that perfectionism predicted nonadherence to medication regimes and poor treatment outcome.

Psychodynamic-Interpersonal Therapies

Several authors (Ashby & Kottman, 1996; Horney, 1950; Rom, 1971) link perfectionism with negative psychological conditions vis-à-vis inferiority. For people with neurotic perfectionism, feelings of inferiority may develop into distressing conditions such as depression, anxiety, procrastination, and relationship problems (Ashby & Kottman, 1996). Rom (1971) considered the root of perfectionism to be an inferiority complex in which one overcomes and overcompensates for perceived weaknesses. Rom recommended that therapists encourage insight into an individual’s inferiority feelings and offer training to navigate tasks in a more flexible and relaxed manner.

Blatt and colleagues’ research on perfectionism led to recommendations for long-term, psychodynamic-interpersonal therapy for individuals with depression and perfectionism. Blatt (1995) suggested that perfectionists over-identify with harsh and judgmental figures such as parents and incorporate parental criticism as an indicator of
self-worth. Blatt recommended that treatment help a person revise identifications with
critical and demanding parental figures and experience a healthy, nurturing relationship
with the therapist. Blatt recommend long-term intensive psychodynamic therapy to
address ingrained perfectionistic beliefs. Although no controlled outcome treatment data
are currently available, Blatt summarized anecdotal evidence regarding the effectiveness
of this treatment.

Pacht (1984) also believed that a perfectionistic value system is linked to one’s
parents, so clients require assistance separating from parental figures and developing a
strong sense of themselves independent of parent values. Pacht determined that the
overall goal of treatment for perfectionists is to accept imperfection as a reasonable,
tolerable, and worthwhile outcome of performance. He believed that individuals will
benefit from interpersonal therapy to develop a caring relationship marked by honest
communication. The therapist models acceptance of imperfection within the relationship
with the client and utilizes reparenting strategies. This approach lessens inflexible early
parental demands and demonstrates unconditional acceptance of the client. In the process,
the therapist hopes a client will assume control over their choices and behaviors.

Sorotzkin (1998) offered suggestions from an object relations approach for treating
adolescents with religiously oriented perfectionism. He stated that religious perfectionism
evolves from moral grandiosity that was likely a reaction to an early narcissistic injury.
Following this early critical incident, an individual dichotomizes self-worth into good and
bad aspects, with religious perfection being the pinnacle of good. In therapy, the
individual recalls when injury to self-worth was prominent. Illusory perfectionistic
religious standards are replaced with more realistic achievement standards and a less
grandiose moral stance.

Flett and Hewitt (2002) developed an interpersonal approach for perfectionism for
inpatient and outpatient settings. The focus is on interpersonal elements (e.g., need for
approval or concerns of abandonment) behind perfectionism and variables that interfere
with a strong therapeutic alliance. Perfectionistic behaviors (e.g., high, self-critical
standards) are addressed by targeting dynamic and contextual influences that drive and
maintain such behaviors. The goal is to better understand underlying factors of why and
how an individual strives for perfectionism before replacing maladaptive thoughts and
behaviors with healthier alternatives.

Slaney and Ashby (1996) noted that individuals with perfectionism struggle with
weighing pros and cons of their perfectionism. Most found their perfectionism distressing
and problematic at times, but nearly all acknowledged positive aspects of perfectionism
such as organization and achievement. Furthermore, no one wanted to abandon
perfectionistic standards even if distress was alleviated. Slaney and Ashby recommended
focusing on this ambivalence with perfectionistic clients, exploring what perfectionism
means to them, and discovering what is distressing about perfectionism. Clients could
then investigate, from a more educated basis and in a supportive relationship, how they
feel about discarding perfectionistic qualities.

White (1988) outlined a predominantly psychodynamic blend of therapy utilizing
imagery with people who chronically procrastinate. Clients learn to understand and
acknowledge dynamics of personality characters. These characters include the Nag, who
harasses and reminds the client of things left unfinished, the Critic, who identifies flaws
and forecasts failure, and the Child, an internal representation of parents. The impact and protective functions served by each character are acknowledged and the client integrates the actions of each into more helpful and appropriate aspects of his sense of self. The client is encouraged to address these internal characters through visualization and interacting with each to learn about their motivations, fears, and angers. Each character is also assigned an imaginary form and voice. This imagery is expected to help clients identify and address self-defeating, critical self-statements and practice adaptive behaviors to replace procrastination.

*Cognitive-Behavioral Therapies*

Perfectionism appears to be a long-standing personality style that is resistant to change and unlikely to decrease if not the explicit focus of treatment (DiBartolo et al., 2001). Perfectionistic striving is often perceived by perfectionists as advantageous (Flett & Hewitt, 2002; Slaney & Ashby, 1996). For those who find perfectionism rewarding, treatments may be viewed as unwanted and unhelpful unless considerable distress is felt. In behavioral terms, this perfectionistic cycle is likely maintained by intermittent reinforcement (Penzel, 2000). Occasional situations occur in which one experiences success that closely approximates perfection and strong satisfaction. However, such situations are almost always short-lived, but the sense that success has occurred and could happen again keeps individuals from seeking treatment to change the behavior.

Beck, Rush, Shaw, and Emery (1979) found that asking clients to list and weigh advantages and disadvantages of perfectionistic beliefs increased recognition that excessive, inflexible standards are associated with negative consequences and should be altered. Rasmussen (2005) treated clients with compulsive personality styles, similar to
perfectionism, using cognitive therapy to address rigid thinking. Rasmussen specifically recommended helping clients process information from novel perspectives to allow them to see that, by maintaining dysfunctional thinking styles, they are primed for distress rather than success.

Cognitive-behavioral therapy (CBT), which emphasizes correcting faulty thought processes and behavioral patterns, is an empirically validated treatment for psychological disorders such as depression (Craighead, Craighead, & Ilardi, 1998) and social phobia (Barlow, Esler, & Vitali, 1998). CBT techniques such as cognitive restructuring may help individuals with maladaptive perfectionism understand and develop problem-focused coping skills to decrease perfectionistic attitudes, beliefs, and behaviors (Flett et al., 1994). Ferguson and Rodway (1994) noted that typical CBT strategies may help reduce perfectionistic thinking and related problems. Specific strategies include educating a client about perfectionism and related problems, addressing faulty thought patterns and developing adaptive coping statements, relaxation, and role play to resolve relationship difficulties. Frost and colleagues (1997) suggested that addressing faulty assumptions about perfectionism, particularly excessive rumination about mistakes, could be expedited by having clients track concerns and reactions to mistakes in a journal.

Burns (1980) offered a cognitive-behavioral treatment strategy for treating perfectionism. He noted that a Socratic questioning style can be effective to counter self-defeating perfectionistic attitudes. Burns offered a step-by-step attitude retraining model to alter motivational, cognitive, and interpersonal aspects of perfectionism. According to Burns, a highly structured treatment format may seem paradoxical for treating overly
structured perfectionistic individuals, but such methods leave clients with a more relaxed and spontaneous outlook and improvements in mood.

Burns (1980) suggested five specific strategies to change perfectionistic thinking. First, clients are instructed to list advantages and disadvantages of trying to be perfect. Burns noted that treatment will be ineffective unless a client acknowledges that perfectionism is problematic and that change is necessary. Second, clients are directed to complete a “Pleasure-Predicting Sheet” to estimate how satisfying an activity will be. The client later records how satisfying an activity actually was and estimates performance efficacy. Similar to an exposure hierarchy, clients perform various tasks that have little or no potential for satisfaction and those that are completely satisfying. A client should see that perfect performance is not necessary or desirable to find a task rewarding.

The third strategy is designed to change dysfunctional dichotomous thinking. Clients rate a wide range of daily situations by all-or-nothing categories (e.g., “Is this person completely bad or good?” “Is that room completely clean or dirty?”). Clients then substitute more realistic appraisals for these situations. Clients also keep a record of automatic, self-critical thoughts and explore ways to test these thoughts for factual evidence. Because perfectionists often fear rejection for less than perfect performance, one experiment might include purposefully making mistakes and gauging reactions of others. The fourth strategy addresses interpersonal aspects of perfectionism by training a client in “verbal judo” (p. 52). A client learns and practices ways to respond to criticism from others and self. By employing empathy instead of anger toward a critic or trying to find some truth in criticism, a client learns strategies to cope with criticism. The therapist often uses role play to demonstrate how to deflect such criticisms. The fifth strategy is to
aim for average performance in tasks rather than perfection. According to Burns, clients usually feel their perfectionism is responsible for their successes. As clients practice achieving average outcomes on tasks, they may see that success has more likely been achieved in spite of perfectionism. As an individual becomes accustomed to accepting average outcomes, substantial pressure is relieved and the quality of his work may improve.

Besser, Flett, and Hewitt (2004) recommended that interventions for treating perfectionism should help a client become more flexible in setting and attaining goals, including learning to appreciate a job done adequately. According to Blankstein and Winkworth (2004), the appraisal process of perfectionists is often misdirected such that negative, self-critical aspects of performance are weighed substantially more heavily than positive or neutral facets of performance. This flawed appraisal process often leaves individuals vulnerable to dysphoria. Blankstein and Winkworth recommended attributional retraining to help clients more accurately appraise causes of distress and personal control needed to change undesirable events. Clients are helped to generate different ways to view, manage, and cope with situations that trigger stress.

Ellis noted that Rational Emotive Behavior Therapy is effective as a long-term treatment for decreasing perfectionistic beliefs because the therapy operates on cognitive, emotive, and behavioral levels (Ellis, 2002). According to Ellis, no single strategy of combating irrational beliefs will be convincing enough for perfectionists. He instead recommended several techniques to address each level. Furthermore, Ellis noted that CBT groups may be better suited for treating perfectionism than individual therapy because groups offer exposure to other individuals with perfectionism, opportunity to
share and learn from others with a similar condition, and accountability among group members to participate and complete therapy activities.

Lundh (2004) suggested that therapy should promote positive forms of perfectionistic striving in place of maladaptive perfectionism. The goal of therapy is not to decrease striving but to refocus goal-setting so strivings are not aimed at demands for inflexible outcomes. Positive perfectionism can be thought of as a "dialectical combination" of striving for excellence and accepting less than perfection. His approach combines elements of Dialectical Behavior Therapy and Acceptance and Commitment Therapy. In Dialectical Behavior Therapy (Linehan, 1993), clients learn that maintaining perfectionistic demands leads to little change. Clients are taught that only two options are available: they can accept continued pain and distress from maladaptive perfectionism or accept non-perfect performances as more reasonable and desirable outcomes in life. In Acceptance and Commitment Therapy (Hayes, Strosahl, & Wilson, 1999), clients are instructed to cede control over thoughts and feelings. Clients learn to view experiences as neither good nor bad and simply accept them as experiences. With perfectionistic behaviors and habits, clients are helped to find problem-focused solutions to replace negative behaviors with positive ones.

Integrative Therapies

Several authors have argued that different strategies should be adapted to target particular aspects of maladaptive perfectionism. Flett and Hewitt (2004) noted that perfectionism reflects a complex interaction of cognitive, emotional, interpersonal, and behavioral facets that requires a similarly complex treatment approach. Cognitive-behavioral strategies may be blended with interpersonal therapy techniques, for example,
to address perfectionistic thoughts and beliefs and a client’s perfectionism-driven relationship dynamics. A therapist may explore relationship dynamics and emotional distress affected by perfectionism, while appropriately timing CBT interventions to institute action-oriented strategies for perfectionistic thinking.

Flett, Greene, and Hewitt (2004) examined the relationship between perfectionism and anxiety sensitivity, or the fear of physical symptoms of anxiety (Reiss, 1991; Reiss & McNally, 1985). A combination of cognitive-behavioral and interpersonal therapy for perfectionism was suggested. These authors felt that fear of cognitive dyscontrol, or fear of inability to control thoughts and behaviors during a stressful event, should be the first target of treating distressed perfectionists. Flett and colleagues recommended addressing anxiety sensitivity and related thoughts using cognitive restructuring to lower anxiety about uncontrollable thoughts regarding personal perfection. Therapists should use the therapeutic relationship as a model to lessen the importance clients place on appearing flawless to others and their expectations of dire consequences from imperfections. Flett and colleagues said clients may also benefit from an emotion-focused treatment strategy to gain awareness, expression, and acceptance of emotional reactions related to anxiety and perfectionism.

Halgin and Leahy (1989) utilized “pragmatic blending,” or a combination of theories and techniques tailored to an individualized treatment plan, to address perfectionism. Though cognitive and behavioral consequences are apparent in this population, early life experiences that contribute to developing and maintaining perfectionistic thoughts and behaviors should be examined. One such pragmatic blend includes psychodynamic-interpersonal, person-centered, and cognitive-behavioral strategies. The authors
recommended that therapists use the relationship with a client to understand his interpersonal relationship dynamics. The therapist should investigate and share with the client unconscious, unresolved issues that produce self-defeating thoughts, attitudes, and behaviors. Because early interactions with parental figures may influence the development of perfectionism, Halgin and Leahy suggested that clinicians examine transference reactions. Clients are also guided to a corrective emotional experience in which a therapist's unconditional positive regard of the client counters earlier conditional approval by parents. Cognitive-behavioral aspects of this treatment focus on psychoeducation, stress reduction, role modeling less perfectionistic approaches to tasks, and cognitive restructuring. Halgin and Leahy recommended cognitive restructuring to teach clients to observe and track internal dialogue and replace faulty cognitive patterns with a more realistic and accurate thinking style.

Adderholdt-Elliott (1991) offered suggestions for teachers and counselors working with gifted adolescents with perfectionism. Initial treatment involves psychoeducation via group activities. This also includes bibliotherapy, or reading homework, to complete between sessions or class time. Predominantly cognitive-behavioral in nature, the author noted that treatment might work best in group or workshop formats. Recommended CBT strategies include examining self-talk, engaging in role play, and teaching coping skills such as relaxation and creative visualization (i.e., visualizing desirable changes and a scene in which such behaviors take place). Some of these activities can be done in a classroom setting using creative games such as a "procrastinate" card game to increase knowledge about how and why people procrastinate and develop strategies to overcome this temptation. The author also recommended Glasser's (1975) Reality Therapy to help
adolescents stop ruminating over matters they cannot change and, instead, focus on future goals.

Addlerholdt-Elliott (1991) noted a key task is to help a client shift from external praise from others as evidence of self-worth toward an internal locus of control where the adolescent is the only arbiter of self-worth. The author noted that humor, particularly teaching teenagers to laugh at their own mistakes, can help decrease demands of always being perfect. The author also recommended that each individual complete at least one creative task without self-criticism.

Ashby, Kottman, and Martin (2004) used play therapy to treat children with perfectionism. This therapy also combined psychodynamic-interpersonal and cognitive-behavioral treatments. The authors contended that high standards should be redirected rather than eliminated in treatment. Ashby and colleagues noted that therapy should focus on aspects of perfectionism that lead to distress, such as self-critical judgment and poor tolerance for making mistakes. Cognitive-behavioral tasks addressed by the play therapist include recognizing self-defeating themes in play behaviors, reacting less to perceived criticism from others, cognitive restructuring, moderating attitudes towards cleanliness and orderliness during play, teaching and practicing strategies to cope with anxiety, and building greater tolerance for mistakes. In-session exposure exercises, such as giving a messy art assignment to a child with strong cleanliness and organizational tendencies, can also be useful.

Ashby and colleagues (2004) also supplemented CBT strategies with Adlerian and interpersonal techniques to help children develop insight and communicate about their perfectionism. This can be accomplished using humor and therapeutic metaphors. One
commonly used Adlerian metaphor is teaching children not to "spit in their soup" by constantly attending to self-defeating thoughts (i.e., not ruining one's mood with negative thoughts). The authors also recommended narratives, or stories about other children or animals with similar difficulty with perfectionism, to help children think about perfectionistic standards.

Treatment Studies Solely Emphasizing Perfectionism

People with perfectionism do not usually seek help to reduce perfectionism per se but rather related conditions such as depression or anxiety (Flett & Hewitt, 2002). Slaney and Ashby (1996) noted that individuals have difficulty abandoning what they perceive as helpful and adaptive features of perfectionism in favor of reducing stress caused by problematic perfectionism. Given lackluster success in targeting and ameliorating perfectionistic symptoms during depression and anxiety treatment, DiBartolo et al. (2001) argued that perfectionism needs to be targeted explicitly. This applies when other disorders are presenting concerns for treatment because perfectionism might have to be addressed prior to, or concurrently with, other clinical symptoms to ensure a reasonably effective outcome. The following section outlines treatment outcome research to reduce maladaptive perfectionism.

Individual Treatment Approaches to Perfectionism

Moore and Barrow (1986) addressed perfectionistic thinking in college students using cognitive-behavioral strategies. Performance-dependent self-worth was conceptualized as a central, core factor of a perfectionistic cognitive style. These authors contended that problematic perfectionistic thoughts and attitudes need to be relearned via feedback,
modeling, and developing and practicing coping skills. The authors suggested that helping a person learn that self-worth is independent of task performances is one of four treatment goals. The other three goals include helping one better estimate standards and goals, increase tolerance for unmet goals, and improve cognitive coping processes so initial perfectionistic reactions are better managed.

The first phase of Moore and Barrow's (1986) treatment consists of assessment, with particular emphases on history of perfectionistic cognitive thinking and academic- and performance-related family history (i.e., familial expectations placed on a student). Such information is used to pinpoint perfectionistic self-talk in the next therapy phase. This second treatment phase blends assessment with increasing awareness of perfectionistic thoughts, clichés (e.g., “Practice makes perfect”), and “should” self-statements. A person is also educated about difficulties and distress related to perfectionistic thoughts. Students practice and complete homework assignments such as a “Perfectionist Worksheet,” which details situations where problematic perfectionistic thinking has occurred via Ellis’ A-B-C (antecedent, beliefs, consequences) model of cognitive tracking.

The third treatment phase involves cognitive restructuring of perfectionistic thinking. This process extends the “Perfectionist Worksheet” to examine advantages and disadvantages of perfectionistic cognitions and dispute negative, perfectionistic self-talk. Therapeutic exercises are also recommended. A person might be given a paradoxical “Do it perfectly” exercise that entails having him choose a future event in which perfect performance will be desired and counterintuitively commit to obtaining the unrealistic high standard. The paradoxical effects of telling one to do the very thing he is trying to overcome can create cognitive dissonance that might briefly disrupt his self-defeating
thought system. This also enables a person to gain better perspective on the strength of unreasonable perfectionistic demands, particularly when instructed to comply with excessive and inflexible standards. A person may also address significant others who helped develop ingrained perfectionistic thoughts. Such exercises include role play, empty chair technique in which one imagines the important person sitting in an empty chair, or composing a letter to someone believed responsible for one’s pressures and expectations. For someone to understand that dire consequences are not likely and that realistic consequences are bearable, a therapist might have him perform tasks where he is unlikely to perfectly succeed.

The final phase of treatment involves reflecting on changes a person has made, maintaining gains, and terminating treatment. Moore and Barrow (1986) recommended having a person establish self-rewards for meeting realistic goals. Although no direct data are available regarding treatment outcome, the authors reported that most people responded positively to the therapy experience.

A more empirical cognitive-behavioral treatment study (Ferguson & Rodway, 1994) specifically geared toward perfectionism was conducted on nine adults. Each client was chosen on the basis of scoring higher than 20 on Burns’ (1980) Perfectionism Scale. Cognitive strategies were used to help clients identify and examine automatic thoughts and develop coping statements to combat and restructure these thoughts. The authors utilized several tools in their treatment phase, such as having clients maintain thought logs, discuss pros and cons of perfectionistic thoughts, receive education about perfectionism and cognitive distortions, and complete and practice a thought tracking exercise. Key interventions to reduce perfectionistic behaviors included role playing,
progressive relaxation, and having clients take risks by exposing themselves to imperfect situations.

The baseline phase in Ferguson and Rodway's (1994) study consisted of measurements twice per week for 3-4 weeks using the Burns Perfectionism Scale (Burns, 1980). A measure of irrational beliefs was also employed in addition to a self-anchored scale to measure intensity of thoughts and feelings. The intervention phase lasted 7-8 weeks and weekly measurements were taken. A follow-up assessment was conducted three weeks post-treatment. Perfectionistic thoughts and related beliefs and feelings in all clients were reduced and gains were maintained at 3-week follow-up.

DiBartolo and colleagues (2001) utilized brief CBT to reduce concerns about making mistakes during a speech performance task. Based on Concern over Mistakes (CM) scores, 30 women were placed into high or low CM groups. From each of those groups, half were assigned to brief training in cognitive restructuring and half completed a distraction task.

After establishing baseline measures of perfectionistic concern over making mistakes (CM), mood, and subjective units of distress (SUDS), participants gave a speech for 10 minutes regarding abortion, seat belt laws, the health care system, corporal punishment in schools, or nuclear power. Students then provided SUDS ratings and answered questionnaires regarding the importance of giving the speech well and how they expected to perform compared to others. Students were given 3 minutes to prepare what to say in their speeches. SUDS ratings were recorded again at the end of the preparation phase. An 8-minute training phase was conducted for each group. Depending on the group to which they were assigned, students were briefly introduced to cognitive restructuring or a
distraction task that involved crossing out "e’s" in a textbook. SUDS ratings were obtained at the beginning and end of each training session.

The cognitive restructuring group addressed three target areas. The first target focused on overestimating the likelihood that feared expectations (e.g., performing poorly on the speech task) would occur. Students were encouraged to calculate the percentage of times the full feared outcome occurred in the past. The second target was aimed at "decatastrophizing," or having a student view the feared outcome more realistically (e.g., comparing the worst case scenario on the speech to other real life events such as failing a course or losing a loved one). The last target emphasized a coping thought or statement to be used when highly anxious. This statement was written on an index card and later taped to the speech podium for reference.

The actual speech was 10 minutes and students performed their speech before two student volunteers who portrayed no emotion and took notes on the speech. The student volunteers later rated the quality of the speech. Participants provided SUDS ratings during each minute of the speech. SUDS ratings were also obtained at the conclusion of the speech and continued each minute for five minutes (or when the participant’s anxiety reached the baseline level) while questionnaires were given to assess mood and student ratings of the quality of the speech. Each participant was contacted via mail one week following the speech. Ratings of the quality of the previous week’s speech were obtained, as were ratings of how much each person continued to be troubled by thoughts about the speech.

Women in the high concerns over making mistakes (HCM) group rated their abilities and distress regarding the speech as worse than women in the lower concerns over
making mistakes (LCM) group, even one week after the speech. No differences were found for audience ratings of the speech or speaker anxiety ratings. Cognitive restructuring effectively reduced ratings of probability and perceived horribleness of the feared outcome, while subjective anxiety ratings decreased and coping ability ratings increased. This effect was particularly noteworthy for the HCM group, which declined more dramatically on ratings of anxiety, probability, and horribleness.

Compared to the LCM group, women in the HCM group still had significantly higher ratings of negative affect before and after the speech. DiBartolo and colleagues (2001) noted that cognitive restructuring may not have decreased the frequency of negative thoughts, but perhaps affected the believability of such thoughts. Given the high comorbidity of social anxiety with perfectionism, cognitive restructuring may have influenced aspects of social anxiety more than perfectionism. The authors noted that, despite the potentially limited short-term impact on cognitive and mood variables, the treatment showed promising success.

Group Therapy Approaches

Some authors note that group therapy holds certain advantages over individual therapy for perfectionism. Ellis (2002) noted that groups provide more opportunities and expectations to share experiences with others. Barrow and Moore (1983) asserted that structured CBT groups can be effective for treating and preventing perfectionistic thinking. Barrow and Moore’s CBT group approach was virtually identical to their (Moore & Barrow, 1986) individual CBT approach for treating perfectionistic thinking. The authors noted that both approaches were similarly effective in reducing perfectionistic thinking.
Barrow and Moore (1983) did not report a specific time frame for group treatment or recommendations regarding the size or exact format of the group. The authors anecdotally noted efficacy in seven university students with problematic perfectionistic thinking. Five people reportedly achieved goals identified at the onset of treatment. On a scale from -1 ("became worse") to +4 ("goal completely met"), with 0 being "no change," mean goal attainment was 2.00 ("goal met to some degree"). Barrow and Moore suggested that, because the group was an introduction to treatment for many of these students, moderate achievements were realistic. Students also reportedly benefited from increased understanding of perfectionistic tendencies and coping skills.

Broday (1989) reported the effectiveness of a 4-week, predominantly CBT group for treating perfectionism. Five students who met criteria for perfectionism on Burns' (1980) Perfectionism Scale were chosen and met for 90 minutes per week. The group was semi-structured and collaborative so group members could explore, discuss, and learn how perfectionistic problems affected each member.

Broday (1989) outlined four goals to be accomplished, one goal per session. During the first week, group members were introduced, expectations about therapy were explored, individual and group goals were discussed, and psychoeducational topics such as describing the difference between high achievers and perfectionists were presented. The second session continued the psychoeducation focus, examining the etiology of perfectionism and deleterious problems related to perfectionism. The third session highlighted cognitive features, or how thoughts, feelings, and behaviors are interrelated. The final session involved continued cognitive work as clients elaborated coping skills and rephrased negative perfectionistic thoughts. Broday reported that mean scores on
Burns’ Perfectionism Scale decreased from 31.4 (of 40) at pre-treatment to 21.5 at post-treatment. In addition, post-treatment surveys indicated that all students accomplished the majority of their goals and rated each session as equally important to overall treatment success.

Richards and Owen (1993) conducted a treatment group at Brigham Young University with 15 Mormon students with excessive preoccupation with religious perfection. The authors reportedly based their study on the idea that some orthodox Christian religious ideologies exacerbate perfectionistic tendencies. These authors noted that some Mormon students were interpreting certain scriptures as calls to be morally perfect. The Burns Perfectionism Scale (1980) was used to establish severity criteria. Depression, self-esteem, and religious and existential well-being were also measured at pre- and post-treatment. A predominantly educational format based on cognitive-behavioral theory was used with a religious-spiritual component for 8 weeks. The first five weeks were structured and educational while the final three weeks were based on support and exploration.

During the initial educational sessions, group participants discussed and received instruction about the relationship between perfectionistic and religious beliefs and ideals. Religious articles and texts were reading assignments. Participants were also taught relaxation strategies that were later combined with imaginative exposure to religious imagery. Final sessions offered students time to reflect and discuss feelings and experiences with perfectionism. Individuals showed significantly less perfectionism and depression at post-treatment. Existential well-being was significantly improved and positive, though statistically nonsignificant changes on religious well-being were found.
Although the authors could not specifically disentangle potentially excessive religious aspects of perfectionism from other elements of perfectionistic thinking, they noted that a short-term, primarily cognitive-behavioral group therapy can effectively decrease problematic perfectionism and related distress.

Summary

Perfectionism has been associated with various forms of psychological distress and can hinder effective therapy. High perfectionism interferes with developing a therapeutic relationship (Blatt, 1995; Flett & Hewitt, 2002; Shahar et al., 2004) and is resistant to strategies for correcting dysfunctional beliefs, attitudes, and behaviors (Ferguson & Rodway, 1994; Kawamura et al., 2001; Sorotzkin, 1998). Despite a breadth of concomitant conditions impacted by perfectionism, few empirical research studies have specifically addressed this condition. The primary goal of the proposed study was to decrease perfectionistic thinking during a brief cognitive-behavioral workshop.

Although Blatt (1995) asserted that long-term psychodynamic treatment is the best approach for perfectionism, only anecdotal evidence has corroborated this claim. Evidence has supported individual and group cognitive-behavioral treatment (CBT) for perfectionism. However, most researchers used small, uncontrolled samples. Barrow and Moore outlined group (Barrow & Moore, 1983) and individual (Moore & Barrow, 1986) CBT to reduce perfectionistic thinking but did not provide empirical evidence. Broday (1989) noted significant decreases of perfectionism ratings by five participants of a 4-week CBT group. Richards and Owen (1993) employed an 8-week CBT group with a spiritual and religious orientation for 15 Mormon students with religious perfectionism.
Following treatment, students reported decreased perfectionism and depression as well as increased self-esteem and religious well-being. Ferguson and Rodway (1994) reduced perfectionistic thinking in 9 clients using 7-8 weeks of CBT. Treatment gains were maintained at 3-week follow-up in all but one individual.

These studies support the use of CBT to reduce perfectionism, but none employed a control group. Information regarding treatment effectiveness for individuals based on severity or types of perfectionism was unavailable. The only study to utilize a comparison group with perfectionism was DiBartolo and colleagues (2001). This study evaluated fear of mistakes on a speech task by female students with high or low Concern over Mistakes (CM). Those who received an 8-minute cognitive restructuring intervention reported less anxiety and distress related to the speech than controls. Although the cognitive restructuring task was not more effective for women with high or low CM, the high CM group evinced more dramatic change. Unfortunately, change in perfectionistic concern over mistakes was not measured after the intervention or at follow-up.

The present study addressed several drawbacks in perfectionism literature. Individuals with low, moderate, and high levels of perfectionism were compared for differential effects following a 2-hour cognitive-behavioral workshop. The primary goals were to reduce perfectionism and concomitant distress and to address which aspects of treatment work best for whom. The workshop was expected to be a beneficial intervention for individuals with problematic perfectionism and a valuable prevention for those at risk for perfectionism. A workshop can be a time- and cost-effective strategy to address various degrees of perfectionism in many people (Belfer, Munoz, Schachter, &
Levendusky, 1995). This study was thus conceived as a pilot investigation that can serve as a heuristic for future research.

Hypotheses

1. Maladaptive perfectionism ratings (Composite of CM, DA, PE, PC, and Discrepancy) were expected to decrease following the workshop intervention. In particular, maladaptive perfectionism ratings for individuals with high and moderate perfectionism were expected to substantially decrease following the workshop, while those with lower perfectionism were not expected to significantly change following treatment. The effects of this intervention were expected to be maintained at 3-week and 3-month follow-ups.

2. Depression (BDI-II), anxiety (STAI-State), and general distress (GSI) ratings were each expected to decrease following the workshop.

3. Pre-treatment ratings of depression, anxiety and general distress will predict change in maladaptive perfectionism ratings from pre-treatment to post-treatment, 3-week, and 3-month follow-up assessments. Also, the workshop intervention was hypothesized to be most effective in reducing maladaptive perfectionism ratings in individuals with lower pre-treatment depression, anxiety, and general distress.

4. Each workshop component was expected to be rated as equally useful by participants. These components include: (1) identifying goals and psychoeducation about maladaptive perfectionism, (2) setting high standards, (3) fearing mistakes and doubting oneself, and (4) preventing distress and maintaining gains.
CHAPTER 3

METHODOLOGY AND RESEARCH DESIGN

Participants

One hundred and five participants (53 males and 52 females) completed the CBT workshop for perfectionism. The number of participants was chosen based on practicality and compromise power analyses. Because groups were to be compared by level of perfectionism (high, moderate, low), an F-test (ANOVA) for medium effect sizes (.25) using the G-Power (Faul & Erdfelder, 1992) computational program revealed that 252 individuals would be required to maintain alpha levels at .05 and minimize Type I error. Recruiting and conducting the workshop with this number of participants was infeasible. However, 105 participants permitted an overall power estimate of .82 that surpassed the minimal recommendation for power to exceed .80 (Pallant, 2007).

The sample consisted of 105 undergraduates (53 male and 52 female) aged 18 to 47 years ($M = 21$ years of age; $SD = 5.05$); 89% of participants were less than age 25 years and 96% were less than age 30 years. The sample was European-American ($n = 53; 50.5\%$), Asian-American/Pacific Islander ($n = 17; 16.2\%$), Hispanic/Latino/Latina ($n = 15; 14.3\%$), Multiracial/Biracial ($n = 13; 12.4\%$), African-American ($n = 6; 5.7\%$), and Native-American/Alaskan Native ($n = 1; 1.0\%$). The sample was primarily single ($n = 64; 61.5\%$) but also partnered/dating ($n = 27; 26.0\%$), engaged ($n = 6; 5.8\%$), married ($n = 4; 3.8\%$), divorced ($n = 2; 1.9\%$), and separated ($n = 1; 1.0\%$) ($n = 1$ unknown).
Reported annual income was $0 per year in 38.5% of the sample \((n = 40)\) and less than $10,000 per year in 51% \((n = 53)\). Participants also reported annual income as $10,000 - $19,000 \((n = 21); 20.2\%\), $20,000 - $28,000 \((n = 13); 12.5\%\), $30,000 - $38,000 \((n = 11); 10.5\%\), $40,000 - $45,000 \((n = 4); 3.9\%\), and $45,000+ \((n = 2)\). The highest number of participants were freshman \((n = 39); 37.1\%\) but also sophomore \((n = 25); 23.8\%\), junior \((n = 26); 24.8\%\), and senior \((n = 15); 14.3\%\). The range of reported grade point averages for 100 participants was 1.87 - 4.00 (on a 4.00 scale) \((M = 3.11, SD = 0.46)\).

Most participants (68.6%) participants indicated they considered themselves a perfectionist. Self-identified perfectionism interfered with goals in the following amounts: “a lot” or “almost always” \((n = 24); 22.8\%\), “somewhat” \((n = 33); 31.4\%\), or “only a little” or “not at all” \((n = 48); 45.7\%\). Self-identified perfectionism was rated as helpful in meeting goals to the following degrees: “a lot” or “almost always” \((n = 49); 46.7\%\), “somewhat” \((n = 24); 22.9\%\), and “not at all” or “only a little” \((n = 32); 30.5\%\).

**Measures**

**Demographic and Background Assessment**

A demographic form (Appendix I) was used to gather information about age, gender, ethnic background, marital status, income, college status, and current grade point average. The form included one self-report item (“Do you consider yourself to be a perfectionist?”) and two follow-up questions based on affirmative response to this item. A participant estimated the degree to which perfectionism interfered with meeting goals or helped achieve goals \((0 - 4\) rating with \(0 = \text{“Not at all”} \text{ and } 4 = \text{“Almost always”})).
Almost Perfect Scale – Revised

The Almost Perfect Scale-Revised (APS-R; Slaney, Rice, Mobley, Trippi, & Ashby, 2001) is a 23-item self-report in which statements are rated on a 7-point Likert-type scale for agreement (1=strongly disagree, 7=strongly agree). Standards (striving to meet high standards) and Order (preference for organization, neatness, and orderliness) subscales represent adaptive perfectionism. The Discrepancy subscale addresses perception of failing to meet high expectations and is associated with depression, anxiety, and distress. All factors reportedly have strong internal consistency (α = .85-.92) and excellent discriminant and concurrent validity (Slaney, Rice, & Ashby, 2002). The Discrepancy subscale is highly sensitive to treatment changes.

Ashby and Kottman (1996) recommended scores at the 66th percentile of the Standards subscale to differentiate perfectionists from non-perfectionists. A median split on the Discrepancy subscale was suggested to identify maladaptive (higher scores) and adaptive (lower scores) perfectionists. The Discrepancy subscale was combined with CM, DA, PC, and PE subscales from the Frost MPS to represent maladaptive perfectionism. Scores in the highest 33% on these subscales marked those with high perfectionism; middle and lower thirds of scores marked those with moderate and low perfectionism. Standards and Order subscales correlate highly with similar subscales on the FMPS so only the Standards subscale was used as a corroborative indicator of maladaptive perfectionism (Ashby & Kottman, 1996).

Multidimensional Perfectionism Scale

The Multidimensional Perfectionism Scale (MPS; Frost, Marten, Lahart, & Rosenblate, 1990) is a 35-item instrument where items are rated on a 1-5 Likert-type
scale (1=strongly agree; 5=strongly disagree). Examples of MPS items include, "If I do not set the highest standards for myself, I am likely to end up a second-rate person," and "People will probably think less of me if I make a mistake." Six subscales comprise this measure. Personal Standards consists of setting excessively high standards of performance. Concern over Mistakes taps fear that making mistakes is equates to failure. Doubting of Actions represents doubts about the quality of performance. Parental Expectations are high standards thought to be imposed by parents whose approval was believed contingent upon performance. Parental Criticism is criticism and punishment from parents for less than perfect performance and behavior. Organization represents overemphasis on order, precision, and organization.

Four FMPS subscales (CM, DA, PC, PE) measured maladaptive aspects of perfectionism. These subscales were combined with the APS-R Discrepancy subscale to classify high, moderate, and low perfectionism. Organization and Personal Standards was considered separately as a "Positive Striving" (or "adaptive") component of perfectionism and was expected to be associated with low perfectionism. Concurrent and discriminant validity and reliability of the FMPS are strong with internal consistencies of .78-.92 (Frost & Marten, 1990; Frost et al., 1990). Frost and colleagues (1990) reported that the MPS is correlated with other measures of perfectionism. The MPS also has been associated with measures of psychopathology and well-being in expected directions (Rice et al., 1998). Frost and Marten (1990) said the MPS correlated with psychopathology symptoms on the Brief Symptom Inventory (Derogatis & Melisaratos, 1983).
Beck Depression Inventory-II

The Beck Depression Inventory, Second Edition (BDI-II; Beck, Steer, & Brown, 1996) assessed changes in depressive symptoms. Individuals rate themselves on a 4-point Likert-type scale (0-3, with higher ratings indicating greater endorsement of the particular item) for 21 items related to depressive symptomatology. Beck and colleagues (1996) recommended the following diagnostic ranges for total scores: 0-13 (minimal), 14-19 (mild), 20-28 (moderate), and 29-63 (severe). Total scores were used in the study to assess depression severity. The content of the items is based on observations of the symptoms and basic beliefs of depressed individuals. The BDI-II is routinely used to assess depression in psychiatrically diagnosed patients and normal adolescents and adults (Beck, Steer, & Garbin, 1988; Dozois, Dobson, & Ahnberg, 1998). The BDI-II has adequate test-retest reliability and sensitivity to change. The instrument has been used within psychological and pharmacological treatments to measure client improvement and treatment efficacy (Dozois et al., 1998).

Brief Symptom Inventory

The Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983) is a 53-item shortened version of the Symptom Checklist 90 (SCL-90; Derogatis, 1977). Items comprise nine dimensions of psychopathology: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The Global Severity Index (GSI), a composite of the clinical symptom subscales, measured general psychological distress. The GSI is a useful and reliable measure of general psychopathology in clinical and research applications (Derogatis, 1993). The BSI has good psychometric properties for use in research settings, including a
good two-week test-retest reliability (.90) and expected correspondence with other measurements of psychopathology such as the MMPI (Derogatis & Melisaratos, 1983).

State-Trait Anxiety Inventory

The State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) is a 40-item instrument that assesses anxious emotional states and individual differences in anxiety proneness (Murphy, Impara, & Plake, 1999). Items are rated on a 1 (not at all) to 4 (very much so) Likert-type self-report scale. A total score is calculated as well as two subscale index scores: State and Trait. Each subscale contains 20 items, half of which assess presence or absence of symptoms. State anxiety (S-Anxiety) involves how an individual currently feels and trait anxiety (T-Anxiety) involves how an individual generally feels as an enduring personality characteristic. The present study focused on state anxiety because the measure is more sensitive to treatment changes (Spielberger et al., 1983). For the S-Anxiety subscale, the test-retest range was .16-.62 with a median stability coefficient of .33. This low result may correspond with the transitory nature of state anxiety. S-Anxiety evinced a mean alpha coefficient of .90 in a normative sample. Spielberger and colleagues reported adequate convergent and divergent validity in predicted directions with various populations (inpatient adults, working adults, college students, high school students, military) using personality (MMPI), vocational (Edwards Personal Preference Schedule), and psychopathological (e.g., Taylor Manifest Anxiety Scale) measurement indicators.
Procedures

Participants volunteered for workshops scheduled at designated times and classrooms on campus. Participants enrolled in psychology courses were recruited via advertisement on the Experimentrix subject pool website. Each participant received three hours of research credit for introductory psychology course research requirements or extra credit. Informed consent was explained and copies of the consent form, detailing voluntary participation, risks, and rights, were given to each participant to read and keep for reference. Questionnaire packets were then given with instructions to participants to refrain from writing their name. Each packet consisted of the aforementioned scales presented in a randomized order with the exception of the demographics form (completed first) and the three additional questions regarding explicit categorization of oneself as a perfectionist (presented last in the packet). Packets took 20-50 minutes to complete but most participants finished within 30 minutes.

The workshop lasted 3 hours; approximately 2 hours were dedicated to the workshop and remaining time dedicated to pre- and post-assessment. Participants completed CBT exercises and forms during the workshop and were encouraged to use these activities outside the workshop. At the conclusion of the workshop, information was obtained from those who wished to be contacted via phone or email for follow-up assessments at 3-weeks and 3-months. Participants were encouraged to complete these follow-up assessments as a courtesy and for the opportunity to win one of four $50 prizes. Participants were reminded that further participation was voluntary.

An email reminder was sent one week prior to follow-up assessments. Participants were told the researcher would call them at their listed number to complete the
assessment via telephone or schedule a time for them to complete questionnaires on campus. Each assessment lasted 15-40 minutes to complete but most participants finished within 20 minutes. The questionnaires were the same as earlier but two additional questions involved continued use of strategies following the workshop and participants’ estimates of the workshop’s utility for reducing distress.

Participants were removed from follow-up consideration after no contact (i.e., two emails and two phone messages) was obtained for 1 week following the 3-week deadline and 3 weeks following the 3-month deadline. A raffle was held 2 months after the last follow-up data were entered and 4 participants were chosen from individuals who completed the 3-week and 3-month follow-ups. Participants were contacted by phone with instructions to collect their cash prize at the psychology department’s front office.

Forty-two workshops were held with 105 participants. The experimenter ran all workshops. Workshops and follow-up data collection occurred between March and October of 2007. The mean number of participants per workshop was 2.5 with a range of 1-7. Sixty-three participants completed the 3-week follow-up and 40 participants completed the 3-month follow-up assessment. One participant’s 3-week ratings were eliminated due to an invalid response pattern in most of the subtests. This decreased the 3-week follow-up total to 62 individuals.

Missing items of data at pre-treatment were substituted with that participant’s rating at post-treatment for a given item to reduce Type I error. Pre-treatment ratings were used for missing post-treatment ratings. Missing data at follow-ups were similarly replaced using ratings from 3-week or 3-month follow-ups. At pre-treatment, 23 individuals had at least one item missing data; 21 individuals at post-treatment left at least one item blank.
No individual left more than four items (of 152 total) blank; all but 3 individuals left two or fewer items unrated.

**Workshop**

The workshop consisted of discussion and activities regarding four themes: (1) identifying goals and psychoeducation about maladaptive perfectionism, (2) setting high standards, (3) fearing making mistakes and doubting oneself, and (4) preventing distress and maintenance of gains. Each component took approximately 30 minutes to complete.

*Study overview, identifying goals, and psychoeducation about maladaptive perfectionism.* The workshop began with an interactive discussion of perfectionism and how participants conceptualize this construct. Psychoeducation regarding healthy and maladaptive striving (Burns, 1980) followed. Potential negative consequences of perfectionism were then explicated and discussed. The relationship of perfectionism to psychological and medical conditions, in addition to relationship and work interference, was discussed.

Participants received a worksheet (Antony & Swinson, 1998) detailing situations in which perfectionistic triggers occur. Participants rated the intensity of perfectionism from 0-100 (0 not a problem, 100 always a problem) for these various situations and were told to keep these forms for future reference. This was done to help individuals identify and record goals to accomplish during the workshop that can also be targeted following the intervention. Finally, participants were introduced to CBT as the intervention approach. Participants were educated about the connection between thoughts, beliefs, and behaviors in relation to perfectionistic thinking.
Setting high standards. Setting unrealistic high standards is a key aspect of perfectionism so participants learned about dangers of rigid thinking (Antony & Swinson, 1998) and how to better discriminate goals from absolute standards (Moore & Barrow, 1986). This segment included education about separating self-worth from performance and adjusting standards to sufficiently meet task demands. Cognitive training and practice exercises to reduce dichotomous thinking (Ferguson & Rodway, 1994) were also employed. These strategies focused on identifying helpful and unhelpful thoughts. The costs and benefits of relaxing standards were discussed with participants. A pleasure-predicting activity was practiced in which participants schedule activities and estimate satisfaction of each (Burns, 1980). This latter exercise was intended to help people realize activities do not have to be performed flawlessly to be rewarding. Many individuals do not wish to cede perfectionistic standards, even when distress occurs (Slaney & Ashby, 1996), so ambivalence of relinquishing perfectionism was discussed.

Fearing mistakes and doubting oneself. Excessive concern over making mistakes is a cardinal feature of perfectionism and consistently associated with psychopathology and distress (DiBartolo et al., 2001; Flett & Hewitt, 2002; Frost et al., 1997). This aspect of maladaptive perfectionism was addressed via thought tracking exercises examining “should” statements and the Perfectionist Worksheet (Moore & Barrow, 1986) where individuals recorded antecedents, beliefs, and consequences of situations where perfectionism occurred. Discussions emphasized estimating when a mistake occurred and the realistic impact of this error (Frost et al., 1997). This discussion was intended to help individuals decatastrophize making mistakes (DiBartolo et al., 2001).
Doubting the quality of one’s actions is also strongly associated with distress (Frost et al., 1990, 1993). Enhancing tolerance for less-than-perfect outcomes was thus discussed (Lundh, 2004; Moore & Barrow, 1986). Strategies for coping with perfectionistic thinking were demonstrated and practiced. Such strategies included developing alternative thoughts (Broday, 1989) and stress reduction techniques such as breathing and brief relaxation (DiBartolo et al., 2001; Ferguson & Rodway, 1994).

Preventing distress and continuing gains. This section of the workshop summarized intervention components and offered suggestions for continuing gains. Participants were told that change is a continual process and they were cautioned against harshly evaluating efforts to change (DiBartolo et al., 2001). Handouts and exercises for daily use were given. These included keeping a CBT-based “perfectionism journal” (Burns, 1980), sample coping strategy (self-statements and relaxation) reminders, and suggestions for self-directed exposures such as aiming for average performance (Burns, 1980) and testing others’ reactions following imperfection (Frost et al., 1997). Participants generated at least one creative activity they could engage in without criticism (Adderholdt-Elliott, 1991). Participants were also encouraged to develop self-reinforcement strategies for meeting short-term, realistic goals (Moore & Barrow, 1986; Preusser et al., 1994).

Treatment Integrity and Dismantling Questions

Undergraduate research assistants rated each workshop for integrity, or the degree to which each aspect of the intervention protocol was covered. Assistants completed a checklist detailing key subject matter covered by each intervention component (Appendix II). Immediately following the workshop and at 3-week and 3-month follow-up assessments, participants rated each intervention component for effectiveness on 5-point
Likert-type scale (1 = “completely unhelpful,” 3 = “neutral,” and 5 = “absolutely helpful”). Participants also ranked components from least (1) to most (5) positively impactful.

Data Analyses

_Hypothesis One (A): Maladaptive Perfectionism Scores will Decrease from Pre- to Post-Treatment Intervention_

Comparisons of dependent variable measurements at different times were used to determine the most appropriate statistical approach to interpret change from pre- to post-treatment and follow-up (Table 1). Given such high levels of correlation in repeated measurements for each of the dependent variables, Tabachnick and Fidell (2000) cautioned against violating the assumption of multicollinearity and recommended using separate repeated measures analysis of variance (ANOVA) equations instead of multivariate analysis of variance (MANOVA). These authors also asserted increased power as an advantage of repeated measures ANOVA.

A one-way repeated measures ANOVA compared scores on the Maladaptive Perfectionism measurement at four times: pre-treatment, post-treatment, 3-week follow-up, and 3-month follow-up (see Table 2 for means and standard deviations). Repeated measures of the same dependent variable at different times often result in violation of the univariate assumption of sphericity (Pallant, 2007). In the present model, the assumption of equivalent measure-to-measure correlation was violated on Mauchly’s Test of Sphericity ($p < .05$). In line with recommendations by Tabatchnick and Fidell (2000), a Greenhouse-Geisser correction for degrees of freedom was used. The Greenhouse-
Geisser value was .83 in this case and served as the value multiplied against degrees of freedom for the repeated measures term and the error term. Pairwise comparisons were then calculated between separate measurement times. A Bonferroni adjustment of the significance level set a more stringent alpha level and reduce risk of Type I error (Pallant, 2007). With four points of measurement, this adjustment reduced significant alpha level from $p < .05$ to $p < .013$. Measures of effect size were calculated using Cohen's $d$.

Hypothesis One (B): Change in Maladaptive Perfectionism Scores will be Significant for Individuals Assigned into High and Moderate versus Low Perfectionism Groups

Assignments to specific perfectionism groups (high, moderate, and low) were made in line with recommendations by Ashby and Kottman (1996), who recommended using the 66th percentile of the APS-R Standards subscale to differentiation non-perfectionists and perfectionists. The Maladaptive Perfectionism composite variable (CM, DA, PC, and PE from the FMPS and Discrepancy from the APS-R) was divided into close approximation of thirds, which roughly corresponded to 0.5 standard deviations from the sample mean. This resulted in groups of 35 individuals in each perfectionism condition. Using the Standards subscale of the APS-R as a corroborative indicator, only two participants rated as highly perfectionistic scored much lower (5 points or more from the 66th percentile) on Standards. Of 40 participants who completed all four assessments, 12 from the low perfectionism group, 13 from the moderate perfectionism group, and 15 from the high perfectionism group remained.

The overall interaction effect for group membership (low, moderate, and high classifications of perfectionism ratings at pre-treatment) was determined using a mixed between-within ANOVA calculated with measurement time (pre, post, 3-week, and 3-
month) as the within-subjects variable and group membership as the between-subjects variable (see Table 3 for means and standard deviations). One-way repeated measures ANOVAs were calculated for each perfectionism group. A Greenhouse-Geisser correction for degrees of freedom accounted for cases in which the assumption of sphericity was violated. Pairwise comparisons at specific measurement times were evaluated at an adjusted Bonferroni alpha level \( p < .013 \). Measures of effect size were calculated using Cohen’s d.

**Hypothesis Two: Depression, Anxiety, and General Distress Scores will Decrease from Pre- to Post-Treatment Intervention**

One-way repeated measures ANOVAs were conducted to assess change in psychopathology ratings at four measurement times: pre-treatment, post-treatment, 3-week follow-up, and 3-month follow-up (see Tables 4-6 for means and standard deviations). Separate repeated measures ANOVAs were calculated for depression (BDI-II), anxiety (STAI-State), and general distress (GSI). Main effects for each dependent variable were evaluated using Greenhouse-Geisser corrections for degrees of freedom due to violation of the sphericity assumption. Pairwise comparisons were made at Bonferroni adjusted alpha levels to minimize Type I error. Measures of effect size were calculated using Cohen’s d.

Women noted significantly higher depression, anxiety, and general distress symptoms than men at initial assessment (see Demographic Analyses) so mixed between-within ANOVAs were calculated with measurement time as the within-subjects variable and gender as the between-subjects variable for each psychopathology variable (see Tables 7-12 for means and standard deviations). Statistical significance and degree of freedom
adjustments for each gender were identical as listed above and Cohen’s d was similarly
used to indicate effect size.

Hypothesis Three (A): Pre-Treatment Depression, Anxiety, and General Distress will
Predict Pre- to Post-Treatment Change in Maladaptive Perfectionism

Three standard multiple regression analyses were conducted to test the hypothesis
that change in pre- to post-treatment maladaptive perfectionism ratings would be
predicted by pre-treatment depression (BDI-II), anxiety (STAI-State), and general
distress (GSI) ratings. Changes in maladaptive perfectionism ratings were calculated for
each participant by creating new variables for each of the three periods of post-treatment
measurement (pre- to immediate post-treatment, pre-treatment to 3-week follow-up, and
pre-treatment to 3-month follow-up). In each regression model, preliminary analyses
were conducted to ensure no violation of the assumptions of multicollinearity, normality,
linearity, and homoscedasticity.

Tolerance (> .10) and variance inflation factor (< 10) estimates for each equation were
in acceptance ranges such that the assumption of multicollinearity was not violated.
Correlations between dependent variables (Table 13) were also acceptable in magnitude
such that dependent variables contributed unique variance to the regression models.
Following review of scatterplots and the Normal Probability Plots of the Regression
Standardized Residual offered by SPSS, none of the other three assumptions were
violated. One outlier was noted as problematic. With this case included in each standard
multiple regression model, the model’s maximum Mahalanobis distance ($X^2 = 16.34$)
exceeded the critical value ($X^2 < 16.27$ for $p < .001$) recommended when regressing a
dependent variable on three independent variables (Tabachnick & Fidell, 2000).
The outlier score was thus removed from subsequent multiple regression equations. The outlier participant reported the highest ratings of depression on the BDI-II, second highest on general distress (GSI), and fifth highest on state anxiety. This individual may have been experiencing high levels of psychopathology to a degree that did not fit the overall regression model among non-clinical college students.

**Hypothesis Three (B): The Intervention will be Most Effective in Reducing Maladaptive Perfectionism for Individuals with Lower Depression, Anxiety, and General Distress**

Individual participants were classified into two groups based on higher versus lower presence of psychopathology symptoms for each independent variable (depression, anxiety, and general distress) to examine whether those with lower psychopathology were more likely to benefit from the workshop than those with higher psychopathology. This hypothesis was generated to investigate Blatt’s (1995) assertion that those with higher perfectionism and concomitant depression and distress symptoms would be less likely to improve following treatment. Given the small number of participants \( n = 40 \) who completed the assessments at all four measurement points, further sorting of participants into maladaptive perfectionism groups was impractical. Grouping for the independent variables of depression (BDI-II), anxiety (STAI-State), and general distress (GSI) were also confined to higher versus lower symptom report.

The BDI-II guidelines for depression characterization were used with the caution that BDI-II scores are intended for use in a clinical population to rate change in depression levels (Dozois, Dobson, & Ahnberg, 1998). Beck, Steer, and Brown (1996) recommended a range of 0-13 to represent those with minimal or no depression. This cut-off allowed for 42 individuals in the study to be classified as the group with higher
endorsement of depression (mild to moderate with two people noting depression in the “severe” range). Thus, 63 individuals were grouped into the low depression group; these persons did not exceed the “minimal” range of depression scores on the BDI-II. This grouping resulted in a 40.0% (higher depression) versus 60.0% (lower depression) split that was similarly applied to the STAI-State and GSI (measures with unspecified cut-offs for degree of impairment). The STAI-State’s cutoff score was determined to be 42+ for those considered in the higher anxiety (n = 43) versus lower anxiety (n = 62) groups. The GSI cutoff for those with lower distress was .79. This resulted in 43 individuals with mild or more (higher) general distress versus 62 individuals with low general distress.

Univariate ANOVAs were calculated for change in maladaptive perfectionism ratings for groups classified as “high” or “low” in depression, anxiety, and general distress. Change in maladaptive perfectionism was analyzed in each group comparing pre-treatment ratings with immediate post-treatment and follow-up ratings of maladaptive perfectionism.

Hypothesis Four: Each Intervention Component of the Workshop will be Rated by Participants as Equally Useful

The workshop comprised four specific components: (1) identifying goals and psychoeducation about maladaptive perfectionism, (2) setting high standards, (3) fearing mistakes and doubting oneself, and (4) preventing distress and maintaining goals. Paired samples t-tests compared individual workshop components.
CHAPTER 4

RESULTS

Demographic Analyses

MANOVA equations examined effects of demographic variables as individual fixed factors and pre-treatment measures of maladaptive perfectionism (CM, DA, PC, PE, and Discrepancy), depression (BDI-II), anxiety (STAI-State), and general distress (GSI). No significant effects were noted in analyses conducted for ethnicity, relationship status, income range, class status, or grade point average. Significant MANOVA results were found for gender effects and self-identified perfectionism.

Females endorsed significantly more psychopathology but not perfectionism than males at pre-treatment. Women reported greater BDI-II depressive symptoms ($F(1,103) = 10.974, p < .01$), general distress on the GSI ($F(1, 103) = 16.184, p < .001$), and STAI-State anxiety ($F(1, 103) = 4.657, p < .05$). Analyses of post-treatment change were thus examined for combined and separate genders. Self-identified perfectionists endorsed significantly more general distress ($F(1, 103) = 5.354, p < .05$) and ratings of maladaptive perfectionism ($F(1, 103) = 14.858, p < .001$) than non-self-identified perfectionists.

MANOVA equations compared demographic information and ratings of psychopathology for individuals who completed follow-up assessments from those who only completed initial assessments. Individuals who completed 3-week follow-ups and
those who completed 3-month follow-ups did not significantly differ from individuals
who did not complete either follow-up assessment with respect to gender, ethnicity,
relationship status, college status, grade point average, and ratings of maladaptive
perfection, depression, anxiety, and general distress. Only gender at 3-month follow-up
approached statistical significance ($p = .06$). Thus, those who completed follow-up
assessments did not appear significantly different on key demographic and
psychopathological variables from those who did not complete follow-ups.

Analyses of Specific Hypotheses

**Hypothesis One (A): Maladaptive Perfectionism Scores will Decrease from Pre- to Post-
Treatment Intervention**

The main effect for time was significant ($F (2.50, 97.44) = 6.76, p < .01$). Maladaptive perfectionism ratings significantly decreased over time after a conservative
Greenhouse-Geisser correction for degrees of freedom. Pairwise comparisons of change
in maladaptive perfectionism scores were thus calculated between each of the four times
(Table 14). Post-treatment and follow-up ratings were significantly lower ($p < .05$) than
at pre-treatment. No comparisons at measurement times other than pre-treatment were
significant.

Pre- and post-treatment score comparisons on maladaptive perfectionism revealed a
significant difference in group means (8.75) ($p = .013$). This decrease indicated a medium
treatment effect ($d = .43$). The mean difference (9.45) between pre-treatment and 3-week
follow-up measures of maladaptive perfectionism were close to significance ($p = .016$). A
medium effect ($d = .48$) for change was noted between pre-treatment and 3-week
measures of maladaptive perfectionism. For pre-treatment and 3-month follow-up measures of maladaptive perfectionism, the mean difference (12.61) was significant ($p < .013$) with a large effect size ($d = .64$). The largest degree of change was between pre-treatment and the 3-month follow-up measures of maladaptive perfectionism.

_Hypothesis One (B): Change in Maladaptive Perfectionism Scores will be Significant for Individuals Assigned into High and Moderate versus Low Perfectionism Groups_

A mixed between-within ANOVA revealed a significant time by group interaction ($F(2, 37) = 6.94, p < .01$). Maladaptive perfectionism ratings did not decrease at similar rates for those with low, moderate, and high perfectionism. Those in the lower perfectionism group did not decrease consistently over time and may have slightly increased (Figure 1). Individual repeated measures ANOVAs were calculated for each perfectionism group (Table 15).

_Low perfectionism group._ A one-way repeated measures ANOVA for those in the low perfectionism group was not significant ($F(1, 11) = .796, p = .39$). No comparisons of pre- and post-treatment measures were significant for the low perfectionism group (Table 16).

_Moderate perfectionism group._ For those moderately perfectionistic, a decrease in maladaptive perfectionism at the four measurement times was significant ($F(2.17, 26.08) = 4.83, p < .05$). This included the Greenhouse-Geisser degrees of freedom correction accounting for violation of sphericity. Further examination revealed only one significant difference between pre-treatment and 3-month follow-up for those moderately perfectionistic (Table 17). This mean difference (14.70) was significant at the $p < .05$
level but not at the more conservative alpha level determined by a Bonferroni correction of $p < .013$.

*High perfectionism group.* A one-way repeated measures ANOVA for individuals in the high perfectionism group revealed a main effect for time ($F(1, 14) = 17.10, p < .01$). The sphericity assumption was not violated. All post-treatment measures of maladaptive perfectionism were significantly lower than pre-treatment scores though not significantly different to other post-treatment means (Table 18). The mean difference between pre-treatment and post-treatment measurement times (15.60) was significantly different at the $p < .05$ level but not at the more conservative Bonferroni correction alpha of $p < .013$.

Mean (17.53) differences between pre-treatment and 3-week measures were significant after the Bonferroni correction ($p < .013$); the effect size of this difference was large (Cohen's $d = 1.32$). Mean differences (24.0) between pre-treatment and 3-month assessments of maladaptive perfectionism were also significant after a Bonferroni correction ($p < .013$); the effect size was also large ($d = 1.45$). Participants who initially scored higher on initial maladaptive perfectionism ratings lowered scores significantly at each post-treatment assessment. This decrease in maladaptive perfectionism continued over time with lowest ratings at 3-weeks and 3-months, respectively.

*Hypothesis Two (A): Depression Scores will Decrease from Pre- to Post-Treatment Intervention*

A one-way repeated measures ANOVA with a Greenhouse-Geisser correction revealed a significant main effect for time regarding depression ($F(2.17, 84.53) = 3.51, p < .05$). Pairwise comparisons of change in depression scores were calculated between each of the four times (Table 19). Pre-treatment scores decreased significantly at post-
treatment \( (p < .01) \) and at three-week follow-up \( (p < .05) \) but no other comparisons were significant. Using a more conservative Bonferroni adjustment of significance level \( (p = .013) \), only the comparison between pre-treatment and immediate post-treatment remained significant for depression. The magnitude of the decrease from pre-treatment to post-treatment was medium \( (d = .31) \).

*Gender interaction and depression change.* The interaction of gender and time was significant \( (F (2.42, 92.46) = 8.14, p < .01) \). Women reported less depression over time but men’s depression increased somewhat at 3-week and 3-month measurements (Tables 7 and 8). The overall main effect for gender, however, was not significant \( (F (1, 38) = 1.93, p = .17) \). Individual repeated measures ANOVAs were thus calculated for each gender.

*Depression change in men.* The assumption of sphericity was violated for men and, with a Greenhouse-Geisser adjustment, the main effect for time was not significant \( (F (1.52, 22.77) = 2.91, p = .09) \). A comparison of mean differences in men (Table 20), however, revealed a significant difference \( (p < .01) \) between pre-treatment and post-treatment measures of depression. The decrease in depression scores from pre- to post-treatment \( (2.44) \) met the criteria for the more conservative Bonferroni correction \( (p < .013) \) and had a large effect size \( (d = .51) \).

*Depression change in women.* In women, the assumption of sphericity was not violated and a significant effect for depression score changes over time was noted \( (F (1, 23) = 23.55, p < .01) \). Pairwise comparisons regarding time revealed a significant decrease \( (p < .01) \) in depression ratings from pre-treatment to the 3-month follow-up (Table 21). This mean difference \( (6.83) \) had a large effect size \( (d = .83) \). A significant
decrease \((p < .05)\) occurred from post-treatment to the 3-month follow-up assessment.

This mean difference \((4.46)\) also had a large effect size \((d = .50)\).

**Hypothesis Two (B): Anxiety Scores will Decrease from Pre- to Post-Treatment Intervention**

A one-way repeated measures ANOVA for anxiety change revealed a significant main effect for time \((F (2.16, 84.39) = 3.07, p < .05)\). Pairwise comparisons of change in anxiety scores were calculated between each of the four assessment times (Table 22). Only pre- and post-treatment means decreased significantly \((p < .05)\). The degree of significance was not large enough to meet the more stringent criterion with a Bonferroni correction of alpha at \(p = .013\). Cohen’s \(d\) for effect size was medium \((d = .39)\).

**Gender interaction and anxiety change.** A mixed between-within ANOVA was calculated to test the interaction of gender and time with respect to anxiety. This interaction was not significant \((F (2.18, 82.85) = .45, p = .66)\). The overall main effect for gender, however, was significant \((F (1, 38) = 5.43, p < .05)\). Individual repeated measures ANOVAs were thus calculated for each gender.

**Anxiety change in men.** The assumption of sphericity was not violated in men but the main effect for time was not significant \((F (1, 15) = .744, p = .40)\). Anxiety scores did not change significantly for men from pre- to post-treatment.

**Anxiety change in women.** The assumption of sphericity was violated in the repeated measure ANOVA for women. After adjusting the degrees of freedom using a Greenhouse-Geisser correction, the main effect for time in anxiety change for women was not significant \((F (1.84, 45.33) = 2.16, p = .13)\). Gender did not vary significantly with respect to anxiety change.
Hypothesis Two (C): Ratings of General Distress will Decrease from Pre- to Post-Treatment Intervention

A one-way repeated measures ANOVA for change in general distress revealed a significant main effect for time ($F(1.93, 75.36) = 14.47, p < .01$). Pairwise comparisons of change in general distress were thus calculated between each of the four times (Table 23).

Pre-treatment general distress scores decreased significantly at 3-week ($p < .01$) and 3-month ($p < .01$) follow-up assessments. The mean difference between pre-treatment and 3-week measurements (.37) remained significant after a Bonferroni adjustment of the alpha significance level to $p = .013$. The effect size was large ($d = .70$). The mean difference between pre-treatment and 3-month measurements (.41) was significant after Bonferroni correction and effect size was large ($d = .77$). The change in general distress ratings continued to decrease at follow-up assessments; general distress at 3-week and 3-month follow-up was significantly lower than at post-treatment.

The post-treatment to 3-week mean difference (.24) was significant after the Bonferroni correction ($p < .013$) and the effect size was medium ($d = .44$). The mean decrease from post-treatment general distress to 3-month follow-up (.28) did not meet the more conservative Bonferroni correction ($p < .013$). The effect size was large ($d = .51$). Ratings of general distress appeared to trend toward continued decrease at follow-up.

**Gender interaction and change in general distress.** A mixed between-within ANOVA revealed a significant interaction of gender and time ($F(2.08, 78.96) = 4.76, p < .05$). Both genders declined in general distress over time though men had a slight increase from 3-weeks to 3-months (Tables 11 and 12). The overall main effect for gender was
also significant \((F (1, 38) = 5.15, p < .05)\). Individual repeated measures ANOVAs were thus calculated for each gender.

*General distress change in men.* The assumption of sphericity was violated for men’s ratings of change in general distress. After applying a Greenhouse-Geisser correction for degrees of freedom, the overall effect for time was not significant for men \((F (1.58, 23.66) = 2.79, p = .09)\). Pairwise comparisons of mean differences between pre- and post-treatment men’s general distress ratings were calculated given this trend (see Table 24). Pre- and post-treatment decrease in general distress ratings for men was significant at the Bonferroni alpha level adjustment \((p < .013)\) with a medium effect size \((d = .37)\). The change in men’s ratings of general distress between pre-treatment and 3-weeks was significant at \(p < .05\) but not at the Bonferroni-adjusted level. Men’s general distress ratings from pre-treatment to 3-months decreased but not significantly. Of note, 3-month ratings of general distress in men slightly increased from the 3-week measurement and were similar to the level at post-treatment.

*General distress change in women.* The assumption of sphericity was also violated for women and a Greenhouse-Geisser correction was used. The overall effect for time was significant for women \((F(2.16, 49.60) = 14.54, p < .01)\). Ratings of general distress change in women significantly decreased at the Bonferroni alpha correction level (Table 25). The effect size was large for each of the following: pre-treatment and 3-week \((d = .82)\), pre-treatment and 3-month \((d = .99)\), immediate post-treatment and 3-week \((d = .61)\), and immediate post-treatment and 3-month \((d = .79)\). Women’s ratings of general distress were significantly higher than men’s scores at the initial assessment and continued to decrease at 3-week and 3-month measurements.
Hypothesis Three (A): Pre-Treatment Depression, Anxiety, and General Distress will Predict Pre- to Post-Treatment Change in Maladaptive Perfectionism

The first standard multiple regression was preformed between ratings of pre- and post-treatment change on maladaptive perfectionism as the dependent variable and depression, anxiety, and general distress as the independent variables (Table 26). The overall model for predicting change in maladaptive perfectionism from pre-treatment to immediate post-treatment was not significant ($F (3, 100) = .32, p = .81$). The adjusted $R^2$ for this model did not differ significantly from zero, explaining only 2.0% of the variance. The independent variable with the greatest contribution, general distress, also was not significant ($\beta = .11, p = .44$) and the squared value for the part correlation coefficient for general distress (.08) represented 0.6% of variance in change in maladaptive perfectionism ratings from pre- to post-treatment.

The second standard multiple regression was performed on the dependent variable of maladaptive perfectionism ratings from pre-treatment to 3-week follow-up; depression, anxiety, and general distress were independent variables (Table 27). The overall model for predicting change in maladaptive perfectionism ratings (pre-treatment to 3-weeks) was not significant ($F (3, 57) = 2.01, p = .12$). The adjusted $R^2$ for this model did not differ significantly from zero, explaining only 4.8% of the variance in the overall model. The greatest contributing independent variable to this model was depression, which was not significant ($\beta = .22, p = .26$). The squared value for the part correlation coefficient for depression (.15) explains only 2.1% of the variance in maladaptive perfectionism ratings from pre-treatment to 3-week follow-up.
The third standard multiple regression involved the dependent variable of maladaptive perfectionism ratings from pre-treatment to 3-month follow-up (Table 28). The overall model for predicting change in maladaptive perfectionism ratings from pre-treatment to 3-month follow-up was not significant \((F(3, 35) = 1.08, p = .37)\). The adjusted \(R^2\) for this model did not differ significantly from zero, explaining 0.6% of the variance in the overall model. The independent variable with the greatest contribution was anxiety, which was not significant \((\beta = .21, p = .30)\). The squared part correlation coefficient for anxiety \((.17)\) corresponded with 2.9% of the variance in maladaptive perfectionism ratings from pre-treatment to 3-month follow-up but the overall model explained less than 1% of the variance. The variance in the overall model may be diminished by error or a possible interaction of variables.

**Hypothesis Three (B): The Intervention will be Most Effective in Reducing Maladaptive Perfectionism for Individuals with Lower Depression, Anxiety, and General Distress**

Univariate ANOVAs were calculated for change in maladaptive perfectionism ratings as the dependent variable and depression, anxiety, and general distress groups (high versus low) as fixed factors. Separate ANOVAs were analyzed for three measurements of change in maladaptive perfectionism: (1) pre-treatment to post-treatment, (2) pre-treatment to 3-week follow-up, and (3) pre-treatment to 3-month follow-up. No significant main effects or interactions were found (Tables 29-31). One term was close to significance: the interaction term of depression, anxiety, and general distress groups with respect to maladaptive perfectionism change from pre-treatment to 3-week follow-up \((F(1, 54) = 3.83, p = .06)\). If significant, this interaction term still may not have held much
interpretable relevance given the high degree of overlap and error inherent in combining all three variable groups.

**Hypothesis Four: Each Intervention Component of the Workshop will be Rated by Participants as Equally Useful**

The highest overall mean (4.62 out of 5.0 scale) was for the component of “setting high standards” (Table 32). Information and exercises in this component addressed the impact of one’s self-worth in trying to meet unrealistically high standards. The next highest means were for “preventing distress and maintaining goals” (4.58) that emphasized stress reduction strategies and “fearing mistakes and doubting oneself” (4.52) that addressed reactions to mistakes. The workshop component with the lowest relative mean (4.48) was “identifying goals and psychoeducation about maladaptive perfectionism,” which provided detailed information about benefits and problems when striving for perfection.

Paired samples t-tests were calculated for each component against each other (Table 33) to assess significant differences. The only comparison that yielded significance was “setting high standards” and “identifying goals and psychoeducation about maladaptive perfectionism” \(t (104) = 2.10, p < .05\). The difference between the highest and lowest means were statistically significant, suggesting that individuals rated the “setting high standards” component as significantly more helpful than “identifying goals and psychoeducation about maladaptive perfectionism.” These means suggest that individuals found each workshop component to be between “somewhat helpful” (rating of 4.0) and “absolutely helpful” (rating of 5.0).
Workshop Satisfaction and Follow-up Ratings of Usefulness

Participants responded to the following question at the conclusion of the workshop and at 3-week and 3-month follow-up periods: “Would you recommend this workshop to friends/family suffering from perfectionism?” All but one participant answered “yes” to this question at all three times; one individual failed to complete an answer choice immediately after the workshop.

Participants were asked at the 3-week (n = 61) and 3-month (n = 40) follow-ups two additional questions: (1) “How much have you used strategies from the workshop?” and (2) “To what extent has the workshop helped you decrease perfectionism and/or stress?” Answers were given along a 4-point Likert-type scale (1= “not at all,” 2= “a little,” 3= “somewhat,” and 4= “a lot”). At 3-weeks, participants reportedly used workshop components “a little” (n = 16; 26.2%), “somewhat” (n =34; 55.7%), “a lot” (n = 10; 16.4%); one person (1.6%) did not use strategies from the workshop. Participants also rated the extent to which the workshop helped decrease perfectionism and stress after 3 weeks: “not at all” (0%), “a little” (n = 18; 29.5%), “somewhat” (n = 32; 52.5%), and “a lot” (n = 11; 18.0%).

Of the remaining 40 participants who completed the 3-month assessment, workshop strategies were reportedly used “not at all” (n = 1 person; 2.5%), “a little” (n = 12; 30.0%), “somewhat” (n = 20; 50.0%), and “a lot” (n = 7; 17.5%). The workshop was estimated to have helped decrease perfectionism and stress either “not at all” (n = 2; 5.0%), “a little” (n = 9; 22.5%), “somewhat” (n = 21; 52.5%), and “a lot” (n = 8 individuals; 20.0%).
Treatment Integrity

Treatment integrity was rated for each workshop along 19 items related to the extent that specific aspects of the intervention were performed. All items except for three items had perfect ratings of 4.0, indicating that each workshop “completely” addressed the item of concern. The other three items were rated very close to this standard: Item 11 = 3.98, Item 18 = 3.95, and Item 19 = 3.90. Thus, the execution of the workshop appeared to be quite faithful to prescribed intervention components.
DISCUSSION

Perfectionistic thinking is widely believed to impact mental health and exacerbate stress-related conditions. Some researchers note positive and adaptive aspects of perfectionism, but perfectionistic thinking is often characterized as overly self-critical and rigid beliefs that may lead to depression, anxiety, relationship problems, and medical concerns. Perfectionism tends to interfere with treatment of mental health and medical conditions (Blatt & Zuroff, 2002; Flett & Hewitt, 2002). People with high perfectionism do not often seek help for perfectionistic thinking (Nadler, 1983), but perfectionism is believed to be an underlying factor for many individuals seeking therapy for depression (Enns & Cox, 1999; Hewitt & Flett, 1993), anxiety (Antony, Purdon, Huta, & Swinson, 1998; Kawamura, Hunt, Frost, & DiBartolo, 2001), and other forms of psychopathology (Preusser, Rice, & Ashby, 1994). DiBartolo, Frost, Dixon, and Almodovar (2001) asserted that perfectionism will not likely decrease unless specifically targeted by treatment.

Several researchers have suggested theoretical and applied strategies to address perfectionism. Many of these suggestions were incorporated into the workshop design for this study. Few empirical studies have been published regarding perfectionism treatment, and only DiBarolo and colleagues (2001) included a control group. DiBartolo and colleague (2001) utilized high concern over mistakes to categorize groups for a 10-
minute intervention but did not measure change in this construct at a later time. The aim of the current study was to expand prior research by targeting several areas of perfectionism via a 3-hour cognitive-behavioral-based workshop. This study is also distinct from existing literature in that follow-up assessments of change in perfectionism were conducted at 3-week and 3-month time periods.

Effectiveness of Workshop in Reducing Maladaptive Perfectionism

The primary intention of this study was to create a workshop to target and reduce maladaptive perfectionism. Ratings of maladaptive perfectionism decreased at each assessment period over the course of the study. Change from pre- to post-treatment was significant at the conservative Bonferroni alpha level \( (p = .013) \) and represented a medium effect size. Change from pre-treatment to 3-week follow-up ratings was significant at typical alpha levels \( (p < .05) \) but just short of the Bonferroni-adjusted alpha. The greatest overall change for pre-treatment maladaptive perfectionism was at 3-month follow-up. This change was significant at the Bonferroni alpha level and accounted for a large effect size.

The trend noted in these data suggests an immediate decrease in maladaptive perfectionism ratings after the workshop. The ratings were maintained 3 weeks later and continued to decrease to the lowest overall level at 3-month follow-up. Participants’ ratings thus reflected the hypothesized trend. Significant change in maladaptive perfectionism after a 3-hour workshop is believed unlikely if perfectionism is considered to be an enduring personality trait. The initial decrease is estimated to result from psychoeducation and practice strategies employed during the workshop. This immediate
decrease in ratings of maladaptive perfectionism also likely reflects insight gained by participants regarding the nature of maladaptive perfectionism and perhaps a sense of hope and empowerment by adopting strategies and perspectives for attenuating maladaptive aspects of perfectionistic thinking.

The key trends in these data were the continued decrease in maladaptive perfectionism ratings at 3-week and 3-month follow-ups. The lowest ratings of maladaptive perfectionism at 3-months support the hypothesized lasting impact of the workshop. Participants were expected to learn information, practice new strategies to reduce perfectionistic thinking, and apply these skills to everyday situations following the workshop. Participants thus benefited from the workshop and reported significantly less maladaptive perfectionism after allowing time for knowledge and strategies gained from the workshop to take effect.

Alternate views of these data include the following: (1) the workshop helped inform participants’ accuracy in rating maladaptive perfectionism at post-treatment; (2) participants attempted to rate themselves as healthier following the workshop, perhaps seeking to support the experimenter’s hypotheses; (3) the majority of 3-month follow-ups occurred in the summer when many participants may not be as exposed to as many performance-related scenarios as during the typical school year; (4) those who chose to participate in the follow-ups may be dissimilar from those who did not complete follow-up assessments; and (5) some participants benefited from the workshop disproportionately from others. The latter explanation is in line with hypotheses examined in subsequent sections.
Change in Groups Low, Moderate, and High in Perfectionism

Groups moderate and high in perfectionism followed a similar trend to the overall ratings of maladaptive perfectionism (Figure 1). For those in moderate and high perfectionism groups, maladaptive perfectionism decreased at each assessment. The low perfectionism group showed decreased maladaptive perfectionism at initial post-treatment but slightly increased ratings at 3-week and 3-month follow-ups. The hypothesis was therefore supported because individuals in moderate and high perfectionism groups reported greater overall change. Those assigned to the low perfectionism group did not demonstrate significant change in maladaptive perfectionism scores.

Only the high perfectionism group met the stringent criteria for significance (Bonferroni correction) between pre-treatment and 3-week follow-up in addition to pre-treatment and 3-month follow-up. The high perfectionism group evinced a sharp decrease from pre- to post-treatment, though this was significant at a less conservative alpha level ($p < .05$). The moderate perfectionism group followed a similar trend with change from pre-treatment and 3-month follow-up significant at the less conservative alpha. These trends may have been significant with a higher sample size.

Participants with higher initial maladaptive perfectionism appear to have benefitted the most from the workshop, and treatment gains continued at follow-up assessments. This result is not surprising given that the workshop was tailored specifically to individuals struggling with perfectionism. Information and exercises presented during the workshop were likely most relevant to those in high and moderate perfectionism groups. Participants with higher ratings of maladaptive perfectionism also had a higher ceiling
and more room for change. The low perfectionism group was not expected to decrease much on ratings of maladaptive perfectionism, though an increase was not anticipated. This slight increase for the low perfectionism group was not significant. These participants may have briefly benefitted from the workshop but reverted to pre-treatment levels at follow-up. Workshop material was likely less relevant to participants in the low perfectionism group who did not report much difficulty with perfectionistic thinking.

**Workshop Impact on Depression Ratings**

The workshop was expected to affect depression ratings given the comorbid relationship of perfectionism and depression (Blatt, 1995; Enns & Cox, 1999; Flett & Hewitt, 2002; Hewitt & Flett, 1993; Shafran & Mansell, 2001). Several aspects of the workshop components are drawn from cognitive-behavioral strategies believed to positively impact mood. Depression ratings decreased at each assessment. Pre-treatment to post-treatment was the most significant decrease and met the Bonferroni correction for alpha ($p < .013$). This decrease represented a medium effect size. Depression at 3-week follow-up was significantly lower than at pre-treatment, though not at the conservative Bonferroni level. Three-month follow-up ratings were the lowest overall but not significantly different from earlier measurements. The workshop thus appeared to impact depression scores and these gains were maintained over time.

Females reported significantly higher depression at pre-treatment than men. Repeated measures ANOVAs were thus calculated for each gender. Men and women reported different patterns of change over time. Depression ratings in men decreased significantly at the Bonferroni alpha level from pre-treatment to post-treatment. This change
represented a large effect size. No other comparisons were significant for men and mean ratings of depression in men increased from post-treatment to 3-week and 3-month follow-ups. The highest overall rating of depression in men was at the 3-month follow-up.

Female ratings of depression followed the trend of the overall model by decreasing at each assessment. The largest decrease in depression ratings for women was between pretreatment and 3-month follow-up with significance at the Bonferroni alpha level. This change represented a large effect size. Women also had a large effect size change from post-treatment to 3-month follow-up but not at the Bonferroni alpha level. Men thus appeared to have an immediate decrease in depression after the workshop, followed by increases at follow-ups. Women seemed to benefit from the workshop with more lasting effects, similar to the trend seen with perfectionism ratings.

The hypothesis that depression ratings would decrease following the workshop was largely supported. Women appeared to fit the projected trend and men displayed an unanticipated rebound in depression ratings. Possible explanations for this difference include: gender differences in prevalence of mood disorders (American Psychiatric Association, 2000), a larger sample size of women (n = 24) than men (n = 16) that may skew the data, and the possibility that women disproportionately incorporated aspects of the workshop for a lengthier time and applied these strategies toward depression symptoms.
Workshop Impact on Anxiety Ratings

Perfectionism has been conceptually and comorbidly associated with anxiety (Antony, Purdon, Huta, & Swinson, 1998; Shafran & Mansell, 2001). Anxiety ratings, as measured by the STAI-State, were expected to decrease following the workshop. Many strategies taught in the workshop were expected to address anxiety related to perfectionism (e.g., fearing mistakes, worry about performance). Anxiety ratings decreased at each measurement. Only the decrease from pre-treatment to post-treatment was significant, but this did not meet the more conservative (Bonferroni) alpha level. Women reported higher initial state anxiety than men, though separate repeated measures ANOVAs did not reveal significant decreases for either gender. Female ratings decreased with each assessment and men experienced a slight rebound at follow-up assessments. This was similar to depression ratings for both genders.

The hypothesis that anxiety would significantly decrease following the workshop was not supported. Perhaps the STAI-State did not capture aspects of anxiety more pertinent to trait-like anxiety associated with chronic perfectionism (Saboonchi & Lundh, 1996). The smaller sample size might not have provided an adequate sampling of those with anxiety concerns. Another possible explanation is that the workshop did not target anxiety directly enough to observe significant change.

Workshop Impact on General Distress Ratings

Perfectionism has been associated with a wide range of psychopathology and general distress (Frost & Steketee, 1997; Shafran & Mansell, 2001). The workshop was expected to impact ratings of general distress as measured by the Global Severity Index (GSI) of
the Brief Symptom Inventory. Ratings of general distress decreased at each assessment. Large effect sizes were found in the decreases from pre-treatment to 3-week and 3-month follow-ups. These decreases were significant at Bonferroni alpha levels. General distress ratings also significantly decreased from post-treatment to 3-week (medium effect size) and 3-month (large effect size) follow-ups, though the decrease at 3-months did not meet the conservative Bonferroni alpha level.

A significant gender interaction was found with respect to change in general distress ratings. Women endorsed higher general distress than men at pre-treatment, similar to depression and anxiety. General distress ratings in men significantly decreased from pre-treatment to post-treatment and met the Bonferroni alpha level with a medium effect size. Pre-treatment ratings of general distress decreased significantly at 3-week follow-up but not at the more conservative alpha level. Men's general distress ratings slightly increased at 3-month follow-up to the level of post-treatment. This rebound was similar to those found with depression and anxiety in men.

Female ratings of general distress decreased at each assessment consistent with the overall model of change for general distress. Bonferroni significance levels were met with significant decreases from pre-treatment to 3-week and 3-month follow-ups. Significant decreases were found from post-treatment to 3-week and 3-month follow-up ratings of general distress in women. All four significant decreases represented large effect sizes.

The hypothesis that the perfectionism workshop would impact general distress ratings was thus supported. Female ratings of change fit the hypothesized trend more accurately than men, who displayed a slight rebound at 3-months. One explanation for this
difference between genders is the larger sampling size of women in this study. In many epidemiological studies (American Psychiatric Association, 2000; Zuckerman, 1999), women report higher levels of general distress and psychopathology than men. If women endorsed higher general distress prior to the workshop, then more room for change may have been available for women than men. Another explanation is that women may be more malleable to change encouraged by the workshop and thus benefitted disproportionately from men.

Psychopathology as a Predictor of Maladaptive Perfectionism Change

Perfectionism and psychopathology are believed to share causal and comorbid associations (Adler, 1956; Burns, 1980; Enns & Cox, 2002; Hamachek, 1978; Hollender, 1965; Shafran & Mansell, 2001). Pre-treatment ratings of depression, anxiety, and general distress were thus expected to predict change in maladaptive perfectionism following the workshop. Degree of psychopathology was expected to exacerbate maladaptive perfectionism consistent with theories of perfectionism as a compensatory strategy (Flett & Hewitt, 2002). Pre-treatment psychopathology ratings were examined using standard multiple regression as predictors for maladaptive perfectionism change from pre-treatment to post-treatment, 3-week, and 3-month follow-ups.

None of the independent variables in any of the standard multiple regression models were significant in predicting change in maladaptive perfectionism ratings from pre-treatment to any of the three post-treatment assessments. Variance explained by each of these models ranged from 0.6% to 4.8%. The independent variable with the greatest contribution was different for each model but not significant in any model. General
distress held the most prediction (0.6%) for pre-to post-treatment maladaptive perfectionism change, whereas depression had the greatest contribution (2.1%) from pre-treatment to 3-week follow-up and anxiety had the greatest contribution (2.9%) in maladaptive perfectionism change from pre-treatment to 3-month follow-up. None of these independent variables held significant unique contribution to permit meaningful interpretation of prediction patterns for each assessment of change. These results do not support the proposed hypothesis that pre-treatment depression, anxiety, and general distress, together or in separate models, predict change in maladaptive perfectionism.

The lack of significant prediction of maladaptive perfectionism change by pre-treatment psychopathology ratings can be explained by several possibilities. Sample size may have been too low to capture an adequate picture of the predictive relationship. The non-clinical sample may not have reported a high enough degree of psychopathology to thoroughly test this hypothesis. Other explanations are linked to the nature and possible etiology of perfectionism. Perhaps individuals with long-standing perfectionism are not highly amenable to short-term shifts in psychopathology. Maladaptive perfectionism may decrease only when specifically addressed (DiBartolo, Frost, Dixon, & Almodovar, 2001) such that decreases in psychopathology may not be direct enough to significantly impact perfectionism. Further, the relationship between perfectionism and psychopathology may better resemble an inverse direction in which decreased psychopathology is subsequent to reduced maladaptive perfectionism. This pattern is consistent with the theory of perfectionism as a coping response to inadequacy or low self-esteem that leads to pathological distress over time (Shafran & Mansell, 2001).
Change in Maladaptive Perfectionism for Individuals with Lower Psychopathology

The workshop intervention was hypothesized to be most effective for reducing perfectionism in those with lower depression, anxiety, and general distress. This hypothesis was consistent with Blatt’s (1995) assertion that individuals with a combination of higher perfectionism and concomitant depression and distress symptoms are less likely to benefit from treatment. Psychopathology groups were created based on pre-treatment ratings of depression, anxiety, and general distress, resulting in 40% of the sample characterized as “high psychopathology” and 60% as “low psychopathology.” Univariate ANOVAs comparing maladaptive perfectionism change for high and low psychopathology groups did not reveal significant main or interactive effects at post-treatment, 3-week, or 3-month follow-up ratings of maladaptive perfectionism change.

The hypothesis that the perfectionism workshop would be more beneficial for individuals with lower (versus higher) initial depression, anxiety, and general distress scores was not supported. Compared to individuals with higher levels psychopathology on the three independent variables, individuals with lower ratings of psychopathology did not appear to benefit differentially from the perfectionism workshop. This result is not surprising given that multiple regression procedures in the previously tested hypothesis (“Hypothesis Three A”) similarly failed to note significant predictive power in pre-treatment depression, anxiety, and general distress with respect to ratings of change in maladaptive perfectionism.

A small sample size may have limited interpretable significance in this hypothesis. The small number of individuals completing all follow-ups also precluded comparisons for individuals with high, moderate, and low perfectionism to be further compared at high
and low psychopathology. Earlier hypotheses suggested that individuals with higher pre-treatment maladaptive perfectionism decreased more substantially than those with lower pre-treatment maladaptive perfectionism. Perhaps perfectionism was uniquely impacted by the workshop aside from connections to psychopathology. The workshop may have impacted depression, anxiety, and general distress; however, interactions between perfectionism and psychopathology with respect to the workshop’s treatment effect did not occur as predicted.

Ratings of Workshop Components

The four workshop components (identifying goals and psychoeducation about maladaptive perfectionism, setting high standards, fearing mistakes, and preventing distress and maintaining gains) were developed to address an array of maladaptive perfectionism concerns and incorporated a breadth of suggestions gleaned from perfectionism treatment literature. Workshop components were expected to be complementary to one another. No component was hypothesized to be rated significantly different from other components. Mean ratings for each component revealed that participants consistently rated each workshop component as helpful. Mean ratings were midway between “somewhat helpful” and “absolutely helpful” for each component.

The difference between the highest rated component and lowest rated component was significant. “Setting high standards” was rated as more helpful than “identifying goals and psychoeducation about maladaptive perfectionism.” The hypothesis of no difference between components was not supported. The lowest mean for the workshop component of “identifying goals and psychoeducation about maladaptive perfectionism” was still
considered a very positive rating. This component was introductory and provided general information about perfectionism while “setting high standards” provided more specific information and activities addressing perfectionistic thinking and adjusting goals to fit more realistic proportions. Perhaps participants grew more interested and invested in the workshop by the second component, “setting high standards.” This component may also have held the most substantial impact because cognitive-behavioral training exercises were introduced and practiced here. “Setting high standards” thus covered a breadth of relevant material on maladaptive perfectionism and likely set the tone for subsequent material presented in the workshop.

Workshop Satisfaction and Follow-up Ratings of Usefulness

Participants unanimously reported that they would recommend the workshop to friends or family with perfectionism. These ratings, combined with helpfulness ratings of workshop components, suggest that participants were satisfied with the quality of the workshop and believed that information and exercises specifically impacted perfectionism. Nearly all participants (97.5%) reported using strategies from the workshop at least “a little,” whereas most participants (greater than two-thirds) reported “somewhat” or more use of strategies at 3-week and 3-month follow-ups. The majority of participants (> 70%) also agreed that the workshop helped decrease perfectionism and stress “somewhat” or more at 3-week and 3-month follow-ups. Less than 3% of the sample said they did not use workshop strategies at 3-week and 3-month follow-ups. All participants at the 3-week follow-up said the workshop helped decrease perfectionism
and stress, whereas only two participants (5%) said the workshop did not help decrease perfectionism and stress at the 3-month follow-up.

The workshop was thus rated as helpful for reducing perfectionism and stress. Participants also successfully applied workshop strategies in the weeks and months following the workshop. These results suggest the workshop had a substantial impact on participants even though the workshop was relatively brief. These findings are also impressive given that the sample comprised college student volunteers. If non-clinical participants substantially benefited from the workshop, then the workshop likely holds particular promise for individuals specifically referred for the treatment of perfectionism.

Participants could have exaggerated the helpfulness of the workshop or their commitment to using strategies in daily life. This might be the case if participants sought to support the perceived hypotheses of the researcher or if they wished to present themselves in a favorable and cooperative light. Objective and subjective data, however, are consistent with the trend reported by participants that the workshop impacted perfectionism, depression, anxiety, and general distress. These favorable ratings of workshop satisfaction are believed to reflect participants' attitudes and experiences following the workshop.

Limitations of the Study

Several factors limit the confidence of conclusions from this study and generalizability of the results. One limitation involves number of participants. Sample size was limited due to feasibility of the study. Given the number of hypotheses and statistical comparisons, a larger number of participants might have permitted more
thorough testing and conclusive interpretations. Attrition further limited participants at follow-up assessments. Smaller sample sizes also prevented generating groups for comparing participants at high, moderate, and low levels of maladaptive perfectionism at high and low levels of psychopathology. This was especially challenging for discerning characteristics of participants who were most likely to benefit from the workshop. Also, a true control group was not employed; however, participants assigned to the low perfectionism group represented a comparison group versus moderate and high perfectionism groups.

The use of a convenience sample of undergraduate volunteers also poses a limitation. The motivation and commitment of a non-clinical population of student volunteers may not equate to individuals actively seeking treatment for perfectionism or distress conditions. Assumptions were made that participants would answer honestly and attentively in all assessments in addition to devoting appropriate attention to the workshop presentation and activities. Return rates for the follow-up assessments were estimated to be adequate given the incentives of honoring requests made by the experimenter and entering a raffle to win cash prizes. Those who completed one or both of the follow-up assessments may differ from those who discontinued participation.

Participants who responded to follow-up assessments may have differed in terms of distress, impact of workshop, motivation for change, or other important variables not captured. Perhaps those who completed follow-ups were also those who enjoyed the workshop or felt a need to repay the experimenter for a helpful intervention. Important information from those who did not benefit from or enjoy the workshop might have been missed. However, no significant differences were found on key demographic and
psychopathological variables between those who completed follow-up assessments and those who did not complete follow-ups. One variable noted as disproportionate at follow-up was gender. Men outnumbered women by one participant (53 men, 52 women) initially, but a disproportionately smaller number of men \((n = 16)\) completed 3-week and 3-month follow-up assessments than women \((n = 24)\). This gender difference at the 3-month follow-up approached statistical significance \((p = .06)\) when compared to the gender ratio at pre- and post-treatment. Women also noted higher depression, anxiety, and general distress at pre-treatment. One possible explanation for this gender disparity was that women were more likely to continue with follow-ups in the study because they also had the most room for change. The data support the idea that symptom decreases continued over time in women but may have slightly rebounded in men.

Expectancy effects are also likely. Participants may have adjusted post-treatment ratings for reasons other than genuine change immediately following the workshop. Participants may have sought to support the hypothesis that symptoms should decrease after the workshop intervention. They may also have gained more insight on the subjects of perfectionism and distress such that ratings reflected this revised understanding. An additional post-treatment question might have queried participants about how accurately they believed initial ratings reflected their genuine experiences at pre-treatment. Participants may have responded favorably to other aspects of the workshop (e.g., the experimenter) and tried to favorably inflate ratings of change following the workshop. On the other hand, participants who viewed the workshop only as a means to fulfill a research requirement and who did not find information or activities helpful may have
taken less care in answering questionnaires. Such individuals may also have sought to
damage the integrity of the study.

The generalizability of this study is also limited. The workshop was designed to apply
to individuals struggling with perfectionism. College undergraduate men and women
were chosen as a sample based on convenience and availability. The majority of
participants were under age 25 years and the mean was age 21 years. This age range and
education level may not match individuals in older and younger age ranges, those with
less education, those with less means for obtaining education, or those not currently in the
process of gaining education. Perhaps this sample was more amenable to the lecture-
based format of the workshop than people not accustomed to classroom situations. The
sample was also overwhelmingly single or dating. Data from this sample may be limited
if applied to individuals married, divorced, or separated, particularly as changes in
relationship status may present additional stressors for individuals.

The sample was predominantly European-American (50.5%). Demographic analyses
did not reveal differences for ethnicity on key dependent variables. However, the specific
information and strategies offered by the workshop may not be received identically by
individuals from diverse backgrounds. Symptoms may be described quite differently
from one ethnic group to another, as with anxiety (Guarnaccia, 1997). Hewitt and Flett
(1991) suggested that striving to meet high standards can be prescribed by social
influences such as culture. The culturally relevant expressions of perfectionism and
culturally sensitive approaches to potential treatment of perfectionism are areas in need of
further investigation.
Many limitations due to selection, retention, and involvement of participants could be remedied by a larger sample size. Possible outliers, if present, might be offset or impact the data less substantially with a larger sample. Recruitment of individuals diverse in areas such as age, ethnicity, socio-economic status, and geographic location is highly preferable to explore the generalizability of this workshop. This study was intended to be a pilot for future studies. Favorable results with this sample support an expectation that this workshop may benefit a wide range of individuals with complex clinical features associated with perfectionism. Application of this workshop to clinical samples, particularly those referred with specific maladaptive perfectionism concerns, is a desirable direction for future research.

Other limitations of this study involve measurement concerns. Judgments were made to include assessment instruments and combined measures based on the best available estimates. However, some manipulations of this study did not have clear precedent in the research literature. For instance, subscales of the Frost Multidimensional Perfectionism and Almost Perfect Scale – Revised were combined to create a measure for “maladaptive perfectionism” in line with suggestions from prominent authors. However, this combination did not produce a scale with known psychometric properties. Categorization of groups was also imprecise and followed suggestions outlined, though not extensively tested, in the research literature. Final decisions about cut-off points for groups were made after deliberation over suggestions from research literature and included balanced proportions when possible. The resulting groups are considered best approximations for use in the study and not necessarily delineated by categorical diagnostic criteria.
Other limitations common to survey research apply to this study. Only self-report instruments were utilized. This method was chosen for convenience and time-efficiency. Information from other sources, such as interviews with friends, relatives, parents, significant others, or coworkers, may have added more well-rounded details to participants' self-reports. This might have also reduced the impact of self-presentation effects and encouraged accurate and honest reporting on measures. The assessment instruments were chosen, however, based on sound psychometric properties and sensitivity to change.

Other important limitations of this study involve statistics and accuracy of interpretation. Repeated measures ANOVA was chosen to investigate treatment change due to high levels of correlation among dependent variables. More sophisticated statistics were not used to allow for a simpler and more conservative estimate of treatment impact. Greenhouse-Geisser corrections were used due to a violation of the equal measure-to-measure correlation assumption of repeated measures ANOVA. This violation was not considered a critical problem but anticipated given an expectation that dependent variable ratings would change substantially over time (Pallant, 2007). A Bonferroni adjustment for alpha level significance was also included to limit Type I error. The issues of multicollinearity and violation of sphericity were thus accommodated by using conservative statistical adjustment. However, the overlap in measurement might obscure an accurate interpretation of changes on dependent variable ratings.

An overlap in symptoms, however, may reflect comorbidity of perfectionism and psychopathology. The nature of perfectionism is not entirely clear. Perfectionism may be associated with psychopathology in an interactive or linear fashion (Shafran & Mansell,
2001). Perfectionistic thinking might thus set the stage for individuals to struggle with aspects of depression, anxiety, and other forms of general distress, while also serving as a method to cope with distress (Flett & Hewitt, 2002). Perfectionism likely exerts an impact across clinical disorders (Frost & Steketee, 1997) and may inhibit accurate assessment.

Research and Clinical Implications

This study represented the first empirical attempt to impact perfectionism using a workshop intervention. Follow-up ratings at 3-week and 3-month post-treatment times were also unique to this study. The results supported a significant treatment effect for individuals with high maladaptive perfectionism ratings. The use of a convenience sample and smaller sample size at follow-up assessments were possible limitations of this study and reflect areas in which future research should next explore. Incentives for attention and following through with workshop recommendations with this population may not be similar to individuals specifically referred for perfectionism treatment, particularly when significant comorbid depression and anxiety are likely with a clinical population. Further investigation is warranted to determine if the workshop's effects continue with individuals struggling with chronic maladaptive perfectionism.

Further research is needed to clarify for whom this workshop best applies. Women appeared to benefit more than men; however, attrition and initial severity differed between genders. A goal for continued investigation is exploring the workshop's applicability for individuals from diverse backgrounds with respect to areas such as ethnicity, culture, age, education level, and socioeconomic status. Positive results with
diverse populations would open this intervention to a breadth of options for tailoring key information and strategies for a wide number of people and situations.

The results from this study supported a hypothesis that the workshop could decrease ratings of depression, anxiety, and general distress. However, disentangling variables related to the severity of psychopathology and perfectionism to better understand this treatment effect was not within the scope of this study. Future research should determine the differential impact of a workshop on those struggling with conditions such as depressive and anxiety disorders in addition to maladaptive perfectionism.

The study was judged successful as a pilot for future research. Such research should apply workshop strategies with various populations (e.g., diversity of demographics and clinical symptoms) and in various formats (e.g., business settings, sports, schools, and therapy). The workshop was designed from a cognitive-behavioral framework and, as such, theoretical and strategic advances should be considered when possible. The workshop was designed to provide a "broad stroke" initial intervention for individuals struggling with maladaptive perfectionistic thinking. The intervention was not believed sufficient as a treatment for chronic perfectionism but may be fleshed out and expanded upon for use in more traditional therapeutic settings.

The portability of the workshop and potential applicability across a wide range of settings are advantages of using this format. Mental health professionals can apply this workshop as an educational and preventative measure for those at risk to struggle from perfectionistic thinking. Such individuals include athletes, students, those in competitive work and social environments, and those referred to medical settings. The workshop,
thus, holds promise as an outreach intervention that may help some people initiate a course of personal change or perhaps seek professional treatment.

Therapists may benefit from utilizing specific aspects of the workshop with a given client. For instance, a client with intense fears of making mistakes may be guided through perfectionistic thought-tracking and exposure exercises geared toward estimating how one knows a mistake has been made and the realistic consequences of the mistake. Therapists and other mental health professionals may use some of the workshop’s information and strategies as starting points or in conjunction with other theoretical models, such as exploring fundamental views of acceptance in the client’s family while tracking self-critical thoughts and beliefs experienced by the client. This workshop was offered in a group format and may have utility as a guideline for support groups or education-focused groups for individuals with perfectionism.

Indications from the workshop’s results, thus, support the use of a structured, brief intervention for perfectionism. The workshop appears to hold promise for adjusting perfectionistic thinking, even after a 2-hour presentation on information and tools to combat perfectionism. Future research and therapeutic indications involve determining the breadth of the workshop across a wide variety of settings and better understanding the characteristics of which individuals might benefit most from which aspects of the workshop.

Overall Conclusions

The primary aim of this study was to create and measure the effectiveness of a workshop intervention for perfectionism. The workshop was designed utilizing
recommendations from prominent authors on perfectionism and was intended to cover an array of aspects associated with maladaptive perfectionism. This study extended prior research by empirically testing an intervention for perfectionism and tracking treatment effects over 3-week and 3-month follow-ups. Prior research has noted anecdotal support for treatment interventions but did not provide empirical data. One exception was a study by DiBartolo, Frost, Dixon, and Almodovar (2001) that assigned groups based on high concern over mistakes and provided a 10-minute treatment for fear of public speaking. DiBartolo and colleagues did not measure change in perfectionistic concern over mistakes, however. The current study thus addressed important areas previously vacant in the research literature.

Results indicated that the workshop did relate to decreased ratings of maladaptive perfectionism and these changes were maintained over time. Particular change of a medium effect size was noted at immediate post-treatment and a large effect size was found at 3-month follow-up. The primary goal was thus met in creating a workshop with immediate and lasting impact on maladaptive perfectionism. Individuals with higher perfectionism appeared to benefit the most from the workshop, perhaps because these participants had the most room for improvement and also found the workshop especially relevant. Moderate and high perfectionism groups had lowest ratings at the 3-month follow-up, suggesting incremental decreases in perfectionism over time. Such continued decreases are likely consistent with repeated practice utilizing skills and knowledge gained from the workshop.

A thorough exploration of the observed gender effects is beyond the scope of this study. However, likely explanations include higher prevalence rates in epidemiological
and clinical studies (American Psychiatric Association, 2000), differing attitudes regarding help-seeking behavior (Zuckerman, 1999), gender role related stress (Shear, Feske, & Greeno, 2000), and the possibility that "masculine" traits may serve as protective factors against depression and anxiety (Eisler & Skidmore, 1987). Overall, these results support the workshop's utility for individuals struggling with perfectionism and comorbid depression and general distress. This impact appears stronger for women over time, while men may benefit from refresher sessions to maintain gains.

Several practical limitations did not permit a more thorough investigation of which aspects of the workshop work best for whom. However, favorable ratings of the overall workshop and individual components lend credence to participants' subjective experiences of the workshop as helpful and impactful. Given such positive results with the use of a non-clinical population to pilot this study, the workshop is anticipated to demonstrate treatment efficacy for individuals referred specifically with maladaptive perfectionism concerns. Further, the workshop is also envisioned as a preventative tool for individuals in school, sports, business, or other areas likely to struggle with the demands of maintaining high quality performance.
APPENDIX I

DEMOGRAPHIC QUESTIONNAIRE AND BACKGROUND ASSESSMENT

1. Age: ___________

2. Gender:  ___ Male  ___ Female  (Check one)

3. Which of the following best describes your racial/ethnic background? (Check all that apply)
   ___ African American/Black
   ___ Asian-American/Pacific Islander
   ___ Euro-American/White
   ___ Hispanic/Latino/Latina
   ___ Middle Eastern
   ___ Native American/Alaskan Native
   ___ Multiracial (Please specify) ________________________________
   ___ Other (Please specify) ________________________________

4. Which of the following best describes your marital/relationship status? (Check one)
   ___ Single  ___ Engaged  ___ Significant other/Partner
   ___ Married  ___ Divorced  ___ Separated  ___ Widowed

5. What is your current yearly income? _______

6. Which of the following best represents your current standing in college? (Check one)
   ___ Freshman
   ___ Sophomore
   ___ Junior
   ___ Senior
   ___ Graduate/Professional Student
   ___ N/A (not currently in college)

7. If you are in college, what is your GPA? _______
Please circle the response that best represents your experiences.

1. Do you consider yourself a “perfectionist”?
   
   Yes  No

2. If you answered “Yes” to the above:

   2a. To what degree has your perfectionism interfered with you meeting your goals?

   Not at All  Only A Little  Somewhat  A Lot  Almost Always
   0          1         2         3         4

   2b. To what degree has being perfectionistic helped you achieve your goals?

   Not at All  Only A Little  Somewhat  A Lot  Almost Always
   0          1         2         3         4
# Appendix II

## Treatment Integrity: Perfectionism Workshop

Date: __________
Workshop #: ______

*Please circle the response that best reflects your rating of each workshop component.*

1. To what extent did the primary investigator orient participants to the expectations of the study?
   - Not at All 0
   - A Little 1
   - Somewhat 2
   - A Lot 3
   - Completely 4

2. To what extent did the primary investigator obtain informed consent?
   - Not at All 0
   - A Little 1
   - Somewhat 2
   - A Lot 3
   - Completely 4

### Study Overview and Identifying Goals

3. To what extent did the primary investigator discuss participants' conceptualizations of perfectionism?
   - Not at All 0
   - A Little 1
   - Somewhat 2
   - A Lot 3
   - Completely 4

4. To what extent did the primary investigator present information about healthy and maladaptive striving?
   - Not at All 0
   - A Little 1
   - Somewhat 2
   - A Lot 3
   - Completely 4

5. To what extent did the primary investigator discuss negative consequences of perfectionism such as psychological and medical conditions?
   - Not at All 0
   - A Little 1
   - Somewhat 2
   - A Lot 3
   - Completely 4

6. To what extent did the primary investigator elicit perfectionism triggers from participants?
   - Not at All 0
   - A Little 1
   - Somewhat 2
   - A Lot 3
   - Completely 4

7. To what extent did the primary investigator introduce the cognitive-behavioral treatment approach?
   - Not at All 0
   - A Little 1
   - Somewhat 2
   - A Lot 3
   - Completely 4
Setting High Standards

8. To what extent did the primary investigator discuss the dangers of inflexible thinking?
   Not at All   A Little   Somewhat   A Lot   Completely
   0           1           2           3           4

9. To what extent did the primary investigator discuss separating self-worth from performance?
   Not at All   A Little   Somewhat   A Lot   Completely
   0           1           2           3           4

10. To what extent did the primary investigator introduce and employ cognitive training to address helpful and unhelpful thoughts?
    Not at All   A Little   Somewhat   A Lot   Completely
    0           1           2           3           4

11. To what extent did the primary investigator discuss the costs and benefits of relaxing one’s high standards?
    Not at All   A Little   Somewhat   A Lot   Completely
    0           1           2           3           4

12. To what extent did the primary investigator offer an activity in which participants estimate satisfaction during pleasurable activities?
    Not at All   A Little   Somewhat   A Lot   Completely
    0           1           2           3           4

Fear of Making Mistakes and Doubting Oneself

13. To what extent did the primary investigator utilize thought tracking exercises (e.g., Perfectionist Worksheet) to address “should” statements?
    Not at All   A Little   Somewhat   A Lot   Completely
    0           1           2           3           4

14. To what extent did the primary investigator discuss how one determines when a mistake has occurred and the personal impact of such errors?
    Not at All   A Little   Somewhat   A Lot   Completely
    0           1           2           3           4

15. To what extent did the primary investigator introduce and demonstrate strategies for coping with perfectionistic thinking (i.e., developing alternate thoughts and stress reduction such as breathing and brief relaxation)?
    Not at All   A Little   Somewhat   A Lot   Completely
    0           1           2           3           4

Preventing Distress and Continuing Gains

16. To what extent did the primary investigator summarize earlier workshop components?
    Not at All   A Little   Somewhat   A Lot   Completely
    0           1           2           3           4
17. To what extent did the primary investigator offer and distribute handout exercises to continue skills learned during the workshop (i.e., Perfectionist Journal, coping strategy reminders, and suggestions for self-directed exposures such as "aiming for average")?

Not at All  A Little  Somewhat  A Lot  Completely
0          1          2          3          4

18. To what extent did the primary investigator encourage participants to generate at least one creative activity to enjoy without criticism?

Not at All  A Little  Somewhat  A Lot  Completely
0          1          2          3          4

19. To what extent did the primary investigator discuss and encourage participants to reward themselves for meeting short-term, realistic goals?

Not at All  A Little  Somewhat  A Lot  Completely
0          1          2          3          4
FIGURES

Figure 1.

Overall and Group Change in Maladaptive Perfectionism at Pre-treatment, Post-treatment, and Follow-up Assessments.
TABLES

Table 1.

Correlations for Individual Measures of Psychopathology at Pre-Treatment, Post-Treatment, and Follow-Up Assessments.

(N=105, Pre-Post; N= 62, 3-Week; N= 40, 3-Month)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Time</th>
<th>Pre</th>
<th>Post</th>
<th>3-week</th>
<th>3-month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mal Perf</td>
<td>Pre</td>
<td></td>
<td>.80**</td>
<td>.50**</td>
<td>.32**</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td></td>
<td>.75**</td>
<td>.54**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-week</td>
<td></td>
<td>.56**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BDI-II</td>
<td>Pre</td>
<td></td>
<td>.83**</td>
<td>.58**</td>
<td>.46**</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td></td>
<td>.68**</td>
<td>.50**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-week</td>
<td></td>
<td>.60**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAI-S</td>
<td>Pre</td>
<td></td>
<td>.72**</td>
<td>.42**</td>
<td>.37*</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td></td>
<td>.39**</td>
<td>.20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-week</td>
<td></td>
<td>.69**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSI</td>
<td>Pre</td>
<td></td>
<td>.88**</td>
<td>.61**</td>
<td>.45*</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td></td>
<td>.78**</td>
<td>.49**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-week</td>
<td></td>
<td>.67**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Correlation is significant at the 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)

Note: “Mal Perf” = Maladaptive Perfectionism composite score used, combining Discrepancy Subscale of the APS-R and maladaptive subscales (CM, DA, PC, and PE) from the FMPS. Beck Depression Inventory-II (BDI-II) used as measure of depression. State portion of the State-Trait Anxiety Interview (STAI-S) was used as the measure of anxiety. General distress was assessed by Global Symptom Index (GSI) of the Brief Symptom Inventory (BSI).

Table 2.

Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of Maladaptive Perfectionism.

(N=40, Used in Repeated Measures ANOVA)

<table>
<thead>
<tr>
<th>Measurement Time</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>126.83</td>
<td>19.75</td>
</tr>
<tr>
<td>Post</td>
<td>118.08</td>
<td>21.43</td>
</tr>
<tr>
<td>3-Week</td>
<td>117.38</td>
<td>19.23</td>
</tr>
<tr>
<td>3-Month</td>
<td>114.20</td>
<td>19.73</td>
</tr>
</tbody>
</table>

Note: Maladaptive Perfectionism measure is a composite of CM, DA, PC, PE, and Discrepancy subscales.
Table 3.

Means and Standard Deviations for Low, Moderate, and High Perfectionism Groups at Pre-Treatment, Post-Treatment, and Follow-Up Measurements.

(Total N=40; High N=15; Moderate N=13; Low N=12)

<table>
<thead>
<tr>
<th>Group</th>
<th>Measurement Time</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Pre-Treatment</td>
<td>102.50</td>
<td>8.89</td>
</tr>
<tr>
<td></td>
<td>Post-Treatment</td>
<td>100.25</td>
<td>17.04</td>
</tr>
<tr>
<td></td>
<td>3-Week</td>
<td>105.50</td>
<td>20.25</td>
</tr>
<tr>
<td></td>
<td>3-Month</td>
<td>106.33</td>
<td>19.50</td>
</tr>
<tr>
<td>Moderate</td>
<td>Pre-Treatment</td>
<td>127.23</td>
<td>5.81</td>
</tr>
<tr>
<td></td>
<td>Post-Treatment</td>
<td>120.38</td>
<td>16.93</td>
</tr>
<tr>
<td></td>
<td>3-Week</td>
<td>115.62</td>
<td>15.19</td>
</tr>
<tr>
<td></td>
<td>3-Month</td>
<td>112.54</td>
<td>15.73</td>
</tr>
<tr>
<td>High</td>
<td>Pre-Treatment</td>
<td>145.93</td>
<td>9.87</td>
</tr>
<tr>
<td></td>
<td>Post-Treatment</td>
<td>130.33</td>
<td>19.15</td>
</tr>
<tr>
<td></td>
<td>3-Week</td>
<td>128.40</td>
<td>16.00</td>
</tr>
<tr>
<td></td>
<td>3-Month</td>
<td>121.93</td>
<td>21.31</td>
</tr>
</tbody>
</table>
Table 4.

Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of Depression.

\( (N=40, \text{Used in Repeated Measures ANOVA}) \)

<table>
<thead>
<tr>
<th>Measurement Time</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>12.70</td>
<td>7.09</td>
</tr>
<tr>
<td>Post</td>
<td>10.30</td>
<td>8.15</td>
</tr>
<tr>
<td>3-Week</td>
<td>9.80</td>
<td>8.19</td>
</tr>
<tr>
<td>3-Month</td>
<td>9.43</td>
<td>8.86</td>
</tr>
</tbody>
</table>

Note: Depression measured using BDI-II total scores.

Table 5.

Means and Standard Deviations for Pre-treatment, Post-treatment, and Follow-Up Measures of Anxiety.

\( (N=40, \text{Used in Repeated Measures ANOVA}) \)

<table>
<thead>
<tr>
<th>Measurement Time</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>39.08</td>
<td>12.20</td>
</tr>
<tr>
<td>Post</td>
<td>34.60</td>
<td>11.02</td>
</tr>
<tr>
<td>3-Week</td>
<td>34.03</td>
<td>11.68</td>
</tr>
<tr>
<td>3-Month</td>
<td>33.95</td>
<td>12.62</td>
</tr>
</tbody>
</table>

Note: Anxiety measured using STAI-State total scores.
Table 6.

Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of General Distress.

(N=40, Used in Repeated Measures ANOVA)

<table>
<thead>
<tr>
<th>Measurement Time</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>0.90</td>
<td>0.62</td>
</tr>
<tr>
<td>Post</td>
<td>0.76</td>
<td>0.63</td>
</tr>
<tr>
<td>3-Week</td>
<td>0.53</td>
<td>0.42</td>
</tr>
<tr>
<td>3-Month</td>
<td>0.49</td>
<td>0.43</td>
</tr>
</tbody>
</table>

Note: General distress measured using GSI subtotal from BSI.

Table 7.

Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of Depression in Men.

(N=16, Used in Repeated Measures ANOVA)

<table>
<thead>
<tr>
<th>Measurement Time</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>9.06</td>
<td>4.51</td>
</tr>
<tr>
<td>Post</td>
<td>6.63</td>
<td>4.90</td>
</tr>
<tr>
<td>3-Week</td>
<td>8.13</td>
<td>5.89</td>
</tr>
<tr>
<td>3-Month</td>
<td>11.13</td>
<td>8.94</td>
</tr>
</tbody>
</table>
Table 8.

Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of Depression in Women.

(N=24, Used in Repeated Measures ANOVA)

<table>
<thead>
<tr>
<th>Measurement Time</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>15.13</td>
<td>7.53</td>
</tr>
<tr>
<td>Post</td>
<td>12.75</td>
<td>9.01</td>
</tr>
<tr>
<td>3-Week</td>
<td>10.92</td>
<td>9.37</td>
</tr>
<tr>
<td>3-Month</td>
<td>8.29</td>
<td>8.81</td>
</tr>
</tbody>
</table>

Table 9.

Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of Anxiety in Men.

(N=16, Used in Repeated Measures ANOVA)

<table>
<thead>
<tr>
<th>Measurement Time</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>34.38</td>
<td>12.77</td>
</tr>
<tr>
<td>Post</td>
<td>29.63</td>
<td>7.91</td>
</tr>
<tr>
<td>3-Week</td>
<td>30.69</td>
<td>10.88</td>
</tr>
<tr>
<td>3-Month</td>
<td>31.44</td>
<td>11.85</td>
</tr>
</tbody>
</table>
Table 10.

*Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of Anxiety in Women.*

(N=24, Used in Repeated Measures ANOVA)

<table>
<thead>
<tr>
<th>Measurement Time</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>42.21</td>
<td>10.97</td>
</tr>
<tr>
<td>Post</td>
<td>37.92</td>
<td>11.68</td>
</tr>
<tr>
<td>3-Week</td>
<td>36.25</td>
<td>11.88</td>
</tr>
<tr>
<td>3-Month</td>
<td>35.63</td>
<td>13.09</td>
</tr>
</tbody>
</table>

Table 11.

*Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of General Distress in Men.*

(N=16, Used in Repeated Measures ANOVA)

<table>
<thead>
<tr>
<th>Measurement Time</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>0.61</td>
<td>0.38</td>
</tr>
<tr>
<td>Post</td>
<td>0.46</td>
<td>0.42</td>
</tr>
<tr>
<td>3-Week</td>
<td>0.39</td>
<td>0.35</td>
</tr>
<tr>
<td>3-Month</td>
<td>0.46</td>
<td>0.38</td>
</tr>
</tbody>
</table>
Table 12.

Means and Standard Deviations for Pre-Treatment, Post-Treatment, and Follow-Up Measures of General Distress in Women.

(N=24, Used in Repeated Measures ANOVA)

<table>
<thead>
<tr>
<th>Measurement Time</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>1.09</td>
<td>0.68</td>
</tr>
<tr>
<td>Post</td>
<td>0.97</td>
<td>0.68</td>
</tr>
<tr>
<td>3-Week</td>
<td>0.62</td>
<td>0.44</td>
</tr>
<tr>
<td>3-Month</td>
<td>0.50</td>
<td>0.48</td>
</tr>
</tbody>
</table>

Table 13.

Correlations between Initial Psychopathology Measures.

(N=105)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mal Perf</th>
<th>BDI-II</th>
<th>STAI-S</th>
<th>GSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mal Perf</td>
<td>-</td>
<td>.41**</td>
<td>.27**</td>
<td>.50**</td>
</tr>
<tr>
<td>BDI-II</td>
<td>-</td>
<td>.58**</td>
<td>.73**</td>
<td></td>
</tr>
<tr>
<td>STAI-S</td>
<td>-</td>
<td>-</td>
<td>.51**</td>
<td></td>
</tr>
</tbody>
</table>

**-Correlation is significant at the 0.01 level (2-tailed)

Note: “Mal Perf” is the maladaptive perfectionism grouping from the FMPS; “Positive Striving” is the positive striving dimension of the FMPS; BDI-II is the Beck Depression Inventory – II; STAI-S is the State portion of the State-Trait Anxiety Inventory; GSI is the Global Severity Index of the Brief Symptom Inventory.
Table 14.

Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Maladaptive Perfectionism.

(N=40)

<table>
<thead>
<tr>
<th>Time Comparison</th>
<th>Mean Difference</th>
<th>SE</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre – Post</td>
<td>8.75*</td>
<td>2.67</td>
<td>.013</td>
</tr>
<tr>
<td>Pre – 3-Week</td>
<td>9.45*</td>
<td>2.95</td>
<td>.016</td>
</tr>
<tr>
<td>Pre – 3-Month</td>
<td>12.63**</td>
<td>3.65</td>
<td>.008</td>
</tr>
<tr>
<td>Post – 3-Week</td>
<td>0.70</td>
<td>2.14</td>
<td>1.000</td>
</tr>
<tr>
<td>Post – 3-Month</td>
<td>3.88</td>
<td>3.12</td>
<td>1.000</td>
</tr>
<tr>
<td>3-Week – 3-Month</td>
<td>3.18</td>
<td>2.90</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**- Mean Difference is significant at the 0.013 level (2-tailed Bonferroni Correction)
* - Mean Difference is significant at the 0.05 level (2-tailed)

Note: Pre – Post Cohen’s $d = .42$
Pre – 3-Week Cohen’s $d = .48$
Pre – 3-Month Cohen’s $d = .64$
(Cohen’s 1988 guidelines for $d$: .10-.29=small, .30-.49=medium, .50-1.0=large).
Table 15.

Repeated Measures ANOVAs for Perfectionism Groups at Pre-Treatment, Post-Treatment, and Follow-Up Measurements.

(N=40)

<table>
<thead>
<tr>
<th>Group</th>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Time</td>
<td>(1, 11)</td>
<td>0.80</td>
<td>.391</td>
</tr>
<tr>
<td>Moderate</td>
<td>Time</td>
<td>(2.17, 26.08)g</td>
<td>4.83*</td>
<td>.014</td>
</tr>
<tr>
<td>High</td>
<td>Time</td>
<td>(1, 14)</td>
<td>17.09**</td>
<td>.001</td>
</tr>
</tbody>
</table>

* - ANOVA is significant at the 0.05 level
** - ANOVA is significant at the 0.013 level (Bonferroni correction)

Note: Group = low, moderate, or high for perfectionism ratings.
df = degrees of freedom for each source (time, error term)
Table 16.

Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Maladaptive Perfectionism in the Low Perfectionism Group.

(N=12)

<table>
<thead>
<tr>
<th>Time Comparison</th>
<th>Mean Difference</th>
<th>SE</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre – Post</td>
<td>2.25</td>
<td>4.19</td>
<td>1.000</td>
</tr>
<tr>
<td>Pre – 3-Week</td>
<td>-3.00</td>
<td>5.83</td>
<td>1.000</td>
</tr>
<tr>
<td>Pre – 3-Month</td>
<td>-3.83</td>
<td>6.07</td>
<td>1.000</td>
</tr>
<tr>
<td>Post – 3-Week</td>
<td>-5.25</td>
<td>4.97</td>
<td>1.000</td>
</tr>
<tr>
<td>Post – 3-Month</td>
<td>-6.08</td>
<td>6.20</td>
<td>1.000</td>
</tr>
<tr>
<td>3-Week – 3-Month</td>
<td>0.83</td>
<td>7.50</td>
<td>1.000</td>
</tr>
</tbody>
</table>

All pairwise comparisons non-significant (p > .05)

Note: Negative values denote an increase in perfectionism ratings.
Table 17.

Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Maladaptive Perfectionism in the Moderate Perfectionism Group.

(N=13)

<table>
<thead>
<tr>
<th>Time Comparison</th>
<th>Mean Difference</th>
<th>SE</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre – Post</td>
<td>6.85</td>
<td>4.50</td>
<td>.923</td>
</tr>
<tr>
<td>Pre – 3-Week</td>
<td>11.62</td>
<td>4.43</td>
<td>.134</td>
</tr>
<tr>
<td>Pre – 3-Month</td>
<td>14.69*</td>
<td>4.55</td>
<td>.043</td>
</tr>
<tr>
<td>Post – 3-Week</td>
<td>4.77</td>
<td>2.92</td>
<td>.770</td>
</tr>
<tr>
<td>Post – 3-Month</td>
<td>7.85</td>
<td>4.97</td>
<td>.844</td>
</tr>
<tr>
<td>3-Week – 3-Month</td>
<td>3.08</td>
<td>2.81</td>
<td>1.000</td>
</tr>
</tbody>
</table>

* - Mean Difference is significant at the 0.05 level (2-tailed)
(not-significant at corrected Bonferroni level of p < .013)
### Table 18.

**Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Maladaptive Perfectionism in the High Perfectionism Group.**

*(N=15)*

<table>
<thead>
<tr>
<th>Time Comparison</th>
<th>Mean Difference</th>
<th>SE</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre – Post</td>
<td>15.60*</td>
<td>4.55</td>
<td>.025</td>
</tr>
<tr>
<td>Pre – 3-Week</td>
<td>17.53**</td>
<td>3.86</td>
<td>.003</td>
</tr>
<tr>
<td>Pre – 3-Month</td>
<td>24.00**</td>
<td>5.98</td>
<td>.008</td>
</tr>
<tr>
<td>Post – 3-Week</td>
<td>1.93</td>
<td>2.97</td>
<td>1.000</td>
</tr>
<tr>
<td>Post – 3-Month</td>
<td>8.40</td>
<td>4.67</td>
<td>.563</td>
</tr>
<tr>
<td>3-Week – 3-Month</td>
<td>6.47</td>
<td>4.41</td>
<td>.986</td>
</tr>
</tbody>
</table>

** - Mean Difference is significant at the 0.013 level (2-tailed Bonferroni correction)

* - Mean Difference is significant at the 0.05 level (2-tailed)

**Note:** Pre – 3-Week Cohen's $d = 1.32$
Pre – 3-Month Cohen's $d = 1.45$
(Cohen's 1988 guidelines for $d$: .10-.29=small, .30-.49=medium, .50-1.0=large).
Table 19.

Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Depression.

(*N=40*)

<table>
<thead>
<tr>
<th>Time Comparison</th>
<th>Mean Difference</th>
<th>SE</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre – Post</td>
<td>2.40**</td>
<td>0.65</td>
<td>.004</td>
</tr>
<tr>
<td>Pre – 3-Week</td>
<td>2.90*</td>
<td>1.02</td>
<td>.044</td>
</tr>
<tr>
<td>Pre – 3-Month</td>
<td>3.28</td>
<td>1.33</td>
<td>.109</td>
</tr>
<tr>
<td>Post – 3-Week</td>
<td>0.50</td>
<td>0.95</td>
<td>1.000</td>
</tr>
<tr>
<td>Post – 3-Month</td>
<td>0.88</td>
<td>1.35</td>
<td>1.000</td>
</tr>
<tr>
<td>3-Week – 3-Month</td>
<td>0.38</td>
<td>1.21</td>
<td>1.000</td>
</tr>
</tbody>
</table>

** - Mean Difference is significant at the 0.013 level (2-tailed Bonferroni Correction)
*  - Mean Difference is significant at the 0.05 level (2-tailed)

Note: Pre – Post Cohen’s $d = .31$. 

152
Table 20.

Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Depression in Men.

\((N=16)\)

<table>
<thead>
<tr>
<th>Time Comparison</th>
<th>Mean Difference</th>
<th>SE</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre – Post</td>
<td>2.44**</td>
<td>0.63</td>
<td>.009</td>
</tr>
<tr>
<td>Pre – 3-Week</td>
<td>0.94</td>
<td>1.05</td>
<td>1.000</td>
</tr>
<tr>
<td>Pre – 3-Month</td>
<td>-2.06</td>
<td>2.06</td>
<td>1.000</td>
</tr>
<tr>
<td>Post – 3-Week</td>
<td>-1.50</td>
<td>0.94</td>
<td>.798</td>
</tr>
<tr>
<td>Post – 3-Month</td>
<td>-4.50</td>
<td>2.10</td>
<td>.293</td>
</tr>
<tr>
<td>3-Week – 3-Month</td>
<td>-3.00</td>
<td>1.90</td>
<td>.811</td>
</tr>
</tbody>
</table>

**- Mean Difference is significant at the 0.013 level (2-tailed Bonferroni Correction)

*Note:* Pre – Post Cohen’s \(d = .51\).
Table 21.

*Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Depression in Women.*

(N=24)

<table>
<thead>
<tr>
<th>Time Comparison</th>
<th>Mean Difference</th>
<th>SE</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre – Post</td>
<td>2.38</td>
<td>1.00</td>
<td>.159</td>
</tr>
<tr>
<td>Pre – 3-Week</td>
<td>4.21</td>
<td>1.52</td>
<td>.065</td>
</tr>
<tr>
<td>Pre – 3-Month</td>
<td>6.83**</td>
<td>1.33</td>
<td>.000</td>
</tr>
<tr>
<td>Post – 3-Week</td>
<td>1.83</td>
<td>1.41</td>
<td>1.000</td>
</tr>
<tr>
<td>Post – 3-Month</td>
<td>4.46*</td>
<td>1.36</td>
<td>.020</td>
</tr>
<tr>
<td>3-Week – 3-Month</td>
<td>2.63</td>
<td>1.43</td>
<td>.471</td>
</tr>
</tbody>
</table>

**- Mean Difference is significant at the 0.013 level (2-tailed Bonferroni Correction)

*- Mean Difference is significant at 0.05 level (2-tailed)

Note: Pre – 3-Month Cohen’s $d = .83$

Post – 3-Month Cohen’s $d = .50$. 

154
Table 22.

Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of Anxiety.

(N=40)

<table>
<thead>
<tr>
<th>Time Comparison</th>
<th>Mean Difference</th>
<th>SE</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre – Post</td>
<td>4.48*</td>
<td>1.50</td>
<td>.029</td>
</tr>
<tr>
<td>Pre – 3-Week</td>
<td>5.05</td>
<td>2.02</td>
<td>.101</td>
</tr>
<tr>
<td>Pre – 3-Month</td>
<td>5.13</td>
<td>2.20</td>
<td>.152</td>
</tr>
<tr>
<td>Post – 3-Week</td>
<td>0.58</td>
<td>2.13</td>
<td>1.000</td>
</tr>
<tr>
<td>Post – 3-Month</td>
<td>0.65</td>
<td>2.38</td>
<td>1.000</td>
</tr>
<tr>
<td>3-Week – 3-Month</td>
<td>0.08</td>
<td>1.52</td>
<td>1.000</td>
</tr>
</tbody>
</table>

* - Mean Difference is significant at the 0.05 level (2-tailed)
(Not significant at corrected Bonferroni level of p < .013)

Note: Pre – Post Cohen’s $d = .39$. 
Table 23.

_Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of General Distress._

(N=40)

<table>
<thead>
<tr>
<th>Time Comparison</th>
<th>Mean Difference</th>
<th>SE</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre – Post</td>
<td>0.13</td>
<td>0.05</td>
<td>.109</td>
</tr>
<tr>
<td>Pre – 3-Week</td>
<td>0.37**</td>
<td>0.07</td>
<td>.000</td>
</tr>
<tr>
<td>Pre – 3-Month</td>
<td>0.41**</td>
<td>0.09</td>
<td>.000</td>
</tr>
<tr>
<td>Post – 3-Week</td>
<td>0.24**</td>
<td>0.06</td>
<td>.003</td>
</tr>
<tr>
<td>Post – 3-Month</td>
<td>0.28*</td>
<td>0.09</td>
<td>.022</td>
</tr>
<tr>
<td>3-Week – 3-Month</td>
<td>0.04</td>
<td>0.06</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**- Mean Difference is significant at the 0.013 level (2-tailed Bonferroni Correction)

* - Mean Difference is significant at the 0.05 level (2-tailed)

**Note:** Pre – 3-Week Cohen’s $d = .70$
  Pre – 3-Month Cohen’s $d = .77$
  Post – 3-Week Cohen’s $d = .44$
  Post – 3-Month Cohen’s $d = .51$. 
Table 24.

*Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of General Distress in Men.*

\(N=16\), Used in Repeated Measures ANOVA)

<table>
<thead>
<tr>
<th>Time Comparison</th>
<th>Mean Difference</th>
<th>SE</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre – Post</td>
<td>0.15**</td>
<td>0.03</td>
<td>.003</td>
</tr>
<tr>
<td>Pre – 3-Week</td>
<td>0.22*</td>
<td>0.07</td>
<td>.029</td>
</tr>
<tr>
<td>Pre – 3-Month</td>
<td>0.15</td>
<td>0.10</td>
<td>1.000</td>
</tr>
<tr>
<td>Post – 3-Week</td>
<td>0.07</td>
<td>0.06</td>
<td>1.000</td>
</tr>
<tr>
<td>Post – 3-Month</td>
<td>0.00</td>
<td>0.11</td>
<td>1.000</td>
</tr>
<tr>
<td>3-Week – 3-Month</td>
<td>-0.07</td>
<td>0.07</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**- Mean Difference is significant at the 0.013 level (2-tailed Bonferroni Correction)
* - Mean Difference is significant at the 0.05 level (2-tailed)

Note: Pre – Post Cohen’s \(d = .31\)
Table 25.

_Pairwise Comparisons among Pre-Treatment, Post-Treatment, and Follow-Up Measures of General Distress in Women._

(_N_=24, Used in Repeated Measures ANOVA)

<table>
<thead>
<tr>
<th>Time Comparison</th>
<th>Mean Difference</th>
<th>SE</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre - Post</td>
<td>0.12</td>
<td>0.09</td>
<td>1.000</td>
</tr>
<tr>
<td>Pre - 3-Week</td>
<td>0.47**</td>
<td>0.11</td>
<td>.002</td>
</tr>
<tr>
<td>Pre - 3-Month</td>
<td>0.58**</td>
<td>0.13</td>
<td>.001</td>
</tr>
<tr>
<td>Post - 3-Week</td>
<td>0.35**</td>
<td>0.09</td>
<td>.005</td>
</tr>
<tr>
<td>Post - 3-Month</td>
<td>0.46**</td>
<td>0.12</td>
<td>.005</td>
</tr>
<tr>
<td>3-Week – 3-Month</td>
<td>0.11</td>
<td>0.07</td>
<td>.846</td>
</tr>
</tbody>
</table>

**- Mean Difference is significant at the 0.013 level (2-tailed Bonferroni Correction)

_Note:_ Pre – 3-Week Cohen’s _d_ = .82
Pre – 3-Month Cohen’s _d_ = .99
Post – 3-Week Cohen’s _d_ = .61
Post – 3-Month Cohen’s _d_ = .79.
Table 26.

Summary of Regression Analyses between Psychopathology Measures and Maladaptive Perfectionism Change from Pre-Treatment to Post-Treatment.

(N=104)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SEB</th>
<th>β</th>
<th>t</th>
<th>p</th>
<th>part r</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II</td>
<td>-0.12</td>
<td>0.30</td>
<td>-0.06</td>
<td>-0.41</td>
<td>0.687</td>
<td>-0.04</td>
</tr>
<tr>
<td>STAI-S</td>
<td>-0.09</td>
<td>0.15</td>
<td>-0.08</td>
<td>-0.64</td>
<td>0.524</td>
<td>-0.06</td>
</tr>
<tr>
<td>GSI</td>
<td>2.37</td>
<td>3.09</td>
<td>0.11</td>
<td>0.77</td>
<td>0.444</td>
<td>0.08</td>
</tr>
</tbody>
</table>

Note: Overall $R = .10$ (Adjusted $R^2 = .02$). The dependent variable is change from pre- to post-treatment ratings on the Maladaptive Perfectionism composite measurement.
Table 27.

**Summary of Regression Analyses between Psychopathology Measures and Maladaptive Perfectionism Change from Pre-Treatment to 3-Weeks Following Treatment.**

(N=61)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SEB</th>
<th>β</th>
<th>t</th>
<th>p</th>
<th>part r</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II</td>
<td>.59</td>
<td>.52</td>
<td>.22</td>
<td>1.15</td>
<td>.256</td>
<td>.15</td>
</tr>
<tr>
<td>STAI-S</td>
<td>-.06</td>
<td>.25</td>
<td>-.04</td>
<td>-0.24</td>
<td>.811</td>
<td>-.03</td>
</tr>
<tr>
<td>GSI</td>
<td>3.92</td>
<td>5.32</td>
<td>.13</td>
<td>0.74</td>
<td>.465</td>
<td>.09</td>
</tr>
</tbody>
</table>

**Note:** Overall $R = .31$ (Adjusted $R^2 = .05$). The dependent variable is change from pre-treatment to 3-week follow-up ratings on the Maladaptive Perfectionism composite measurement.
Table 28.

Summary of Regression Analyses between Psychopathology Measures and Maladaptive Perfectionism Change from Pre-Treatment to 3-Months Following Treatment.

(N=39)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SEB</th>
<th>β</th>
<th>t</th>
<th>p</th>
<th>part r</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II</td>
<td>.25</td>
<td>.84</td>
<td>.07</td>
<td>0.30</td>
<td>.769</td>
<td>.05</td>
</tr>
<tr>
<td>STAI-S</td>
<td>.43</td>
<td>.41</td>
<td>.21</td>
<td>1.05</td>
<td>.300</td>
<td>.17</td>
</tr>
<tr>
<td>GSI</td>
<td>1.90</td>
<td>8.69</td>
<td>.05</td>
<td>0.22</td>
<td>.829</td>
<td>.04</td>
</tr>
</tbody>
</table>

Note: Overall $R = .29$ (Adjusted $R^2 = .01$). The dependent variable is change from pre-treatment to 3-month follow-up ratings on the Maladaptive Perfectionism composite measurement.
Table 29.

*Between-Subjects ANOVA for Psychopathology Groups at Pre- to Post-Treatment Change in Maladaptive Perfectionism.*

(N=105)

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depr Group</td>
<td>1</td>
<td>0.64</td>
<td>.426</td>
</tr>
<tr>
<td>Anx Group</td>
<td>1</td>
<td>0.90</td>
<td>.346</td>
</tr>
<tr>
<td>Gen Dist Group</td>
<td>1</td>
<td>0.01</td>
<td>.945</td>
</tr>
<tr>
<td>Depr x Anx</td>
<td>1</td>
<td>0.19</td>
<td>.667</td>
</tr>
<tr>
<td>Depr x Gen Dist</td>
<td>1</td>
<td>0.15</td>
<td>.704</td>
</tr>
<tr>
<td>Anx x Gen Dist</td>
<td>1</td>
<td>0.02</td>
<td>.877</td>
</tr>
<tr>
<td>Depr x Anx x Gen Distr</td>
<td>1</td>
<td>1.19</td>
<td>.279</td>
</tr>
</tbody>
</table>

All ANOVAs non-significant (p > .05)

*Note:* Dependent variable = change from pre- to post-treatment ratings on Maladaptive Perfectionism composite. Depr Group = pre-treatment ratings of depression on the BDI-II compared at higher vs. lower levels. Anx Group = pre-treatment ratings of anxiety on the STAI-State compared at higher vs. lower levels. Gen Dist Group = pre-treatment ratings of general distress on the GSI compared at higher vs. lower levels.
Table 30.

Between-Subjects ANOVA for Psychopathology Groups at 3-Weeks Change in Pre-Treatment Maladaptive Perfectionism.

(N=62)

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depr Group</td>
<td>1</td>
<td>0.39</td>
<td>.538</td>
</tr>
<tr>
<td>Anx Group</td>
<td>1</td>
<td>3.27</td>
<td>.076</td>
</tr>
<tr>
<td>Gen Dist Group</td>
<td>1</td>
<td>0.30</td>
<td>.587</td>
</tr>
<tr>
<td>Depr x Anx</td>
<td>1</td>
<td>0.25</td>
<td>.618</td>
</tr>
<tr>
<td>Depr x Gen Dist</td>
<td>1</td>
<td>0.55</td>
<td>.463</td>
</tr>
<tr>
<td>Anx x Gen Dist</td>
<td>1</td>
<td>0.70</td>
<td>.408</td>
</tr>
<tr>
<td>Depr x Anx x Gen Distr</td>
<td>1</td>
<td>3.83</td>
<td>.056</td>
</tr>
</tbody>
</table>

All ANOVAs non-significant (p > .05)

Note: Dependent variable = change from pre-treatment to 3-week ratings on Maladaptive Perfectionism composite. Depr Group = pre-treatment ratings of depression on the BDI-II compared at higher vs. lower levels. Anx Group = pre-treatment ratings of anxiety on the STAI-State compared at higher vs. lower levels. Gen Dist Group = pre-treatment ratings of general distress on the GSI compared at higher vs. lower levels.
Table 31.

*Between-Subjects ANOVA for Psychopathology Groups at 3-Months Change in Pre-Treatment Maladaptive Perfectionism.*

\( (N=40) \)

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depr Group</td>
<td>1</td>
<td>0.17</td>
<td>.681</td>
</tr>
<tr>
<td>Anx Group</td>
<td>1</td>
<td>1.14</td>
<td>.294</td>
</tr>
<tr>
<td>Gen Dist Group</td>
<td>1</td>
<td>0.31</td>
<td>.581</td>
</tr>
<tr>
<td>Depr x Anx</td>
<td>1</td>
<td>0.47</td>
<td>.496</td>
</tr>
<tr>
<td>Depr x Gen Dist</td>
<td>1</td>
<td>1.55</td>
<td>.223</td>
</tr>
<tr>
<td>Anx x Gen Dist</td>
<td>1</td>
<td>0.35</td>
<td>.557</td>
</tr>
<tr>
<td>Depr x Anx x Gen Distr</td>
<td>1</td>
<td>1.46</td>
<td>.235</td>
</tr>
</tbody>
</table>

All ANOVAs non-significant \( (p > .05) \)

**Note:** Dependent variable = change from pre-treatment to 3-week ratings on Maladaptive Perfectionism composite. Depr Group = pre-treatment ratings of depression on the BDI-II compared at higher vs. lower levels. Anx Group = pre-treatment ratings of anxiety on the STAI-State compared at higher vs. lower levels. Gen Dist Group = pre-treatment ratings of general distress on the GSI compared at higher vs. lower levels.
Table 32.

Means and Standard Deviations for Ratings of Perfectionism Workshop Components.

(N=104)

<table>
<thead>
<tr>
<th>Component</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychoeducation</td>
<td>4.48</td>
<td>0.67</td>
</tr>
<tr>
<td>High Standards</td>
<td>4.62</td>
<td>0.58</td>
</tr>
<tr>
<td>Fearing Mistakes</td>
<td>4.52</td>
<td>0.68</td>
</tr>
<tr>
<td>Stress Reduction</td>
<td>4.58</td>
<td>0.69</td>
</tr>
</tbody>
</table>

Note: Psychoeducation = “Identifying goals and psychoeducation about maladaptive perfectionism” component. High Standards = “Setting high standards” component. Fearing Mistakes = “Fearing mistakes and doubting oneself” component. Stress Reduction = “Preventing distress and maintaining goals” component.
Table 33.

*Paired Samples T-Tests among Perfectionism Workshop Components.*

*(N=104)*

<table>
<thead>
<tr>
<th>Time Comparison</th>
<th>Mean Difference</th>
<th>SE</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>PsyEduc - HiStnds</td>
<td>-0.14*</td>
<td>0.06</td>
<td>-2.10</td>
<td>.038</td>
</tr>
<tr>
<td>PsyEduc - Mistakes</td>
<td>-0.04</td>
<td>0.06</td>
<td>-0.60</td>
<td>.549</td>
</tr>
<tr>
<td>PsyEduc - StressMgmt</td>
<td>-0.10</td>
<td>0.07</td>
<td>-1.37</td>
<td>.175</td>
</tr>
<tr>
<td>HiStnds - Mistakes</td>
<td>0.10</td>
<td>0.06</td>
<td>1.55</td>
<td>.123</td>
</tr>
<tr>
<td>HiStnds - StressMgmt</td>
<td>0.04</td>
<td>0.07</td>
<td>0.55</td>
<td>.582</td>
</tr>
<tr>
<td>Mistakes - StressMgmt</td>
<td>-0.06</td>
<td>0.05</td>
<td>-1.10</td>
<td>.275</td>
</tr>
</tbody>
</table>

* - Mean Difference is significant at the 0.05 level (2-tailed)

**Note:** PsyEduc = “Identifying goals and psychoeducation about maladaptive perfectionism” component. HiStnds = “Setting high standards” component. Mistakes = “Fearing mistakes and doubting oneself” component. StressMgmt = “Preventing distress and maintaining goals” component.
REFERENCES


and how perfectionism impedes the brief treatment of depression: Further analyses of
the National Institute of Mental Health Treatment of Depression Collaborative

in brief treatment of depression: Further analyses of the national institute of mental
health treatment of depression collaborative research program. *Journal of Consulting
and Clinical Psychology, 64*, 162-171.


(1999). Relationship of perfectionism to affect, expectations, attributions and

Today, 34*-52.

personality and goal pursuit. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism:
Theory, research, and treatment* (pp. 181-198). Washington, DC: American
Psychological Association.

demographic.pdf.


VITA

Graduate College
University of Nevada, Las Vegas

Marcus T. LaSota

Home Address:
2214 Red Tail Lane
Waverly, AL 36879

Degrees:
Bachelor of Arts, Psychology, 1999
Purdue University

Master of Arts, Clinical Practices in Psychology, 2001
University of Hartford

Master of Arts, Psychology, 2006
University of Nevada, Las Vegas

Publications:


Dissertation Title: A Cognitive-Behavioral Based Workshop Intervention for Perfectionism

Dissertation Examination Committee:
Chairperson, Dr. Christopher Kearney, Ph.D.
Committee Member, Dr. Christopher Heavey, Ph.D.
Committee Member, Dr. Murray Millar, Ph.D.
Graduate Faculty Representative, Dr. Robert Tracy, Ph.D.