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CONTEXTUAL INFLUENCES IN THE RELATIONSHIP OF PERFECTIONISM
AND ANXIETY: A MULTIDIMENSIONAL PERSPECTIVE

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degree of

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By

ZACHARY A. BORYNACK

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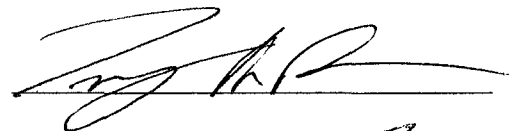
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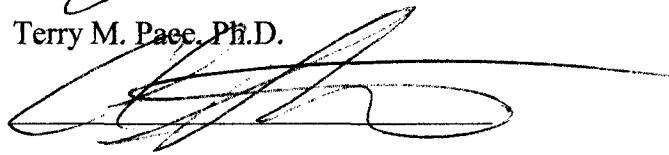
CONTEXTUAL INFLUENCES IN THE RELATIONSHIP OF PERFECTIONISM
AND ANXIETY: A MULTIDIMENSIONAL PERSPECTIVE

A Dissertation APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

BY

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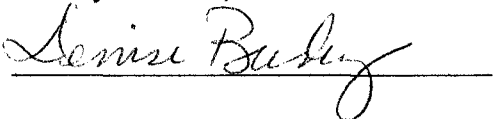
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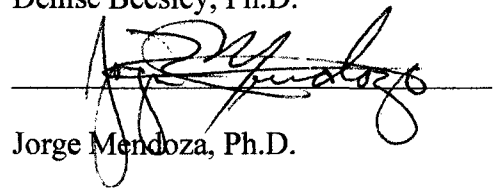
Cal D. Stoltenberg, Ph.D.

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Rockey Robbins, Ph.D.

A handwritten signature in black ink, appearing to read 'Denise Beesley', written over a horizontal line.

Denise Beesley, Ph.D.

A handwritten signature in black ink, appearing to read 'Jorge Mendoza', written over a horizontal line.

Jorge Mendoza, Ph.D.

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Abstract

The purpose of this study was to investigate contextual differences in anxiety and perfectionism in the context of academic performance. Two hundred and fifty-eight participants were recruited from an undergraduate psychology course in a public, south central university. These participants were randomly assigned to one of two conditions. The experimental condition was presented with an academic scenario using guided imagery, while the control condition was not. Both conditions completed a protocol consisting of the Almost Perfect Scale-Revised (APS-R), the Multidimensional Perfectionism Scale (MPS), and the State-Trait Anxiety Inventory (STAI). The experimental condition completed an additional survey, the Scenario Rating Scale, developed by the researcher. Cluster analyses were conducted to assign participants within each condition to Adaptive, Maladaptive, and Nonperfectionist groups. Analyses of Variance indicated significant differences in Standards, Discrepancy, and State and Trait Anxiety between the conditions and among perfectionism groups. Interactions between condition and perfectionism groups were indicated for two dependent variables: Standards and Trait Anxiety. Standards for Nonperfectionists were significantly higher in the experimental condition, while the other two groups did not change. These results are evident of a contextual dimension for perfectionism. Trait Anxiety for Maladaptive perfectionists was also significantly higher in the experimental group, while the other two groups did not change. This interaction clarified the main results, indicating that Adaptive perfectionism is a quality that serves as a protective agent, moderating the effect of trait anxiety in anxiety provoking situations. Conversely, Maladaptive perfectionism was found to be a factor of vulnerability to anxiety provoking situations.

CHAPTER ONE

Introduction

When one thinks of the term “perfectionist,” words and phrases such as extremely high standards, “nit-picky,” never satisfied, cannot settle for second-best, and a number of others come to mind. It would seem that those who are not perfectionists look upon this type of behavior as negative while some, usually those who are a certain type of perfectionist, may see this type of behavior as advantageous. Like most labels in society, people may have ambivalent feelings toward perfectionism and perfectionists. Perfectionists are wanted and needed in our society because they represent the “best of the best,” for the most part.

But, perfectionism can also have a negative effect on psychological outcome (Flett, Hewitt, & Dyck, 1989; Hewitt & Flett, 1991b; Minarik & Ahrens, 1996;). For example, would you rather have someone who strives for perfection performing your operation, representing you in court, or piloting the aircraft on which you are a passenger? In answering this question, consider the perfectionist who is out of control and cannot function as a result of his/her extreme desire to be perfect. They are so much of a perfectionist that they become depressed, anxious, unable to make decisions, and exhibit procrastinating behaviors. Now ask yourself that same question, “Would you rather have someone who strives for perfection performing your operation, representing you in court, or piloting the aircraft on which you are a passenger?” The answer, now, may be “certainly not.” This is the essence of the ambivalent nature of the psychological construct of perfectionism.

There are other confusing and difficult questions that research still has not conclusively and comprehensively answered (Blatt, 1995; Hamachek, 1978; Pacht, 1984). For example, when measuring perfectionism it is still difficult to discriminate the normal versus neurotic types of perfectionists, measure the actual degree of perfectionism that one exhibits, or even define the term comprehensively. After an assessment of an individual for perfectionism, there may be those who report as “false-positives” on this dimension as well as those who report as “false-negative.”

A “false positive” would be one who reports a high number of perfectionistic symptoms, but really is not a perfectionist. Conversely, a “false negative” would be one who reports a low number of symptoms, but really is a perfectionist. But, is perfectionism a categorical or a continuous construct? In understanding the construct of perfectionism, it would be very important to determine the accuracy of an individual’s level of perfectionism. Quite similarly, it could be useful to determine if certain levels of perfectionism break a threshold that can accurately categorize perfectionists from non-perfectionists. As previously stated, however, there may be those who function better or worse as a result of perfectionism. With this in mind, the presence of perfectionism does not just become important to detect. The effect of perfectionism on the individual’s functioning is just as important.

It seems plausible that people would be perfectionists in different areas of their lives. Some may have one area in which they set very high standards, but some may set these standards in many or all areas of his or her life. In this way, perfectionism could be thought of as a context-based or trait-based construct. Some research has been conducted on perfectionism in relationships and in academics (Haring, Hewitt, & Flett, 2001;

Parker, 1997). These would be considered two potential contexts of a person's life in which they may exhibit perfectionistic qualities. Most of the research, however, has been focused on perfectionism as a trait-based construct (Burns, 1980; Frost, Marten, Lahart, & Rosenbate, 1990; Hewitt, & Flett, 1991a; Slaney, Mobley, Trippi, Ashby, & Johnson, 1998). This seems too broad of an approach, given the complexity of perfectionism and human personality. Much of the results of correlational research studies done with perfectionism and psychological outcome have shown moderate correlations (Rice, Ashby, & Slaney, 1998). This is less true when accounting for the positive and negative effects of perfectionism. However, some of the variance could be lost due to the focus of this construct being trait-based. If specific contexts were considered, results may show much higher correlations to individual functioning and levels of perfectionism when considering its positive or negative effects.

It is important to distinguish what would be considered context-based perfectionism from state-based perfectionism. The concept of state-based perfectionism would be more specific to the situation that one exhibits perfectionistic tendencies. For example, someone who may be a state-based perfectionist might only exhibit perfectionistic behaviors and thoughts at a specific moment or in relation to some specific event. Alternatively, context-based perfectionism would be consistently experiencing state-based perfectionism in one specific context. In addition, the context-based perfectionist would exhibit these behaviors and thoughts in the same context even in the absence of a specific situation that could precipitate them. In essence, the context-based perfectionist would exhibit perfectionistic thoughts and behaviors in that context most of the time.

This can be confusing when one context-based perfectionism to trait-based perfectionism as well. Theoretically, the trait-based perfectionist would exhibit these thoughts and behaviors across contexts, regardless of the situation. But, how does one distinguish trait-based perfectionism from state-based perfectionism. This would seem to be related to experiencing similar situations, but approaching them differently. Thus, a state-based perfectionist might approach one situation from a perfectionistic perspective, but, at a different time, approach a similar situation in the same context from a non-perfectionistic perspective. This would imply that other factors may have influences on that individual's perfectionistic approach to situations than just the context.

Relating perfectionism to anxiety would be particularly important since these disorders, and other subclinical levels of anxiety, are more context-dependent. For example, Post-Traumatic Stress Disorder, one type of anxiety disorder, is highly dependent on the context of the stressful situation to which the patient responds. Specific phobias are other examples of anxiety disorders that are also highly context dependent. Uncovering the function of perfectionism in these types of disorders may provide useful information to the further understanding and treatment of them.

The purpose of this study is to determine if there is evidence of a contextual basis for perfectionism and if this predicts anxiety, as measured by the Spielberger's State Trait Anxiety Inventory, better than a trait-based conceptualization of perfectionism. In doing so, it will be important to observe differences in scores on the measurement of context-based and trait-based perfectionism. In addition, it will be important to observe differences in magnitude and significance in their correlation with measure of anxiety.

Research Questions

1. Do people measure differently in the construct of perfectionism, as measured by the Almost Perfect Scale - Revised (APS-R), in a specific context as compared to how they measure on this construct in their life in general?
2. Would a context-based measure of perfectionism better distinguish the positive from the negative effect of perfectionism than a trait-based measure of perfectionism (APS-R)?
3. Would a context-based measure of perfectionism better distinguish perfectionists from non-perfectionists than a trait-based measure of perfectionism (APS-R)?
4. Would a context-based measure of perfectionism be more reliable and accurate in relating itself to the psychological construct of anxiety, as measured by the State Trait Anxiety Instrument (STAI)?

CHAPTER TWO

CONTEXTUAL INFLUENCES IN THE RELATIONSHIP OF PERFECTIONISM
AND ANXIETY: A MULTIDIMENSIONAL PERSPECTIVE*Problems In Defining Perfectionism*

Defining any psychological construct in a comprehensive manner presents many different challenges. People may have different aspects and issues that they feel are relevant and important that either conflict with one another in some ways or do not entirely address all the issues at hand. In this way, a multidimensional construct can be very complex and confusing, but offer a more comprehensive perspective. Hence, a clear and concise definition or explanation for it can be a monumental undertaking. At what point do you sacrifice comprehensiveness for conciseness? This section will attempt to address most of the issues addressed in reviews of this body of literature. It will initially be focused on Hamachek's, Burn's, and Pacht's problems with defining this construct, which were addressed in the 1970's and 1980's. Following that, the focus will be turned to the more recent questions of the definition posed by Rice and Slaney.

Numerous researchers have identified the difficulties in defining the psychological construct of perfectionism. The Webster's dictionary definition leaves one in the same state of confusion about this construct as they were thirty years ago: not being able to distinguish between normal and neurotic perfectionists. It defines perfectionism as a tendency to be dissatisfied with anything less than perfection. This clearly falls short of the mark of a good definition given what research has illuminated the public about this psychological construct. At best, it distinguishes the perfectionists from the non-perfectionists. Frost, Marten, Lahart, and Rosenbate (1990) indicated the difficulties of previous research endeavors in defining the construct of perfectionism, but that it has

been hypothesized to play a major role in many different psychopathologies. Currently, researchers are still having problems with a clear definition of perfectionism, but they have made much progress.

Perfectionism has been regarded as a trait-based construct, which may come from theoretical orientations of researchers investigating the nature of it. There are several theories that may serve to explain the existence of perfectionism as a trait-based psychological construct. Mostly closely linked to the idea of perfectionism is Adlerian theory. Adlerian theory is a psychoanalytic theory that is very different from how Freud conceptualized the psyche. In general, Alder holds that individuals are born inferior, a condition against which they fight during their lives in order to reach self-actualization. People strive to achieve for self-improvement and superiority. Striving to be perfect is overtly stated in Adler's theory. When striving for perfection is done for practical reasons, it is thought to be normal. However, neuroses can develop as a result of striving purely as a result of concern about one's superiority. This is highly related to perfectionism by its relationship with striving towards goals and having high standards for performance.

Another theory related to the concept of perfectionism is Behavioral theory. According to Skinner's behavioral theory, an individual's behavior will increase when positively reinforced and decrease when negatively reinforced or punished. Simply stated, the notion of perfectionism according to this theory would be explained by the need for reinforcement. According to Bandura, if reinforcement is only given when perfection is attained, the individual will learn through that experience that perfection is needed to gain reinforcement. When less than perfect results are produced, the individual

may expect to be punished: an outcome that is aversive to the individual. Therefore, setting the highest standards in all areas, from the generalization of behavioral reinforcement, results in perfectionistic tendencies. Problematic, perfectionistic behavior, according to this theory, occurs when the level of perfection is so high that it cannot be attained, despite the belief by the individual that it can. This can also result in depression and/or anxiety. Further, the emphasis that an individual may place on avoiding punishment rather than getting positive reinforcement may influence the problematic nature of some perfectionistic behavior. Normal, perfectionistic behavior is characterized by setting realistically high standards that have been reinforced as a result of having achieved those results, or similarly high ones, in the past.

These two theories are very different from one another, yet they are able to explain perfectionism similarly. That is to say that they can account for setting high standards and the appropriate or inappropriate reaction to achieving them. Additionally, they explain the purpose or realistic nature of the high standards that are being set in terms of normality and abnormality. Finally, they both explain perfectionism in terms of it being a trait-based construct. These theoretical bases of perfectionism suggest that individuals are either perfectionistic, normal or neurotic, or nonperfectionistic and they do not serve to account for different types or levels of perfectionism in individuals based on different contexts or situations.

Dimensions of Perfectionism

Most of the research points to Hamachek (1978) as the provider of the first psychological definition of perfectionism. He defined the term by distinguishing normal versus neurotic perfectionists. He asserted that normal perfectionists are those who

“derive a real sense of pleasure from the labors of a painstaking effort...feel free to be less precise...need approval as much as anyone else...and use it as encouragement to continue on and even improve their work.” (p. 27). He described neurotic perfectionists as those whose efforts “...never seem good enough...unable to feel satisfaction...create anxious feelings, confusion, and are emotionally drained before a task has even begun...are motivated by a fear of failure” (p.28). This is less of a definition and more of a description of two different types of perfectionists. But what is the distinguishing factor, if there is such a thing?

Burns’ (1980) attempt to define this construct was very similar to Hamachek’s (1978) definition. His definition focuses on the unrealistic nature of the goals that are set for the maladaptive perfectionist. While he distinguishes what Hamachek describes as neurotic versus normal perfectionism using different terms, essentially he states that there is a difference between realistic pursuits of a goal and unrealistic and generally unattainable goals. Like Hamachek’s, this definition, while pointing research in a clear direction, lacks the clarity needed to accurately measure this construct or even accurately categorize those who are normal versus neurotic perfectionists.

Pacht (1984), on the other hand, prefers to only use the term “perfectionist” in the context of psychopathology. This could be a serious problem inherent in measuring and defining the construct. If perfectionists are concerned about being perfect and this is considered a negative thing, then the use of defense mechanisms such as denial could be widespread among these individuals. As a consequence, using self-report measures would present a serious problem in measuring perfectionism in individuals, given this negative slant on the construct. Respondents may feel defensive about reporting

something negative about themselves, especially those who are perfectionists and have difficulty acknowledging negative qualities of oneself.

There have been three related outgrowths of Hamachek's and Burn's models of perfectionism that attempt to operationalize perfectionism multidimensionally. Frost identified six dimensions of perfectionism that were focused on aspects of an individual's life that caused them to have perfectionistic tendencies. These dimensions were Parent Expectations, Parent Criticisms, Concerns over Mistakes, Personal Standards, Organization, and Doubts over Actions.

Hewitt and Flett (1991a) identified three dimensions of perfectionism related to the subject's orientation and focus of perfectionistic behaviors. These were Self-Oriented, Others-Oriented, and Socially Prescribed perfectionism. Self-oriented perfectionism is described by the authors as perfectionism that is directed on the self. For example, these individuals place extremely high standards upon themselves and tend to blame themselves when these standards are not met. This seems very consistent all the other measures of perfectionism, including the Frost-Multidimensional Perfectionism Scale (F-MPS), Burns Perfectionism Scale, and Almost Perfect Scale-Revised. Other-oriented perfectionism, however, is a dimension that is directed at individuals who place extremely high standards on others and then criticize them for not meeting those very standards. These individuals place a high level of importance on the idea of other's being perfect. Essentially, Other-Oriented perfectionism is self-oriented perfectionism directed outward. Finally, Socially-Prescribed perfectionism is described by the authors as perfectionistic behaviors that are due to the perception that significant others have set

extremely high standards for them, critically evaluate these behaviors, and pressure them to be perfect.

Recently, Slaney, Mobley, Trippi, Ashby, and Johnson (1996) identified another salient component to the construct of perfectionism called Discrepancy, which is the perception that one consistently fails to meet the high standards one has set for oneself. In this model, the dimensions are labeled as Adaptive perfectionists, Maladaptive perfectionists, and Nonperfectionists. Adaptive and maladaptive perfectionists are characterized as having extremely high standards, while they are distinguished from each other on their level of Discrepancy. Adaptive perfectionists are characterized as having low levels of Discrepancy, while Maladaptive perfectionists are characterized as having high levels of Discrepancy. Nonperfectionists are distinguished from Adaptive and Maladaptive perfectionist in that they do not have high standards.

Another interpretation of the dimensions of Slaney, et al. (1996) is provided by Rice and Mirzadeh (2000). He also identified three dimensions of perfectionists: Maladaptive, Adaptive and Nonperfectionists. The distinguishing feature between perfectionists and Nonperfectionists were the need for orderliness and personal standards. Maladaptive and Adaptive perfectionists differed on their level of concerns over making mistakes, parental expectations and criticisms, and self-doubt. Maladaptive perfectionists also differed from Adaptive and Nonperfectionists on their levels of cognitive distortions, especially those related to the distress of depression. They also differed from Adaptive and Nonperfectionists on self-efficacy and interpersonal control (LOC). So, Maladaptive perfectionists hold themselves to high standards, believe that they must be perfect or they have failed, and hold strong beliefs that their results are due to external forces.

Qualitative findings indicated that the term “perfectionist” is considered a pejorative term by those identified as such.

Categorizing Perfectionists

Perfectionists can be categorized in different ways and these ways tend to be based on the dimensions of perfectionism being measured. If one were to use the MPS, developed by Hewitt and Flett, one would categorize perfectionists into the dimensions of Self-Oriented, Other-Oriented, or Socially-Prescribed perfectionists. Alternatively, if one were to use the APS-R, developed by Slaney et al., one would categorize perfectionists into the dimensions of Adaptive, Maladaptive, or Non-perfectionists. The instrument used to measure perfectionism clearly has an impact on the way one categorizes perfectionist.

However, a question of whether perfectionism is a categorical or continuous variable should be posited. How does one correctly categorize individuals into the correct grouping on any given dimension? This is a statistical question and one that has been specifically addressed by Parker (1997) and Rice and Mirzaheh (2000). They assert that the Cluster analysis is a valid and reliable statistical procedure with which to categorize individuals into Adaptive, Maladaptive, or Non-Perfectionists. Prior to this, the median-split method had been used and cutoff scores were calculated. The median-split method continues to be used in categorizing perfectionists into Self-Oriented, Others-Oriented, or Socially-Prescribed perfectionists.

The cluster analysis appears to be particularly suited for this type of categorization of perfectionists. First, the cluster analysis is a multivariate statistical analysis, which would be the preferred type of analysis, since the dependent variables (categories) are more than

two in number (Adaptive, Maladaptive, and Non-Perfectionists). Second, the independent variables, which are the subscales of the APS-R (Standards and Discrepancy), are quantitative in nature. And finally, and most obviously, one wishes to assign individuals into one of a number of categories.

According to Borgen and Barnett (1987), the cluster analysis is a multivariate statistical analysis used to identify homogeneous groups within a data set. Clustering algorithms are used to determine groupings by looking at the closeness of variable scores to each other. Agglomeration coefficients, as well as theoretical expectations, are used to determine the number of clusters in a data set. The theoretical expectation of the number of groups of perfectionists is three, based on the APS-R. They would be Adaptive, Maladaptive, and Non-Perfectionists.

Two types of cluster analyses can be used to determine the number of clusters. First, the K-Means Cluster Analysis assumes a theoretical expectation and requires the statistician to enter the number of expected clusters. Second, the Hierarchical Cluster Analysis produces an agglomeration schedule and agglomeration coefficients. These are similar to the Eigenvalues found in a factor analysis and are used to determine a cut-off point for the number of clusters. These two statistics provide information about the homogeneity within clusters and the heterogeneity between clusters and are useful in decision-making about the number of clusters that should be used. Increases in agglomeration coefficients that are large indicate that clusters have been identified that are more different from each other than smaller agglomeration coefficients. The two methods can be likened to an exploratory (hierarchical method) versus a confirmatory (k-

means method) cluster analysis similar to the theory supporting the use of exploratory and confirmatory factor analyses.

Studies have used cluster analysis to determine perfectionism clusters in the past (Gilman, LoCicero, & Ashby, 2001; Parker, 1997; and Rice & Mirzadeh, 2000). In these studies, three clusters were indicated. These clusters were similarly identified as Adaptive, Maladaptive, and Non-Perfectionists. These clusters were shown to be useful in examining differences in attachment, adjustment, and other individual characteristics of students between all three clusters. Differences between individuals of different clusters were analyzed using Analysis of Variance (ANOVA) and/or Multivariate Analyses of Variance (MANOVA) techniques, using cluster groups as the independent variables and other measures of psychological functioning as the dependent variables.

Negative Psychological Consequences of Perfectionism

Research in the study of perfectionism has been useful in understanding its role in depression. Hewitt & Flett have conducted several such studies. In a study by Hewitt and Flett (1991b), it was found that depressed patients had higher levels of self-oriented perfectionism than either the psychiatric or normal control subjects. Another study tested whether perfectionism dimensions interacted with specific stressors to predict depression (Hewitt & Flett, 1993). The results of this study provided partial support that self-oriented perfectionism interacted only with achievement stressors to predict depression. Socially prescribed perfectionism interacted with interpersonal stress and with achievement to predict depression. However, other personality variables including socially prescribed perfectionism accounted for unique variance in depression. A longitudinal study was done by Hewitt, Flett, and Ediger (1996) to test whether

perfectionism dimensions interact with specific stress over time. These results provide additional support that perfectionism dimensions are related to vulnerability to depression over time. So, the research shows that there are positive and negative aspects of perfectionism.

Rice, Ashby, and Slaney (1998) conducted a study examining the mediating effect of self-esteem between perfectionism and depression. The results of this study indicated that maladaptive perfectionism was negatively associated with self-esteem and positively associated with depression. However, self-esteem was shown to mediate the effects of maladaptive perfectionism with depression. That is, as self-esteem increased, the relationship between maladaptive perfectionism with depression was reduced. Those participants classified as having high self-esteem had very little change in depression scores regardless of their levels of maladaptive perfectionism. These results clearly suggest that perfectionism is related to depression. They also suggest that perfectionism dimensions may contain vulnerability factors to depression, yet the impact of perfectionism on depression can be modified by self-esteem.

Anxiety and Perfectionism

The relationship between perfectionism and anxiety has not received nearly the specific attention in studies, as has the relationship between perfectionism and depression. However, many studies that have investigated the relationship between perfectionism and other constructs have included measures with subscales related to anxiety and examined its association with perfectionism only tangentially (Flett, Hewitt, & Dyck, 1989; Frost, 1990; Slaney, et al., 1998).

Perfectionism is an important component with respect to anxiety. However, the research on perfectionism does not quite support this statement in terms of the amount and type of results of research that has been conducted. Anxiety has only shown to be mildly related to perfectionism and much less so than depression. Diagnostically, perfectionistic thinking is an important criterion in the diagnosis of Obsessive Compulsive Personality Disorder (OCPD). In fact, perfectionism and excessive orderliness, a subcomponent thought to be highly associated with perfectionism, are two primary characteristics of OCPD (APA, 1994). Intuitively, it seems that perfectionism would be so highly related to OCPD that, when one reads the diagnostic criteria for OCPD, one might think that little distinguishes it from perfectionism. In the criteria for OCPD, there are allusions to extremely high standards and extreme orderliness combined with a conscientious attitude of preventing errors.

However, diagnoses are not the only seeming relationship that perfectionism has with anxiety. Anxiety is not just a “disorder” or diagnosis. There appears to be other types of anxiety, most of which are less severe as the list of anxiety disorders. For example, Frankel (1959) describes a sort of “existential anxiety” which is not the same as the DSM-IV category of Anxiety disorders. Another way anxiety has been operationalized is on the basis of state and trait components of the construct (Spielberger, 1983). In these ways, perfectionism also seems to have some relationship to anxiety.

Existential anxiety seems to be a subclinical form of anxiety that denotes worry and concern, but does not impede as severely as anxiety disorders with everyday psychological functioning. Perfectionism is related to this in that worries and concerns about making mistakes; not meeting parental expectation; and fear of failure are all

aspects of perfectionism that are in common with anxiety. These aspects are found in all of the instruments used to measure perfectionism, including the Frost MPS (Frost et al., 1990), the MPS (Hewitt and Flett, 1991a), and the APS-R (Slaney, et al, 1998).

In developing and validating the perfectionism measures, anxiety was determined to have some relationship with perfectionism. For example, Frost (1990) found that anxiety as it is measured by the Brief Symptom Inventory was significantly related to overall perfectionism ($r=.439$, $p<.01$) and two of the subscales in the F-MPS: Concerns over Mistakes ($r=.354$, $p<.01$) and Doubts over Actions ($r=.596$, $p<.01$). However, the remaining subscales did not correlate significantly with anxiety.

In developing the APS-R, Slaney et al. (1998) decided to remove the procrastination and anxiety subscales, which measured maladaptive aspects of perfectionism. This seems contrary to the thought that anxiety may be related to perfectionism, however, these subscales were not providing any additional psychometric data that improved this instrument. This occurred despite the fact that the anxiety subscale had a high factor loading for maladaptive perfectionism ($r=.68$). This raises questions as to the conflict that research and theory have had with each other pertaining to the relationship of perfectionism and anxiety. The answer seems to lie in determining the factors that influence their relationship. It may also lie in how the situation or contextual demands influence how anxiety is expressed.

Spielberger (1983) developed the State-Trait Anxiety Scale (STAI), which is used to measure these two components of anxiety. Essentially he theorizes that there are two different and distinct aspects of anxiety: State-Anxiety (S-Anxiety) and Trait-Anxiety (T-Anxiety). Spielberger asserts that, "People with high T-Anxiety exhibit S-Anxiety

elevations more frequently than low T-Anxiety individuals because they tend to interpret a wider range of situations as dangerous and threatening (Spielberger, 1983, p. 6).”

Therefore, not distinguishing state from trait anxiety would seem to suppress the existence of state anxiety if instruments only measure the trait component. Similarly, Borynack (2003) asserts that there may be evidence of Contextual and Trait dimensions of perfectionism that is similar and related to these two dimensions of anxiety.

Therefore, an individual who is a perfectionist in a very specific context may score low on perfectionism scales that measure this construct as one that is trait-based. Given these two parallels between perfectionism and anxiety, it may have been difficult to correlate perfectionism and anxiety in the past due to the masking of the perfectionists who are focused only on one or two specific contexts. These types of perfectionists may not endorse items on a perfectionism scale that are trait-based. This may also be true for those with state-based anxiety. For example, an individual with state-anxiety might score low in perfectionism due to instruments that measure perfectionism being more trait-oriented.

The similarities of perfectionism and anxiety along the dimensions of trait versus state/context may have diagnostic implications for Post Traumatic Stress Disorder (PTSD). Criterion C of PTSD requires that there be persistent avoidance of stimuli or situations associated with the trauma that was experienced (APA, 1994). This notion implies an avoidance of these specific contextual situations due to fears and may be related to state-anxiety and contextual perfectionism. However, individuals diagnosed with PTSD may not endorse the trait-based items of perfectionism scales unless they

were first exposed to a situation similar to their trauma and then instructed to respond to the items on a perfectionism scale based on that context or situation.

Another relationship that perfectionism has with anxiety is in the area of performance evaluation, or standards. Additionally, the response between one's preconceived goal and actual performance evaluation, as described by Slaney et al. (1998) as Discrepancy, may play a specific role in anxiety. "Circumstances in which failure is experienced or an individual's personal inadequacy is evaluated are generally more threatening to person's with high T-Anxiety (Spielberger, 1983, p.6)." This appears to suggest that there may be some relationship to maladaptive perfectionism and T-anxiety. At the same time, one might surmise that S-anxiety may be more related to the perfectionism that one exhibits in a specific situation or context and therefore may be more adaptive in nature and related to adaptive perfectionism. This hypothesis, however, has not been addressed or tested in research studies yet.

Trait vs. Context as Another Dimension of Perfectionism

It would seem plausible that people would be perfectionists in different areas of their life. Some may have one area in which they set very high standards, but some may set these standards in many or all areas of his or her life. In this way, perfectionism could be thought of as a context-based or trait-based construct. Some research has been conducted on perfectionism on couples in relationships, in academic populations, and with respect to body image (Cash & Szymanski, 1995; Gilman, et al., 2001; Haring, Hewitt, & Flett, 2001; Klein & Dubow, 2001; Parker, 1997; and Shea, 1999). These would be considered other potential contexts of a person's life in which they may exhibit perfectionistic qualities. Most of the research, however, has been focused on perfectionism as a trait-

based construct. This seems too broad of an approach, given the complexity of perfectionism and human personality. Much of the results of correlational research studies done with perfectionism and psychological outcome have shown only low to moderate correlations (Rice, et al., 1998). This is less true when accounting for the positive and negative effects of perfectionism. However, some of the remaining variance could be lost due to the focus of this construct being trait-based. If specific contexts were considered, results may show much higher correlations to individual functioning and levels of perfectionism when considering its positive or negative effects.

It is important to distinguish the idea of context-based perfectionism, the focus of this study, from state-based perfectionism. The concept of state-based perfectionism would be more specific to the current situation that one exhibits perfectionistic tendencies. For example, someone who may be a state-based perfectionist might only exhibit perfectionistic behaviors and thoughts at a specific moment or in relation to some specific event. It would seem that the context-based perfectionist would exhibit these behaviors and thoughts in the same context even in the absence of a specific situation that could precipitate them. In effect, the context-based perfectionist would exhibit perfectionistic thoughts and behaviors in that context most of the time.

Research of Perfectionism in Specific Contexts

There have been articles that have predicted perfectionism and the affects of perfectionism in populations of academic children, marital relationships, and in populations of religious individuals (Gilman, et al., 2001; Klein & Dubow, 2001; Sorotzkin, 1998; Parker, 1997; Shea & Slaney, 2000; and Haring, et al., 2001). However, no studies exist that validate the concept of a contextual basis of perfectionism in

comparison to a trait-based concept of this construct. These studies, however, have confirmed many of the findings of other empirical articles that measured perfectionism in non-specific contexts.

In the study conducted by Gilman et al. (2001), they examined 185 middle school students in an exploratory investigation. They were able to distinguish adaptive from maladaptive perfectionists, as one would expect. This study used cluster analysis to distinguish the adaptive perfectionists, maladaptive perfectionists, and non-perfectionists from one another. Maladaptive perfectionists reported more negative relationships with their family and school experiences, along with greater emotional distress. Adaptive perfectionists scored higher on a number of self-reported measures of academic, intrapersonal, and interpersonal measures.

Another study examining the academic context, investigated the relationship of perfectionism and anxiety among gifted and non-gifted children. They used a sample of gifted, N=83, and non-gifted, N=100, children in 5th to 7th grades. In this study, the researcher modified the F-MPS (Frost, 1990) items to reflect academic and social domains for perfectionism. Both groups showed correlations between academic perfectionism and academic anxiety. However, there were certain aspects of academic perfectionism that were stronger predictors of academic anxiety, which were Concerns and Parental Pressure. This study suggested that perfectionism may be better understood from a domain-specific perspective.

Relationship satisfaction has been another context of the study of perfectionism. In a study by Shea and Slaney (2000), the researchers were interested in studying the relationship between perfectionism and relationship satisfaction. The Dyadic APS-R was

developed by the researchers specifically for this study. There were 327 university students who participated in the development of the Dyadic APS-R portion of the study. Sixty-three partners of these students agreed to participate in the second part of this study. The results indicated that the Dyadic APS-R significantly predicted one's own and one's partner's relationship satisfaction better than the APS-R alone, further suggesting that context specific measures of perfectionism are more reliable and valid than trait-based measures.

Another study in the context of interpersonal relationships was conducted to explore the relationship between perfectionism and interpersonal coping strategies (Haring et al., 2001). A sample of 76 couples that had been together for less than four years were used in this study. The researchers used the MPS (Hewitt & Flett, 1991a) as a measure of perfectionism and multiple measures of marital functioning. The results indicated that coping strategies mediated the relationship between perfectionism and relationship maladjustment. Increased marital distress was predictive of perfectionistic couples that use more negative coping strategies when dealing with marital disagreement.

Another context in which perfectionism has been studied is in religious individuals. Sorotzkin (1998) conducted a review of the literature that summarizes understanding and treating perfectionism in religious adolescents. He validates the distinction of pathological perfectionism in their reaction to less than perfect performance. Sorotzkin addresses the significant problem with perfectionism in Orthodox-Jewish adolescents, which often leads to severe depression, narcissism, obsessive-compulsive disorders, and others. The religious context is important because frequently religious people are encouraged to be idealistic, rather than realistic and to emphasize performance over belief

and attitude. The prevalence of perfectionism in the context of religion further legitimizes the need to investigate this construct by comparing its trait-based characteristics to potential context-based characteristics.

The previous studies described three contexts of perfectionism: academia, relationships, and religion. However, there are other contexts that have not been addressed at all or adequately in the literature that seem to warrant further exploration. The occupational context seems to be one of these. This is one in which people spend a great deal of time and effort in their lives and experiencing success in this area is frequently based on performance in this area. As a whole, perfectionism has not been adequately addressed as a contextually-based construct, but merely studied within contexts as a trait-based construct.

Theoretically, the idea of contextual perfectionism can be explained in many different ways, just as trait based perfectionism. One theory that explains why people may be perfectionists in some areas, but not in others, is Bandura's social learning theory. Social learning theory combines intrapersonal factors with behavioral and environmental factors. Basically, according to Bandura, these three aspects are interdependent on each other. In terms of perfectionism, one may ask whether opportunities exist that promote perfectionistic behaviors in certain contexts or environments. These opportunities must be perceived by the individual's intrapersonal factors and result in perfectionistic thoughts and behaviors. Alternatively, the individual may apply perfectionistic thoughts and behaviors to an environment in which these opportunities did not exist that promoted his/her behavior and thoughts. The degree to which these three aspects complement each other would determine how perfectionistic the individual was. If the individual did not

have perfectionistic perceptions or behaviors in a specific context, the individual would most likely be classified as a Nonperfectionist in that context. However, the individual may be Adaptive or Maladaptive in his/her perfectionistic thoughts and behaviors in other situations. Adaptive perfectionists would think and behave in environments that allowed for these behaviors to provide some benefit. Alternatively, Maladaptive perfectionists would think and behave in environments that did not allow these behaviors to provide some benefit.

A second theory that may explain perfectionism is interpersonal/psychodynamic theory. According to Sullivan, the self is an open system interacting with the environment. He theorized that the self seeks homeostasis in terms of anxiety reduction. That is, tensions emerge from needs and anxieties. Consequently, individuals constantly seek to interact with the environment in order to bring their “self” into harmony with the environment through anxiety reduction. The need to be perfect can be applied to this theory as easily as any other need. However, this theory applies to contextual perfectionism best in terms of its specific application to interpersonal relationships. According to Sullivan, it is through various social relationships that individuals fulfill their need reduction. Relational perfectionism seems to be explained well through this theory. Some people may have the need to be perfect in relationships. The contextual component arises out of the individual’s evaluation of a relationship as relevant and valuable. Those relationships that are relevant and valuable are available to be cued by their perfectionistic thoughts. How this context of perfection is attained is very subjective and determined by the individual. Nevertheless, the realistic nature of the perfection that is needed can serve as a basis for Adaptive or Maladaptive forms of

perfectionism. Those who have unrealistic views of what a perfect relationship is and attempts to attain this type of relationship would be viewed as a Maladaptive perfectionist, while the converse would be viewed as Adaptive. Nonperfectionists would not concern themselves with being in a perfect relationship to reduce anxiety tensions.

These two theories serve to explain how perfectionism may operate, but only in specific contexts. That is, they account for individuals who only think and behave perfectionistically in confined situations. This is not to suggest that there are no trait-based perfectionists, only that this may be another dimension of perfectionism that has not been adequately addressed.

Trait and Context Related to Adaptive/Maladaptive Perfectionism

Qualitative studies suggest that adaptive perfectionism is more related to context-based perfectionism and that maladaptive perfectionism is more related to trait-based perfectionism (Ashby, 2002). This makes sense from an intuitive point of view, in that those whose perfectionism is pervasive across contexts (trait perfectionism) would be more frequently categorized as maladaptive perfectionists. The converse also makes sense, which is that those whose perfectionistic tendencies are only present in certain contexts of their life (academics, work, relations, etc.) would be categorized as adaptive perfectionists. In this way, adaptivity seems to be related to having only a few areas in one's life about which they are perfectionistic.

This idea, however, may be questioned in terms of those who may be so perfectionistic in certain contexts of their life, that they actually are maladaptive. Or, one may question this hypothesis in terms of those with only one or two primary roles in their life, but are highly perfectionistic in those roles. An example of this may be an

undergraduate college student with no job and who is not in an intimate relationship, but who is so perfectionistic that s/he is a Maladaptive perfectionist in the context of academics. This hypothesis still needs to be tested in quantitative studies, as none have been conducted as of yet.

Guided Imagery as a Method of Tapping Context

One concern about conducting research in this area is the method of tapping context. How can this be accurately achieved? There are no measures of perfectionism that have been normed to tap perfectionism across different, specific contexts other than the Dyadic Almost Perfect Scale-Revised (Shea & Slaney, 2000). However this scale only looks at the single context of relational perfectionism and cannot compare the results among other contexts. Also, what one may be perfectionistic about in any given context may vary.

Methodology that is geared at simulating context is risky due to the ability of participants to be engaged in the scenario. In addition, some contexts would be much more difficult to simulate than others. For example, participants who were not in a romantic relationship would have difficulty fully engaging in a scenario that simulated this situation. This would require that participants who are not in such a relationship to be excluded from this study. Further, it would be difficult to select individuals that were known to have perfectionistic tendencies in a specific context, even if that context was valid for the participants. Populations of academic students, those in romantic relationship, those who have professional careers would have to be carefully selected for these studies.

Guided-imagery is one method that may provide an adequate level of relevance and engagement for participants in order to tap context. Providing a physical environment

and visual imagery may assist in improving the context that the researcher is simulating. Guided imagery also tends to have the added benefit of tapping cognitions, emotions, and memory, which are more likely to improve the relevance of the situation and engagement of the participants. Further, finding participants for whom the guided-imagery scenario is a potential current issue would provide even more relevance for the participants.

Purpose of this Study.

The purpose of this study is to detect contextual differences in the measurement of perfectionism and its relationship to anxiety. To do this we will look at how participants respond in general to instruments that measure perfectionism and anxiety and how participants respond to instruments that measure perfectionism and anxiety after being presented with a particular scenario. It is hypothesized that a cluster analysis conducted to categorize adaptive perfectionists, maladaptive perfectionists, and non-perfectionists will result in a significant fit to the 3-group model of perfectionism for both the control and experimental condition. Additionally, it is hypothesized that there will be between group differences with respect to mean Standards scores for the adaptive and maladaptive perfectionists. It is further hypothesized that there will be between and within group differences with respect to mean anxiety scores for adaptive and maladaptive perfectionists.

Hypothesis 1: For each condition (control and experimental), the data will cluster participants into three distinct groups (Adaptive Perfectionists, Maladaptive Perfectionists, and Non-Perfectionists) based on their responses to the Standards and Discrepancy subscales of the APS-R. Further, Standards and Discrepancy will be significantly higher in the experimental group as compared to the control group.

Hypothesis 2: There will be a significantly higher mean State Anxiety score, as measured by the STAI, in the experimental condition as compared to the control condition. Further, each of the Perfectionist groups will have a higher mean State Anxiety score in the experimental condition as compared to the control condition.

Hypothesis 3: Trait Anxiety, as measured by the STAI, will correlate moderately to strongly with the Discrepancy subscale of the APS-R among all participants in the study. A higher correlation between Discrepancy and Trait Anxiety will be found in the experimental condition as compared to the control condition.

Hypothesis 4: Maladaptive Perfectionists will have a significantly higher mean Trait Anxiety score, as measured by the STAI, in both conditions (control and experimental). Further, the State and Trait Anxiety scores, as measured by the STAI, of Maladaptive Perfectionists will increase significantly more in the experimental condition than those of the Adaptive and Non-Perfectionist groups.

Hypothesis 5: Adaptive Perfectionists will show no significant increases in their mean Trait Anxiety score, as measure by the STAI, in the experimental condition as compared to the control condition.

CHAPTER THREE

METHOD

Participants

This study sampled 258 volunteer introductory psychology students at a public university in the south central region of the United States. Participants were sampled using a purposive sampling technique and were randomly assigned to one of two conditions: (1) a context-based perfectionism group (Context-P) or (2) a trait-based perfectionism group (Trait-P). The Context-P group (experimental condition) consisted of 129 participants and the Trait-P (control condition) consisted of 129 participants. This population was used because it is the most relevant for the academic context that is to be studied in this experiment. The participants were comprised of more females than males and were mainly freshmen, nineteen years old, and Caucasian. There were 101 male and 157 female participants. Racially, the participants seemed to approach reflecting the diversity found in the local community with 198 Caucasian, 16 African American, 14 Native American, 10 Latino, 9 Asian American, and 11 who identified themselves at “Other.” There were 174 Freshmen, 55 Sophomores, 19 Juniors, and 10 Seniors.

Materials

Demographic Questionnaire. This is a survey that gathered important demographic data such as sex, age, race, classification, GPA, and Major (See Appendix C and D).

Scenario. The scenario that provided the stimulus for the experimental group was a one page, typed summary (approximately five minutes in length) of a contextual situation involving them receiving the results of an exam, after having turned in a term paper (Appendix E). The scenario was presented by audiotape using guided-imagery

techniques in a slow, relaxing tone of voice. It began by attempting to focus the students on the task at hand and some relaxation breathing. Further, the scenario called attention to the instructor giving the students information about a term paper about which they were unaware prior to turning in the paper. This information detailed how the instructor wanted the students to write in a specific format and to include specific content in their paper. The scenario also told the participants that they did not write in that format and did not include the specific content in their paper. It also presented the participants with a situation in which they did not prepare for the type of exam they were about to take during that class period.

Scenario Survey (Appendix I). This survey was created in order to measure the degree of relevance, realism, and engagement of the participants. It is a self-report survey that consists of four items. Participants respond by choosing the degree to which they agreed with the item. This survey is found in Appendix 2. The items are (1) I felt engaged in the scenario of the guided imagery, (2) the scenario in the guided imagery was relevant to my academic life, (3) I identified with the scenario in the guided imagery, and (4) I was able to place myself in the scenario of the guided imagery. The responses ranged from one to five on a Likert scale with 1=not at all, 2=slightly, 3=moderately, 4=strongly, and 5=very strongly.

Almost Perfect Scale-Revised (APS-R; Slaney, et al, 1998). This scale consists of 23 items and has three subscales: Standards, Discrepancy, and Orderliness (see Appendix G). The Standards and Discrepancy scales were the only subscales used in this study. High Standards is a measure of the level of perfectionism and distinguishes perfectionists from non-perfectionists. Discrepancy is a measure of adaptiveness of perfectionism and

distinguishes adaptive perfectionists from maladaptive perfectionists. The items are measured on a one to seven point Likert scale. Higher scores mean higher perfectionism and maladaptiveness. Cronbach's alphas for the subscales ranged from .85 to .92 according to previous norming studies. In validation studies, the APS-R was shown to have good validity estimate properties also. High Standards had a correlation coefficient of $r=.64$ with the Personal Standards subscale of the F-MPS and $r=.55$ with the Self-Oriented Perfectionism subscale of the MPS. The Discrepancy subscale correlated well with similar scales of other perfectionism instruments ($r=.49$ with Socially-Prescribed Perfectionism of the MPS; $r=.62$ with Doubts over Actions of the F-MPS; and $r=.55$ with the Concerns over Mistakes of the F-MPS).

Multidimensional Perfectionism Scale (Hewitt & Flett, 1991a). This scale consists of 53 items and has three subscales: Self-Oriented Perfectionism, Others-Oriented Perfectionism, and Socially Prescribed Perfectionism (see Appendix H). Self-Oriented Perfectionism measures the degree to which perfectionism is oriented inward and standards are applied to the self. Others-Oriented Perfectionism is the degree to which perfectionism is directed toward other people and high standards are applied to them. Socially Prescribed Perfectionism measures the degree to which one is concerned about how others evaluate them. The items are measured on a one to seven point Likert scale. Higher scores mean higher perfectionism overall or along the subscales. Internal reliability coefficients from previous norming studies were found to be .79 for Other-Oriented perfectionism, .86 for Socially-Prescribed perfectionism, and .89 for Self-Oriented perfectionism. In validation studies, the MPS was shown to have good validity estimate properties as well. Self-Oriented Perfectionism had a correlation coefficient of

$r=.69$ with Personal Standards of the F-MPS. The Socially-Prescribed Perfectionism scale had a correlation coefficient of $r=.61$ with Concerns over Mistakes of the F-MPS, $r=.49$ with Doubts over actions of the F-MPS.

State-Trait Anxiety Inventory-Form Y (STAI; Spielberger, 1983). This instrument measures both state-based and trait-based anxiety. It consists of 40 items on a 4-point Likert scale (see Appendix F). Twenty items comprise the State Anxiety subscale (Form Y-1) and 20 items comprise the Trait Anxiety subscale (Form Y-2). Each subscale consists of 10 items worded positively and 10 items worded negatively. The reliability coefficients found in previous norming studies for the State Anxiety subscale ranged from $r=.91$ to $.93$ for college students. The Trait Anxiety subscale consists of nine items worded positively and 11 items worded negatively. The reliability from previous norming studies for this subscale ranged from $r=.90$ to $.91$ for college students. Total and subscale scores are computed by adding the rating for each item in that scale or subscale. For each subscale, higher scores mean higher anxiety. Overall, the STAI had high correlations with other measures of anxiety and with other measures of personality. A correlation coefficient of the STAI was found to be $.80$ with the Taylor Manifest Anxiety Scale (TMAS; 1953) and $.75$ with the Institute for Personality and Ability Testing (IPAT) Anxiety Scale (1963). The STAI also correlated well with the Psychasthenia clinical scale of the MMPI-2. The State-Anxiety subscale of the STAI had a correlation coefficient of $r=.79$ and the Trait-Anxiety scale had a correlation coefficient of $r=.81$ with this clinical scale of the MMPI-2.

Procedures

Data was collected on three different days over a one-week period at the end of the spring semester in April. Sign-up times were posted on a web site two weeks prior to the first day of data collection with fifteen spaces open for each group. Each time period was thirty minutes in duration. Participants signed up for a time at their discretion, but were not told whether they would be part of the experimental or control condition. After they signed up for a time, participants were e-mailed the location with directions where their group would meet.

Each condition's group times alternated between experimental and control conditions on each day. On each day, there were eight groups from which students could choose. The times ranged from 9:00 a.m. to 3:00 p.m. The same times were available on the remaining two days, but the experimental and control group times were switched on the second day. For example, the 9:00 a.m. time on the first day was a control condition, but on the second day it was an experimental condition.

The control condition took place in a conference room at a counseling clinic located off campus. The participants were given a consent form, demographic questionnaire with instructions for filling out the surveys, and the MPS, APS-R, and STAI. As students arrived to the group they were asked to take a seat and to read and sign the consent form. When all the participants arrived, they were quickly guided through the protocol and then told how to complete each questionnaire/survey. After they were completed, their protocols were reviewed for completeness and they were excused from the group. As each participant was excused, a debriefing sheet was issued.

The experimental condition took place in a university classroom located on the main campus. The participants were given a consent form, demographic questionnaire with instructions for filling out the surveys, MPS, APS-R, STAI, and the scenario survey. As participants arrived, they were asked to read and sign the consent form. When all the participants were ready, they were allowed to complete the demographic questionnaire and then they were oriented to the protocol. The participants were then given instructions with regard to the scenario and how to respond to the questionnaire. After that, the participants were guided through the scenario. Immediately following the scenario, they were asked to complete the protocol and each protocol was checked for completeness before they were excused from the study. A debriefing sheet was given to each participant as they were excused.

CHAPTER FOUR

Results

In order to test the hypotheses in this study, reliability and validity estimates were conducted first by using Cronbach's alpha and correlation analyses. Participants were assigned to Perfectionist groups using a multivariate cluster analysis (k-means). Finally, four Analyses of Variance (ANOVA) were conducted which looked at differences between perfectionist groups with respect to their Standards and Discrepancy on the APS-R scale and their State and Trait anxiety scores on the STAI. First, the reliability and validity estimate results are discussed in detail. Next, the results of the cluster analysis are discussed. Finally, the results related to each ANOVA are reported.

Reliability and Validity Estimates

Reliability analyses are important in determining if similar reliability coefficients for the STAI, APS-R, and MPS were found in this study. For the STAI, the Cronbach's alpha was .96. The State-Anxiety subscale had a Cronbach's alpha of .97 and the Trait-Anxiety subscale had a Cronbach's alpha of .92. For the APS-R, this analysis revealed a Cronbach's alpha of .87. The Cronbach's alpha was .82 for the Standards subscale and .93 for the Discrepancy subscale. For the MPS, this analysis revealed the Cronbach's alpha to be .91. These reliability estimates are commensurate with those found in the development of these instruments. Further, a correlation analysis was run in order to provide an estimate of validity for the APS-R. A correlation of r equal to .58 ($p < .01$) was found between the APS-R and the MPS. This is a moderate to strong correlation and is also consistent with previous research findings.

Another concern of this study was the reliability of the survey instrument created to estimate the relevance and level of engagement in the scenario that was developed for this context. A correlation matrix is provided in Table 1 that outlines the correlations of items on this survey. In this analysis, correlations of items 1 through 4 ranged from .39 to .70 ($p < .01$) within the survey. For the four items in the survey, a reliability analysis was conducted and resulted in a Cronbach's alpha of .80. In order to provide an estimate of validity for the scenario, the means of each item were calculated. Table 2 provides the mean scores for each item, which range from 3.3 to 4.0 on a Likert scale of one to five. The overall mean for the survey was 3.6 on a Likert scale of one to five. The conclusions drawn from this finding is that the scenario was generally rated by the participants as moderately to strongly relevant.

Hypothesis 3 stated that the Discrepancy subscale score should have a moderate to strong positive correlation with the Trait Anxiety subscale score. As expected, there were moderate to strong correlations with respect to these variables. The correlation of Discrepancy with Total Anxiety on the STAI was $r = .53$ ($p < .01$). In addition, the correlation of the Discrepancy subscales with the State and Trait subscales were $r = .32$ ($p < .01$) and $r = .67$ ($p < .01$) respectively. Interestingly, Standards did not correlate with any measures of anxiety. When correlations analyses were run between Trait Anxiety scores and Discrepancy scores for participants in the control condition, the correlation was found to be .634 ($p < .01$). However, higher correlations were found when this analysis was run in the experimental condition. The correlation of Trait Anxiety scores with Discrepancy scores for the experimental condition was $r = .70$ ($p < .01$). This statistic

shows that Trait Anxiety correlated better in the experimental group than in the control condition.

Cluster Analyses

In order to test the hypotheses for this study, SPSS was used to conduct a K-means Cluster Analysis by group. The decision to use a K-means Cluster Analysis rather than a Hierarchical Cluster Analysis was made due to the large number of participants ($N=258$) and the theoretical expectation that three clusters would emerge from the analysis. The cluster analyses were conducted using the participant scores on the Standard and Discrepancy subscales of the APS-R as dependent variables. These scores were converted into standardized z-scores in order to be suitable for this analysis. Separate cluster analyses were conducted for the control condition and the experimental condition. Frequency distributions for Standards and Discrepancy for both conditions resulted in the need to conduct data cleaning. One participant from the control condition and one from the experimental condition were removed based on their Standards score falling outside of three standard deviations from the mean. No further data cleaning was required, as all assumptions for the cluster analyses were met. Three clusters for the control condition and three for the experimental condition emerged as a result of the analysis, thus supporting hypothesis 1. The control condition and experimental condition clusters are depicted in figures 1 and 2 respectively. The details of each cluster analysis are discussed in the following paragraphs.

The results of the cluster analysis of the control condition were significant and a 3-group cluster emerged after six iterations. The analysis of variance for this condition, which tests between-groups differences, was significant ($F=112.82$, $p<.0001$) for

Standards and ($F=86.49$, $p<.0001$) for Discrepancy. There were 128 participants in this analysis as a result of the elimination of the one participant previously mentioned. The final cluster centers for each group were as follows: group 1 (Maladaptive Perfectionists) Standards equaled $.37z$ and Discrepancy equaled $1.04z$ ($N=42$); group 2 (Adaptive Perfectionists) Standards equaled $.45z$ and Discrepancy equaled $-.69z$ ($N=60$); group 3 (Non-Perfectionists) Standards equaled $-1.50z$ and Discrepancy equaled $-.07z$ ($N=26$). The distances between final cluster centers were $1.73z$ between group 1 and 2, $2.04z$ between groups 2 and 3, and $2.17z$ between groups 1 and 3.

Mean scores for these three perfectionist groups for Standards and Discrepancy were as follows. For the Maladaptive Perfectionist's, the average Standards score was 43.52 with a standard deviation of 3.04 and the average Discrepancy score was 56.93 with a standard deviation of 10.31. For the Adaptive Perfectionist's, the average Standards score was 43.95 with a standard deviation of 3.0 and the average Discrepancy score was 31.65 with a standard deviation of 8.03. Finally, for the Non-Perfectionists, the average Standards score was 33.38 with a standard deviation of 3.65 and the average Discrepancy score was 40.69 with a standard deviation of 11.44.

The results of the cluster analysis of the experimental condition were significant and a 3-group cluster emerged after five iterations. The analysis of variance for this condition, which tests between-groups differences, was significant ($F=102.15$, $p<.0001$) for Standards and ($F=113.09$, $p<.0001$) for Discrepancy. There were 128 participants in this analysis as a result of the elimination of one participant previously mentioned. The final cluster centers for each group were as follows: group 1 (Maladaptive Perfectionists) Standards equaled $.62z$ and Discrepancy equaled $1.30z$ ($N=30$); group 2

(Nonperfectionists) Standards equaled $-.98z$ and Discrepancy equaled $.055z$ ($N=44$); group 3 (Adaptive Perfectionists) Standards equaled $.53z$ and Discrepancy equaled $-.76z$ ($N=54$). The distances between final cluster centers were $2.02z$ between groups 1 and 2, $1.71z$ between groups 2 and 3, and $2.06z$ between groups 1 and 3.

Mean scores for these three perfectionist groups in the experimental condition for Standards and Discrepancy were as follows. For the Maladaptive Perfectionist's, the average Standards score was 45.50 with a standard deviation of 2.92 and the average Discrepancy score was 63.37 with a standard deviation of 9.52. For the Adaptive Perfectionist's, the average Standards score was 45.09 with a standard deviation of 2.49 and the average Discrepancy score was 32.24 with a standard deviation of 8.14. Finally, for the Non-Perfectionists, the average Standards score was 38.05 with a standard deviation of 2.81 and the average Discrepancy score was 44.57 with a standard deviation of 9.89.

Analyses Of Variance

Using the established perfectionism groups from the cluster analysis of the control and experimental conditions, 2×3 Analyses of Variance (ANOVA) was conducted in order to test the remaining hypotheses in this study. Independent variables were the condition group (experimental or control) and perfectionism group (Adaptive, Maladaptive, or Non-perfectionists) for each ANOVA. Dependent variables entered were Standards and Discrepancy, as measured by the APS-R and State Anxiety and Trait Anxiety, as measured by the subscales of the STAI. Mean group differences in Standards, Discrepancy, State Anxiety, Trait Anxiety are listed in Tables 3, 4, 5, and 6 respectively.

Two 2 x 3 Analyses of Variance were conducted to test the hypothesis that there would be differences in Standard and Discrepancy scores between the control and experimental condition. Support for this hypothesis is vital to the idea of contextual perfectionism as differences along these two dependent variables will show perfectionism differences based on treatment conditions. The first ANOVA was conducted with Discrepancy as the dependent variable and condition (2-levels) and perfectionism group (3-levels) as the independent variables. Data cleaning was not necessary as no participants fell outside of the -3 to +3 standard deviations from the mean and all other assumptions were met for this analysis. A significant main effect for Condition was found ($F=8.89$, $p<.003$, $\text{Power}=.844$, $\text{Effect Size}=.034$). The details of this analysis are summarized on Table 4. Means and standard deviations are summarized on Table 9.

These results indicate that Discrepancy was significantly higher for the experimental condition as compared to the control condition. Further, a significant main effect for Perfectionism Group was also found ($F=197.71$, $p<.0001$, $\text{Power}=1.000$, $\text{Effect Size}=.61$). These results indicate that Discrepancy was significantly different among the perfectionism groups. Maladaptive Perfectionists were found to have the highest Discrepancy score, followed by Nonperfectionists and then Adaptive Perfectionists. These three groups were all significantly different from each other. There was no main interaction effect for Condition and Perfectionism group (see figure 4).

The second ANOVA was conducted with Standards as the dependent variable and condition (2-levels) and perfectionism group (3-levels) as the independent variables. Data cleaning was not necessary as no participants fell outside of the -3 to +3 standard deviations from the mean and all other assumptions were met for this analysis. A

significant main effect for Condition was found ($F=45.68$, $p<.0001$, Power=1.00, Effect Size=.16). Standards was found to be significantly higher in the experimental condition as compared to the control condition. Further, a significant main effect for Perfectionism Group was also found ($F=216.46$, $p<.0001$, Power=1.00, Effect Size=.63). The details of this analysis are summarized on Table 3. Means and standard deviations are summarized on Table 9.

Standards was found to be significantly higher in Adaptive and Maladaptive perfectionists groups as compared to the Nonperfectionist groups. A significant interaction was also detected in this analysis between condition and perfectionism group ($F=7.60$, $p<.001$, Power=.944, Effect Size=.06). The interaction is summarized in Table 8. The interaction indicates that differences were detected between perfectionism groups along the variable of Standards across conditions. Nonperfectionists increased significantly more on their Standards score from control to experimental condition as compared to either the Adaptive or Maladaptive perfectionists (see figure 3). This indicates that the treatment condition had a unique effect on only the Nonperfectionists' Standards.

To test hypothesis 2, which stated that there would be a significantly higher difference in State Anxiety in the experimental group as compared to the control condition, a 2 x 3 ANOVA was conducted with State Anxiety as the dependent variable and condition (2-levels) and perfectionism group (3-levels) as the independent variables. Data cleaning was not necessary as no participants fell outside of the -3 to $+3$ standard deviations from the mean and all other assumptions were met for this analysis. A significant main effect for Condition was found ($F=143.03$, $p<.0001$, Power=1.00, Effect Size=.36). Further, a

significant main effect for Perfectionism Group was also found ($F=12.68$, $p<.0001$, Power=.997, Effect Size=.092). There was no significant interaction effect for this analysis (see figure 5). The details of this analysis are summarized on Table 5.

The mean State Anxiety score for the Control condition was 36.12 and the mean for the Experimental condition was 56.28. Significance tests for the results for the differences between Conditions indicated that the mean difference in State Anxiety was 20.16 ($p<.0001$). These results are supportive evidence for hypothesis 2 and indicate that State Anxiety was significantly higher in the Experimental condition overall as compared to the Control condition. Means and standard deviations are summarized on Table 9.

In addition, each of the perfectionism group means for State Anxiety was significantly higher in the Experimental condition as compared to their corresponding control condition mean score. Control condition Adaptive Perfectionists had a State Anxiety mean of 32.10 as compared to the Experimental Adaptive Perfectionist State Anxiety mean of 50.76. This difference was highly significant ($p<.0001$). Also, the Control condition Nonperfectionist group had a State Anxiety mean of 37.31 as compared to the Experimental Nonperfectionist State Anxiety mean of 54.48. This difference was also highly significant ($p<.0001$). Finally, Control condition Maladaptive Perfectionists had a State Anxiety mean of 38.95 as compared to the Experimental Maladaptive Perfectionist State Anxiety mean of 56.36. This difference was also highly significant ($p<.0001$). These results further support Hypothesis 2.

Hypothesis 4 stated that there would be a significantly higher difference in Trait Anxiety in the Maladaptive Perfectionists than the Adaptive Perfectionists in both conditions and that the Maladaptive Perfectionists' increase in Trait Anxiety would be

significantly more dramatic than that of the Adaptive Perfectionists. To test this, another 2 x 3 ANOVA was conducted with Trait Anxiety as the dependent variable and condition (2-levels) and perfectionism group (3-levels) as the independent variables. Data cleaning was not necessary as no participants fell outside of the -3 to +3 standard deviations from the mean and all other assumptions were met for this analysis. A significant main effect for Condition was found ($F=14.73$, $p<.0001$, Power=.969, Effect Size=.06). Further, a significant main effect for Perfectionism Group was also found ($F=47.93$, $p<.0001$, Power=1.00, Effect Size=.28). In addition, a significant interaction effect was detected between Condition and Perfectionism Group ($F=3.12$, $p<.046$, Power=.60, Effect Size=.024). The details of this analysis are summarized in Table 6.

These results indicate that there were significant differences found between the Control and Experimental conditions along the dependent variable, Trait Anxiety. Further, there were significant between group differences found for Perfectionism groups, as a whole, for Trait Anxiety. Finally, the significant interaction effect indicates that there were significant difference between Control-Perfectionism groups and Experimental-perfectionism group that will be examined in further detail.

Hypothesis 4 was supported by the evidence found in the analysis. The mean Trait Anxiety score for all Maladaptive Perfectionists was 46.79 with a standard deviation of 10.65 and this was significantly higher ($p<.0001$) than the mean Trait Anxiety score for all Adaptive Perfectionists, which was 35.17 with a standard deviation of 7.41. Interestingly, the mean Nonperfectionist Trait Anxiety of 42.10 with a standard deviation of 7.95 was also significantly lower ($p<.0001$) than Maladaptive Perfectionist Trait Anxiety. Means and standard deviations are summarized on Table 9.

For the interaction effect, it was found that control condition Maladaptive Perfectionists had a mean difference in their Trait Anxiety Score of 9.10 higher than control condition Adaptive Perfectionists and this was a significant finding ($p < .0001$). Experimental Maladaptive Perfectionists had a mean difference in their Trait Anxiety score of 15.37 higher than Experimental Adaptive Perfectionists and this was also highly significant ($p < .0001$). This indicates that the change in Maladaptive trait anxiety increased significantly more than the change in Adaptive trait anxiety. This also indicates that perfectionism group is a moderating variable of trait anxiety.

Hypothesis 5 was also supported by the results of this analysis. It was found that the mean Trait Anxiety scores for Adaptive Perfectionists was not significantly different across Conditions. However, for Maladaptive Perfectionists a significant difference ($p < .001$) was detected across Conditions (see figure 6). Maladaptive Perfectionist Trait Anxiety was found to be significantly higher in the Experimental Condition as compared to the other perfectionism groups in that condition, indicating that the change in Trait Anxiety scores for Maladaptive Perfectionists was also significantly higher (hypothesis 4). The results of the interaction effect for the ANOVA with Trait Anxiety as the dependent variable are summarized in Table 7.

CHAPTER FIVE

Discussion

Overall, the results of this study seem to strongly support the main hypothesis that perfectionism is a psychological construct with a contextual component. That is, individuals in particular situations have different attitudes along the dimension of perfectionism as compared to their attitudes in general. Additionally, trait anxiety, which is considered a more stable psychological construct, showed similar differences between general situations and a relevant, particular situation. Therefore perfectionism scales, which measure perfectionism as a stable, trait-based construct, appear to be providing misleading information about respondents' perfectionistic attitudes. This chapter, initially, will explain how each of the hypotheses were supported through the methodology and data analysis used in this study. Next, a discussion of the specific strengths and limitations of this study will be provided. An applied speculative section will also be included that will describe how this data led the researcher to question and ponder upon the nature of perfectionism. Finally, future areas of research will be discussed in terms of practical questions, the answers to which could provide useful information to issues related to counseling psychology.

Control and Experimental Condition Differences

As outlined in the first three chapters, the objective of this study was to observe differences in contextual and trait-based perfectionism with respect to anxiety. Having a control and treatment condition allowed for randomly assigned participant responses to reveal these differences. However, when one provides an anxiety-provoking scenario to individuals in one condition, one expects to see overall differences between these two

conditions. This could occur along many constructs by virtue of introducing a treatment stimulus to one group over another. These differences did exist as described above. The most obvious and expected difference was along the dimension of State Anxiety. As one would expect, and as hypothesized, State Anxiety was significantly greater in the experimental condition as compared to the control condition. Of course, this does not show evidence for the existence of contextual perfectionism. It does, however, validate the effect of the treatment stimulus and support the concept of state anxiety in that an anxiety-provoking situation should increase State-Anxiety scores as compared to an impotent situation.

In order to show contextual differences in perfectionism, it was required that differences between the experimental and control conditions along measures of perfectionism be observed. The Discrepancy and Standards subscales of the APS-R were used to accomplish this. As revealed in the results, there were significant differences found along these two variables between the experimental and control conditions. This shows that when given a specific situation, individuals tend to respond differently along measure of perfectionism. Both of these variables increased from control condition to experimental condition, indicating that Standards and Discrepancy generally tend to rise in specific and relevant situations as compared to nonspecific situations.

Another interesting difference between the control and experimental condition was along the dimension of trait anxiety. As described previously, trait anxiety is a more stable measure of anxiety and would not be expected to change as a result of being prompted with a specific situation (Spielberger, 1982). However, the results of this study revealed that it did change. Experimental condition participants generally scored higher

on trait anxiety as compared to the control condition participants. This indicates that how one rates their own general anxiety may be influenced by the current situation in which one is found.

Perfectionism Group Differences

As one would expect from the cluster analysis, all perfectionism groups differed significantly based on either Discrepancy or Standards, the measures of perfectionism from the APS-R. This is expected because the cluster analysis used these two variables in an attempt to maximize the distances between groups of similarly responding individuals based on their Discrepancy and Standards scores. Therefore, significant differences should be found between perfectionists, both Maladaptive and Adaptive, and the Nonperfectionists along the dimension of Standards, as this is their distinguishing variable. Additionally, significant differences should be observed between Adaptive and Maladaptive perfectionists along the dimension of Discrepancy, as this is the distinguishing variable between these two groups. As these results were found, this validates the clusters that were formed and provides a means of comparing perfectionism groups between conditions in order to observe statistical interactions.

Anxiety differences were observed among the three groups of perfectionists. Adaptive perfectionism appeared to have the lowest state anxiety score, which was significantly lower than the nonperfectionism and Maladaptive perfectionism. Interestingly, Nonperfectionists and Maladaptive perfectionists did not differ along the dimension of state anxiety. The same pattern held true for trait anxiety. The Adaptive perfectionists were the lowest on this measure of anxiety. However, the Nonperfectionists, while higher than the Adaptive perfectionists, were significantly lower

than the Maladaptive perfectionists on trait anxiety. So, it seems that being an Adaptive perfectionist is associated with lower state and trait anxiety as compared to the other two perfectionist groups. Conversely, it seems that being a Maladaptive perfectionists is associated with having higher state and trait anxiety as compared to the other two perfectionist groups. One would expect these results, given the high correlation with the Discrepancy subscale of the APS-R and the Trait Anxiety subscale of the STAI, which was .667 ($p < .01$). This raises the question as to the nature of these differences and whether or not an interaction exists.

Interactions between Treatment and Perfectionism Groups

There are several other pieces of data that provide further clarification for how contextual perfectionism seems to operate among perfectionist groups between the control and experimental condition. If one assumes that perfectionism is a trait-based construct, different situations should not result in differences between conditions among the perfectionism groups in Discrepancy and Standards. This is because they are factors of perfectionism and would be more stable. In addition, one should assume similarly with respect to trait anxiety. Because trait anxiety is considered a generalized form of anxiety and stable across situations, one would assume no differences exist in different situations. However, several differences between the control and experimental condition were found among Perfectionist groups. These differences were found with respect to the dependent variables of Standards of the APS-R and Trait Anxiety of the STAI. Thus, further support for how contextually based perfectionism seems to operate appears to exist in this study.

In fact, the data in this study supports specific evidence that different perfectionism groups are affected differently by anxiety provoking situations, such as the treatment stimulus. While there were no main effects for interactions between treatment condition and perfectionism group for the dependent variables of Discrepancy and State Anxiety, interactions did exist for Standards and Trait Anxiety. By conducting a cluster analysis and assigning participants into one of three perfectionism groups by condition, one can observe differences in the changes in anxiety scores with respect to those groups. The cluster analysis has been used increasingly with the APS-R to assign participants into such perfectionism groups successfully (Borynack, 2002; Parker, 1997; Rice 2000). Similarly, the cluster analysis in this study created three perfectionism groups (Adaptive, Maladaptive, and Nonperfectionists) in the control condition and the same three groups in the experimental condition.

Participants scored higher on the Standards subscale in the experimental condition as compared to the control condition within the Nonperfectionist group, but not in the Adaptive or Maladaptive perfectionist groups. Therefore, it appears that the treatment stimulus played a role in increasing the standards of the Nonperfectionists, but not for the Adaptive or Maladaptive perfectionists. This is important because it provides direct evidence that by placing Nonperfectionist individuals in a specific scenario, they will have differing levels of perfectionistic thoughts and attitudes with regard to the situation and began to approach perfectionist levels of Standards. One might question why the Adaptive and Maladaptive perfectionist groups did not increase significantly between conditions. Perhaps, it was because they already scored high on Standards and could not score much higher as a result of a ceiling effect of the subscale. This evidence provides

further clarification for how perfectionism differs when presented with a specific situation or context.

The evidence from the 2 x 3 ANOVA that examined differences in Trait Anxiety scores is significant in the support for the main research question and for hypotheses four and five. As noted earlier, there was a significant difference in the control and experimental conditions along this variable. As trait anxiety is regarded as a more stable anxiety score, a difference here is a finding that, while it was hypothesized, seems to be intuitively less likely. However, one might be torn between supporting the null hypothesis for this analysis and supporting that a difference does exist. This is because, theoretically, this type of anxiety is more stable than state anxiety. That would be true, if one does not consider the fact that the treatment condition encountered is one widely experienced by or highly relevant to the participants of the study (which was the case for this study). In that situation, one might hypothesize differences in Trait Anxiety scores. The data found in this analysis seems to cast a shadow on the validity of both the stability of perfectionism and trait anxiety across contexts for certain groups of individuals. In this case, the group that was least stable was the Maladaptive perfectionists.

This leads to the final finding that supports hypothesis five, which stated that perfectionism serves as a moderating variable for trait anxiety. It was found that, while no differences existed between Adaptive perfectionists and Nonperfectionists between the experimental and control conditions for trait anxiety, differences did exist between the Maladaptive perfectionists by treatment condition. This means that Adaptive perfectionists' and Nonperfectionists' trait anxiety was not significantly affected by the treatment stimulus. However, maladaptive perfectionists had a significantly higher Trait

Anxiety score in the experimental condition than in the control condition. This seems to indicate the presence of possible protective factors of Adaptive perfectionists and vulnerability of Maladaptive perfectionists with regard to being exposed to anxiety provoking situations.

The lack of a significant interaction for State Anxiety and Discrepancy between treatment condition and perfectionism group has specific meaning to this study. What this means is that state-based anxiety and Discrepancy did not have a unique effect on any of the individual perfectionism groups from control to experimental condition. This implies that the Adaptive, Maladaptive, and Nonperfectionist groups within the control condition all increased with the same magnitude along these variables as a result of the treatment stimulus. Consequently, none of the groups showed a particular sensitivity to the treatment stimulus based on State Anxiety and Discrepancy scores, thus leading one to believe that each group is no more vulnerable to state anxiety and Discrepancy changes than another. This is important because this study is looking at the potential difference in the more stable variables of trait anxiety, rather than state anxiety (a more situationally-dependent variable).

Therefore, not only did this study show contextual differences in perfectionism related to anxiety, but it provided supporting evidence that the Adaptive perfectionism group has lower state and trait anxiety scores, in general. It also provided evidence that Adaptive perfectionism has qualities that serve as a protective agent to the effect of more stable forms of anxiety, even in specific, anxiety-provoking situations. This seems to support the idea that perfectionism is not a trait-based construct for all individuals, since situations seem to have an impact on how certain people score on perfectionism scales.

Finally, the relevant situations that would be expected to have a significant impact on one's anxiety seem to be moderated by one's membership in a particular perfectionism group.

Strengths and Limitations of this Study

There are several strengths and limitations to this study. One major strength of this study is that the design matches the research questions. Looking for differences necessitates a control and experimental condition with random assignment in order to draw more solid conclusions. In addition to this, the scenario provided an adequate treatment condition to differentiate the two groups. This scenario was moderately to strongly relevant to the participants according to the survey and was moderately to strongly reliable according to its coefficient of reliability (.80). Also, this scenario, done through guided imagery, was audiotaped and presented to the participants instead of read to them. This provides another element of reliability in that the scenario did not vary with different data collection groups. The use of classrooms as the location of the experimental condition and an off-campus location for the control condition also allowed to further distinguish the two conditions and allowed for a more realistic situation for the experimental condition. The population used was another strength, as it seemed to be pertinent and logical, based on the type of scenario that was used. An academic scenario presented at the end of the semester whose content related to a term paper and final exams seemed to fit the population of undergraduate students that was sampled. Finally, moderate effect sizes and high power were found in these analyses. While effect sizes appeared to be in the range of .35 to .40, Power was consistently above .95 and frequently reached 1.0.

Limitations, however, were also evident as they are in all studies. The population, while a strength for some reasons, also presents limitations to the generalization of this study. Undergraduate college students represent a unique and limited subset of society and therefore the results are only generalizable to that population. In light of the intent of this study, however, it is not as big a limitation as it would be in some cases. After all, the objective of this study was to look at the context of academics with respect to perfectionism and anxiety. Another limitation to this study was that perfectionism groups did not have equal cell sizes for the ANOVAs. This occurred due to the assignment of participants to each perfectionism group through cluster analysis. This statistical procedure does not assign equal number of participants to each group. Rather, it placed participants in each group based on their Standards and Discrepancy scores. This, however, was mitigated by using a harmonic mean sampling technique in SPSS. Also, the power for the analyses was very high, which also lends to the credibility of the data analyses. Of course, most of the participants were Caucasian, which further limits generalizability to this culture only.

Applied Speculation of Contextually-Based Perfectionism

It seems that perfectionism, as an individual psychological construct, has been defined, described, and measured as a trait-based construct (Slaney et al., 1998; Hewitt & Flett, 1991; Frost, 1991). This is evident in the past and current instruments that have been developed, such as the APS-R, MPS, F-MPS, and Burns Perfectionism Scale. It is also evident in definitions offered by Hamachek (1978) and other, more recent researchers and theorists. When one questions the nature of this construct, one may be able to argue theoretically and/or intuitively as to the reliability that perfectionism is, in

fact, a trait-based construct. After all, perfectionism seems to be regarded as more attitude-based and attitudes can be thought of as more stable over time as compared to emotions. Even when one looks empirically at perfectionism, one may see more stable, trait-based characteristics of it. However, the presence of data to support one side of an argument does not necessarily invalidate the other side of an argument; namely, that perfectionism has a contextual basis. It seems that other research has not argued against this notion, but that this notion has not been adequately studied through testable hypotheses and research.

Critically examining the context in which perfectionism is being measured may require that the notion of value-based motivation be considered. When standards of performance are considered, it seems relevant to consider how important or valuable a specific context is to an individual. For example, an individual who is not interested in school or education would have a low probability of having high standards in this area. Therefore, by default, they would most likely fall in the Nonperfectionist category. However, this same individual may have one context in their life in which they do have extremely high standards, which also are maladaptive in nature. While this individual may not be a global perfectionist, s/he may be a Maladaptive Perfectionist in this one context.

Self-efficacy, or the confidence in one's own ability, is another important concept to consider when examining the nature of contextual perfectionism. Research has been consistent in showing more reliable measure of self-efficacy when a specific area is identified. This is important in contextual perfectionism because it supports the notion of a contextual influence with regard to expectations, or standard-setting, of an individual in

a given situation. Further, if an individual does not have self-efficacy in a specific context, it may be unlikely that s/he will not set a very high standards. And, as is the case in the concept of value-based motivation, s/he will fall into the Nonperfectionist category by default, despite the potential of the presence of perfectionism in other contexts.

This newly described dimension of perfectionism, trait versus context, raises new thoughts that have not been previously discussed as to how this construct may operate in people. It may explain in a more complex, yet conclusive way, why people behave as they do. Take, for example, a person who loves to play golf. When you observe this person, you may see someone who gets very upset with him/herself when they make a bad golf shot. Also, you may observe that this shot was not bad by your values, but was not exactly what they intended to do with the ball and/or did not meet their standards. This person clearly has higher standards for performance. But, does that mean that s/he would behave this way in other sports or in completely different situations, such as relationships, school, work, or other hobbies? It certainly does not; at least we are not sure if it does or does not. However, the high standards of performance would lead one to believe that s/he is a perfectionist and their reactions to their performance would lead one to believe that it was maladaptive. What the observer may not see is what happens when s/he leaves the golf course. It may be that s/he goes home and is able to relax and do other things without the negative impact of his/her subjectively poor golf performance that day. With this new idea of contextual perfectionism, this person may now be classified as a contextually based maladaptive perfectionist in the area of golf.

Alternatively, how would an observer's assessment of the same person differ if the observed was a professional golfer and his/her less than perfect golf performance

continued to create distress for the individual in other areas of his/her life? From a cognitive perspective, this golfer may have thoughts that sound catastrophic, absolute, and/or highly “black and white” if s/he does not perform perfectly. Such thoughts could be: “I am a loser,” “I am terrible at this sport,” “I will not earn enough money to pay my bills,” and others. Would this be considered contextually based maladaptive perfectionism? From a cognitive perspective, these thoughts could predispose him/her to depression. Perhaps this distress would create increasing perfectionistic thoughts in other areas of his/her life. In this case, s/he seems to be a trait-based perfectionist.

Another way to reconceptualize how perfectionism operates is to look at the Nonperfectionists with more scrutiny. When an observer assesses a situation, s/he does so with respect to his/her own values. For example, a young girl playing soccer may seem to be a non-perfectionist because she does not try too hard to perform to her potential. This would appear to most observers as having lower standards, and therefore lead one to classify this child as a non-perfectionist. However, there may be behavior to which the observer is not attending, such as the relationships between the young girl and her peers. There may be a motivating factor that is driving her to perform at the same level as others, especially her friends. She may have learned that outperforming others can make other jealous and subsequently upset relations with others. From a social learning perspective, she may be trying to let others have a turn with the ball, instead of taking the ball herself. In this way, her behavior could be considered perfectionistic if it were based on her standards of being a good friend or of her social skills. This illustrates the idea of value-based motivation. And, as the relational aspect of soccer was valued

over the actual task of soccer, it introduces the question of gender differences in perfectionism.

Similar to the results of this study with respect to differences in Standards, the lack of identifying this behavior could produce a false negative, in that she may be a perfectionist, but just not in soccer. It may be relationally based perfectionism that is at play here. This young soccer player may value the relationships that she has to such a high degree that she holds high standards of interpersonal performance for herself. However, this may not be detected with the instruments that measure perfectionism as a trait-based construct. Such is the case with the results of this study. Standards in Nonperfectionists increased significantly from control to experimental condition as compared to those of Adaptive and Maladaptive perfectionists. Just as looking at soccer may be the wrong context for that individual, looking at life in general may mask perfectionistic tendencies one may have in particular situations.

These ideas seem to point to the nature of measuring high standards. What are high standards and who holds the official definition of what is high and what standards are valuable? It seems that each individual is responsible for his or her own definition and that researchers are left to guess what they are. For this reason, group studies may not be as conducive to unlocking the nature of perfectionism as $N=1$, single subject, and qualitative studies. Current trends in publishing research seem to be pointing to increasing the productivity of this type of research design. In addition, there are specific lines of research in this area that may be useful to initiate and continue.

Future Research Ideas

This study provides moderate to strong, reliable support that there may be a contextual component to perfectionism, which is in contrast to how other researchers have conceptualized this construct. This support opens many new questions and ideas about how perfectionistic thoughts may operate in a less stable and more situationally based way. If perfectionism is not only a trait-based construct, then how does one determine in what contexts it operates in certain groups of people? This seems very subjective and value-based, which is not conducive to large-sample, quantitative research. However, this study shows that research that appears to be subjective can be done with group studies. It is through careful methodological procedures and reliability and validity measure that one can improve the strength of the results.

Practically, this study may evoke deeper questions as to how people think and value certain situations/contexts over others. For example, contextual perfectionism is the idea that some people are perfectionists in certain situations and not in others. These people may be adaptive or maladaptive in those situations. So, can an individual be a perfectionist in two different situations? And, can s/he be an adaptive perfectionist in one situation and a maladaptive perfectionist in another situation. Because the data in this study supports the hypothesis that people can be perfectionists in specific situations, the intuitive answer to that question may be yes. Of course, further research would need to be conducted to test those hypotheses using careful methodology and sound reliability and validity measures. Studies that replicate the current one and examine different contexts with different populations, especially different cultural populations, would be valuable to this area of research.

Specifically, one may question the clinical anxiety levels in the participants in this study. Because these participants came from the “normal” population, there is no way to know if those clinically diagnosed with different forms of anxiety would perform any different with respect to this study. A particular group that comes to mind is one whose members have been diagnosed with Post-Traumatic Stress Disorder (PTSD). This type of anxiety disorder seems to fit well with the notion of situationally based thoughts and anxiety. The manifestation of PTSD is highly related to a specific situation that the individual experienced in the past which was life threatening and out of the range of normal human experience. This disorder is considered to be highly contextual. A study with this population would be useful in examining if perfectionism differences exist when given the APS-R in general versus after being exposed to a situation that was similar to the traumatic event that was associated with the development of PTSD symptoms.

Another useful study would be to look at the subscale of Discrepancy in more detail to determine if it, in fact, measures what it purports to measure. The construct validation of this subscale could examine the correlation between Discrepancy and the difference between participant goals for a task and the actual performance on that task. One would expect a high correlation between the difference between their goal and actual performance and their score on Discrepancy subscale of the APS-R. Finally, this study needs to be replicated and contrasted with a seemingly insignificant scenario. The contrast would be important to see if differences exist when the treatment stimulus shows little to no relevance to the participants. Support for the need of a relevant context would exist if no differences were observed between conditions.

Finally, research in the area of eating disorders/body image would be another useful application of contextual perfectionism. Body image would be another context in which one might have very high standards and classified as a perfectionist. In many previous research studies, the 6-item subscale of the EDI has been used to measure perfectionism. There were no published studies that were found to have used general measures in order to measure perfectionism. This is surprising, given the limited perfectionism items of the EDI and its corresponding reliability estimate (Cronbach's $\alpha = .80$).

Conclusion

In this study, the data supported the overall hypothesis that the dimension of context influences the measurement of the construct of perfectionism. Individuals seem to respond differently with respect to their perfectionistic thoughts in relevant, specific contexts as compared to "in general." Further, Standards, the measure distinguishing perfectionists from non-perfectionists, are greater in these relevant, specific situations as compared to "in general." Context, in this study, was a moderator of Standards for the Nonperfectionist group. Their Standards increased significantly more than other groups in the experimental condition. Trait Anxiety, considered a more stable form of Anxiety, differs between groups who are exposed to an anxiety provoking situation and those who are not. Finally, perfectionism was shown to have a moderating effect on anxiety provoking situations. Adaptive perfectionist seemed to show resiliency in anxiety provoking situations, resulting in no differences in their Trait Anxiety scores between the control and experimental condition. Conversely, Maladaptive perfectionists seemed to show vulnerability toward anxiety provoking situations, resulting in much greater Trait Anxiety scores in the experimental condition as compared to the control condition.

This study examined perfectionism from a contextual point of view. It is important in that it looked at a general psychological construct from an individual differences perspective, rather than as a “catch-all.” After all, most individuals act differently in different situations. Many researchers, however, attempt to obtain consistent and generalizable data about individuals based on situations or interpersonal relationships “in general.” This, of course, could lead to misperceptions about reality based on observation and intuitive thought. Perfectionism research with a values and context-based approach is important in the field of counseling psychology as individuals are all different and have different values and orientations to similar situations. It seems that more research should be designed so that individual difference can be accounted for or, at least, considered.

Perfectionism, as previously discussed, is a very difficult psychological construct to define and operationalize. There are many dimensions from which one might view perfectionism, such that isolating one dimension may discount the presence and influence of others. Measurement instruments of perfectionism seem to have brought that issue to life more than anything else. No one instrument that measures perfectionism comprehensively measures every dimension of perfectionism. Because of this, we seem to get inaccurate perceptions of perfectionism. However, the more research serves to further expand the understanding of all the potential dimensions that exist (and there probably are more that have not been identified and tested), the greater the understanding society will have of this construct and how it influences the human condition.

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Table 1

Intercorrelation Matrix of the Scenario Survey

	Item 1	Item 2	Item 3	Item 4
Item 1	-	-	-	-
Item 2	.355**	-	-	-
Item 3	.395**	.699**	-	-
Item 4	.666**	.385**	.606**	-

** correlation is significant at the 0.01 level

Items are: (1) I felt engaged in the scenario of the guided imagery; (2) The scenario in the guided imagery was relevant to my academic life; (3) I identified with the scenario in the guided imagery; (4) I was able to place myself in the scenario of the guided imagery.

Table 2

Scenario Survey Mean Scores

Item	N	Mean	SD
Item 1	129	3.61	0.86
Item 2	129	3.31	1.22
Item 3	129	3.50	1.08
Item 4	129	3.95	0.90
Total	129	3.90	0.73

Mean scores were on a Likert scale from 1 to 5 (1=not at all; 2=slightly; 3=moderately; 4=strongly; 5=very strongly). Items are: (1) I felt engaged in the scenario of the guided imagery; (2) The scenario in the guided imagery was relevant to my academic life; (3) I identified with the scenario in the guided imagery; (4) I was able to place myself in the scenario of the guided imagery.

Table 3

Two by Three Analysis of Variance of Standards: Condition by Cluster Groups

	Control	Adapt. Perf.	Nonperf.	Maladapt. Perf.
Experimental	2.60***	--	--	--
Adaptive Perf.	--	--	8.80***	NS
Nonperfectionist	--	-8.80***	--	-8.80***
Maladaptive Perf.	--	NS	8.80***	--

NS difference is not significant.

*** difference is significant at the 0.0001 level or lower.

Values are mean differences (I-J) in Standards scores in raw points. Standards is a measure of how the respondent reports their level of standards for performance in their life.

Table 4

Two by Three Analysis of Variance of Discrepancy: Condition by Cluster Groups

	Control	Adapt. Perf.	Nonperf.	Maladapt. Perf.
Experimental	3.64**	--	--	--
Adaptive Perf.	--	--	-10.70***	-28.20***
Nonperfectionist	--	10.70***	--	-17.52***
Maladaptive Perf.	--	28.20***	17.52***	--

NS difference is not significant.

*** difference is significant at the 0.0001 level or lower.

Values are mean differences (I-J) in Discrepancy scores in raw points. Discrepancy is a measure of how the respondent reports a difference between perceived performance of standards and actual performance of standards.

Table 5

Two by Three Analysis of Variance of State Anxiety: Condition by Cluster Groups

	Control	Adapt. Perf.	Nonperf.	Maladapt. Perf.
Experimental	20.16***	--	--	--
Adaptive Perf.	--	--	-7.16**	-8.28***
Nonperfectionist	--	7.16**	--	NS
Maladaptive Perf.	--	8.28***	NS	--

NS difference is not significant.

** difference is significant at the .001.

*** difference is significant at the 0.0001 level or lower.

AP=Adaptive Perfectionists; NP=Nonperfectionist; and MP=Maladaptive Perfectionists.

Values are mean differences (I-J) in State Anxiety scores in raw points. State Anxiety is a measure of how the respondent reporting feeling anxiety at the time of completing the questionnaire.

Table 6

Two by Three Analysis of Variance of Trait Anxiety: Condition by Cluster Groups

	Control	Adapt Perf.	Nonperf.	Maladapt. Perf.
Experimental	4.17***	--	--	--
Adaptive Perf.	--	--	-6.48***	-12.23***
Nonperfectionist	--	6.48***	--	-5.75***
Maladaptive Perf.	--	12.23***	5.75***	--

*** difference is significant at the 0.0001 level or lower.

Values are mean differences in Trait Anxiety Scores (I-J) in raw points. Trait Anxiety is a measure indicating how much anxiety the respondents generally feel.

Table 7

Interaction Effect of Perfectionism Groups and Condition for Trait Anxiety

	Cn AP	Cn NP	Cn MP	Ex AP	Ex NP	Ex MP
Cn AP	-	-5.63*	-9.10***	NS	-8.85***	-16.88***
Cn NP	5.63*	-	NS	NS	NS	-11.26***
Cn MP	9.10***	NS	-	7.58***	NS	-7.79**
Ex AP	NS	NS	-7.58***	-	-7.33***	-15.37***
Ex NP	8.85***	NS	NS	7.33***	-	-8.04**
Ex MP	16.88***	11.26***	7.79**	15.37***	8.04**	-

* difference is significant at the 0.05 level or lower

** difference is significant at the 0.001 level or lower

*** difference is significant at the 0.0001 level or lower

Cn=Control, Ex=Experimental, AP=Adaptive Perfectionist, NP=Nonperfectionist,

MP=Maladaptive Perfectionists. Values are mean differences in Trait Anxiety Scores (I-J) in raw points. Trait Anxiety is a measure indicating how much anxiety the respondents generally feel.

Table 8

Interaction Effect of Perfectionism Groups and Condition for Standards

	Cn AP	Cn NP	Cn MP	Ex AP	Ex NP	Ex MP
Cn AP	-	10.57***	NS	NS	5.90***	NS
Cn NP	-10.57***	-	-10.14***	-11.71***	-4.66***	-12.12***
Cn MP	NS	10.14***	-	NS	5.48***	NS
Ex AP	NS	11.71***	NS	-	7.05***	NS
Ex NP	-5.90***	4.66***	-5.48***	-7.05***	-	-7.45***
Ex MP	NS	12.12***	NS	NS	7.45***	-

* difference is significant at the 0.05 level or lower

** difference is significant at the 0.001 level or lower

*** difference is significant at the 0.0001 level or lower

Values are mean differences in Standards scores (I-J) in raw points. Standards is a measure of how the respondent reports their level of standards for performance in their life.

Table 9

Table of Means and (Standard Deviations)

Group	Dependent Variable Means (Standard Deviation)				
	N	Stand.	Discrep.	State Anx.	Trait Anx.
Control Group	128	41.66 (5.24)	41.78 (14.65)	35.41 (11.07)	38.58 (9.58)
Experimental Group	128	42.77 (4.36)	43.77 (15.13)	55.05 (15.51)	42.09 (9.89)
Adaptive Perf. (AP)	114	44.49 (2.82)	31.93 (8.05)	40.94 (15.95)	35.17 (7.41)
NonPerf. (NP)	70	36.31 (3.86)	43.13 (10.58)	48.10 (15.67)	42.10 (7.95)
Maladapt. Perf. (MP)	72	44.35 (3.13)	59.61 (10.42)	49.22 (17.32)	46.79 (10.65)
Control AP	60	43.95 (3.00)	31.65 (8.03)	32.10 (8.86)	34.45 (8.12)
Control NP	26	33.38 (3.65)	40.69 (11.44)	37.31 (11.16)	40.08 (7.57)
Control MP	42	43.52 (3.04)	56.93 (10.31)	38.95 (12.64)	43.55 (10.15)
Experimental AP	54	45.09 (2.49)	32.24 (8.14)	50.76 (16.38)	35.96 (6.51)
Experimental NP	44	38.05 (2.81)	44.57 (9.89)	54.48 (14.47)	43.30 (8.01)
Experimental MP	30	45.50 (2.92)	63.37 (9.52)	63.60 (11.91)	51.33 (9.78)

Values of N are number of participants. Values of Standards, Discrepancy, State Anxiety, and Trait Anxiety are in raw score. Standard deviations for each mean score is in parentheses following the score. AP=Adaptive Perfectionist, NP=Nonperfectionist, and MP=Maladaptive Perfectionist.

Figure 1

Final Centers for the Control Condition Cluster Analysis

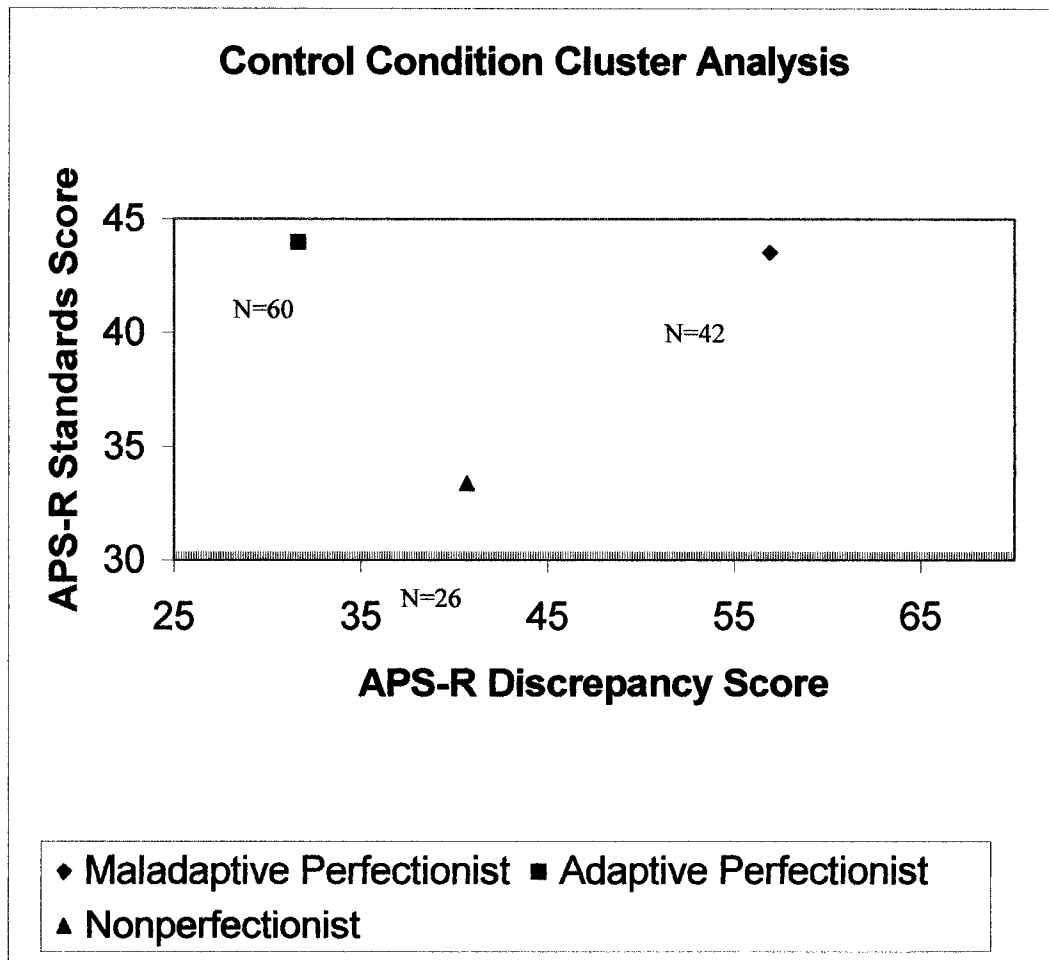


Figure 2.

Final Centers for the Experimental Condition Cluster Analysis

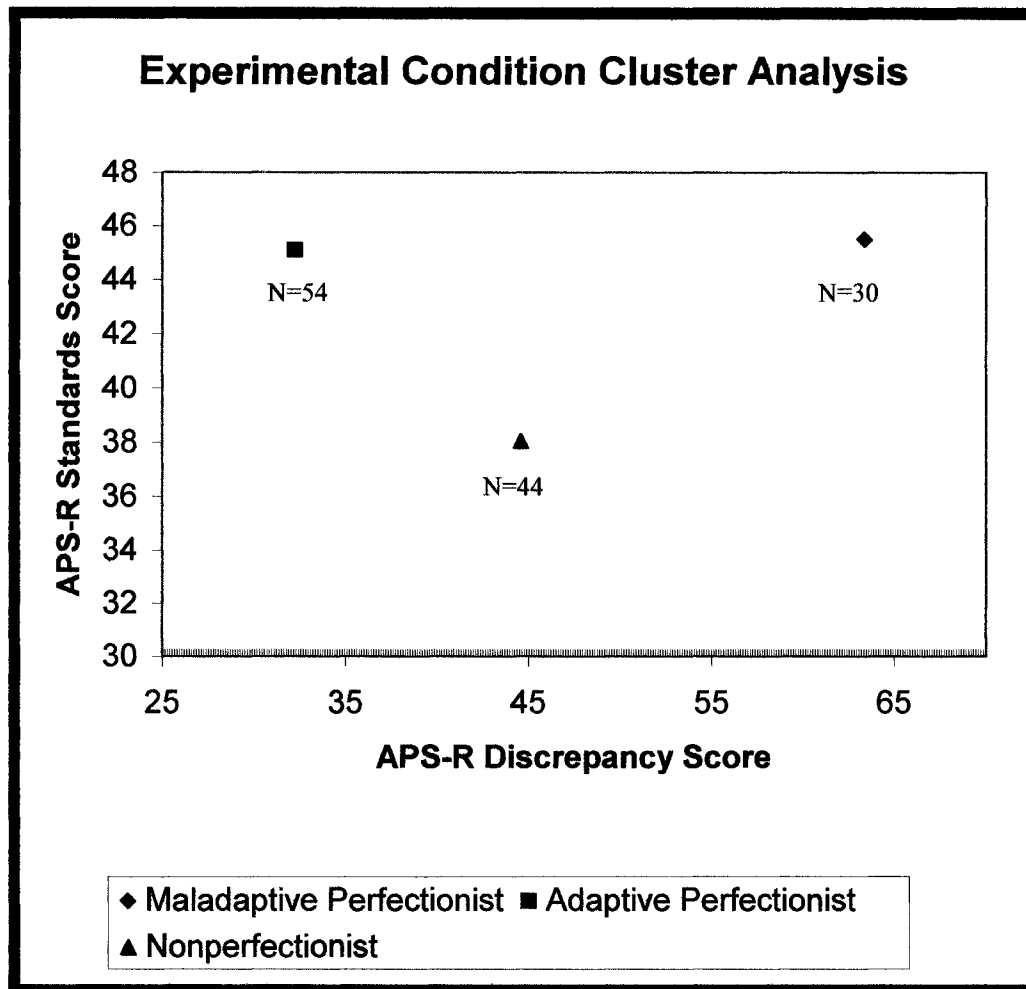


Figure 3

APS-R Standards Differences between Condition and Perfectionism Group

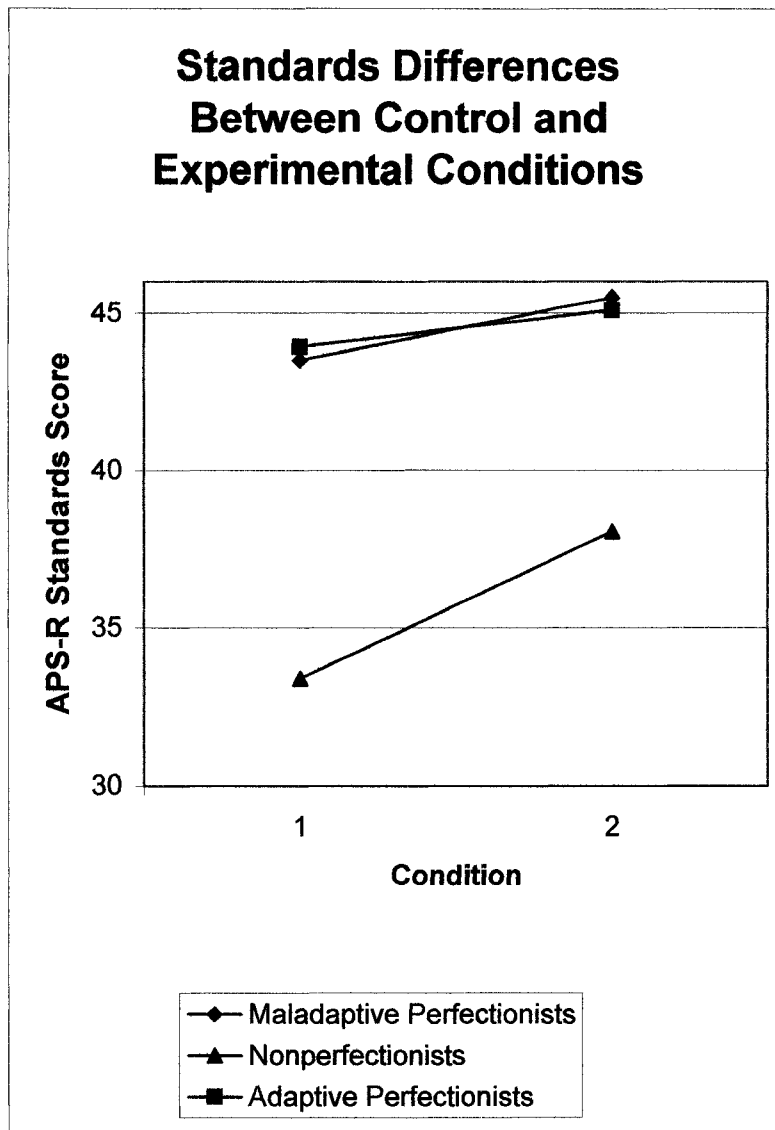


Figure 4

APS-R Discrepancy Differences between Condition and Perfectionism Group

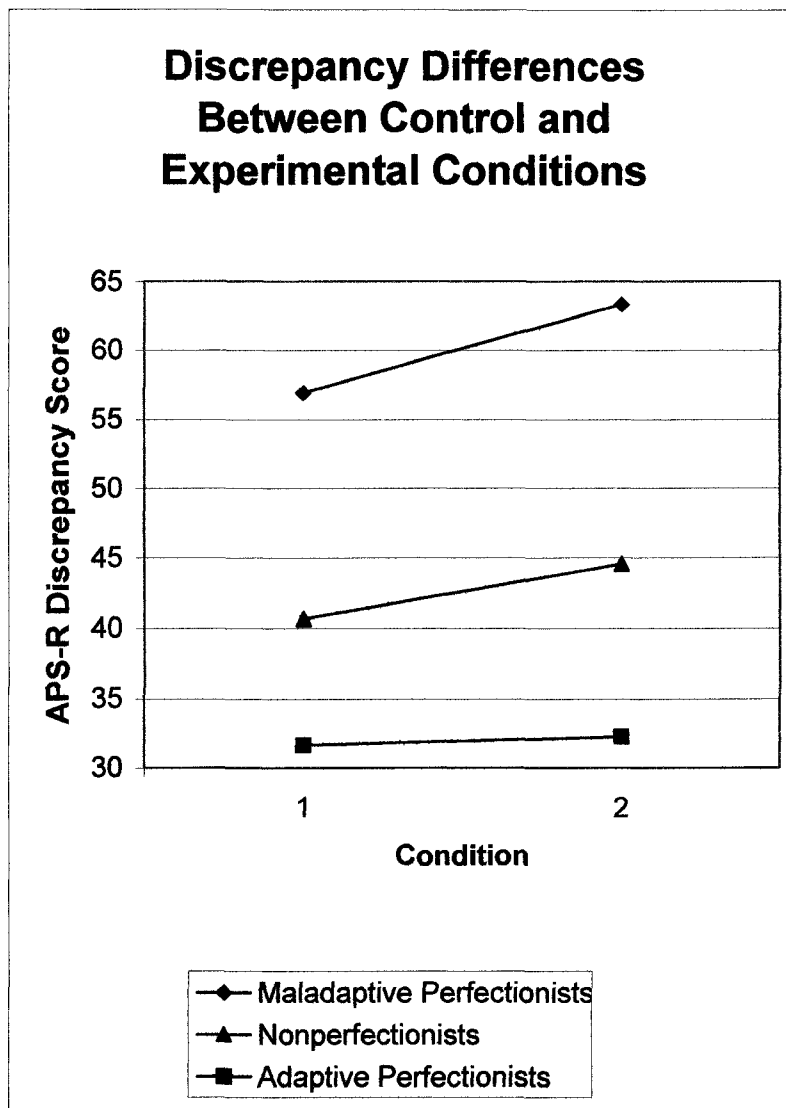


Figure 5

State Anxiety Differences between Condition and Perfectionism Group

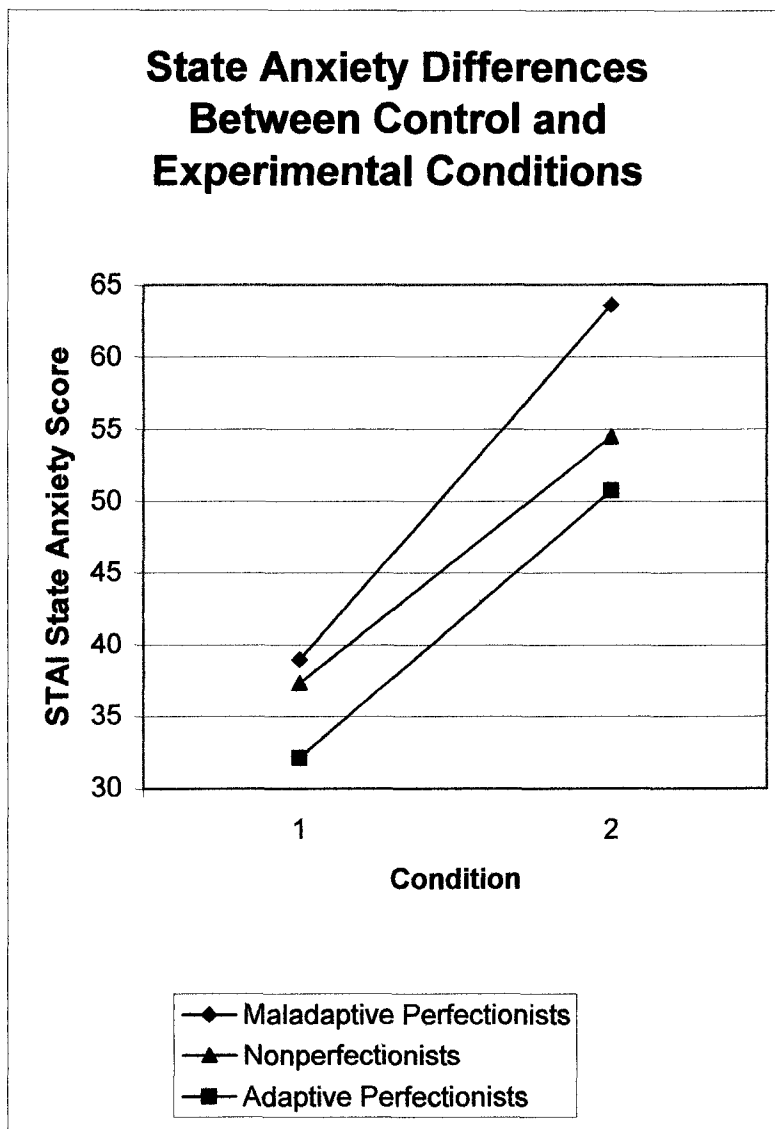
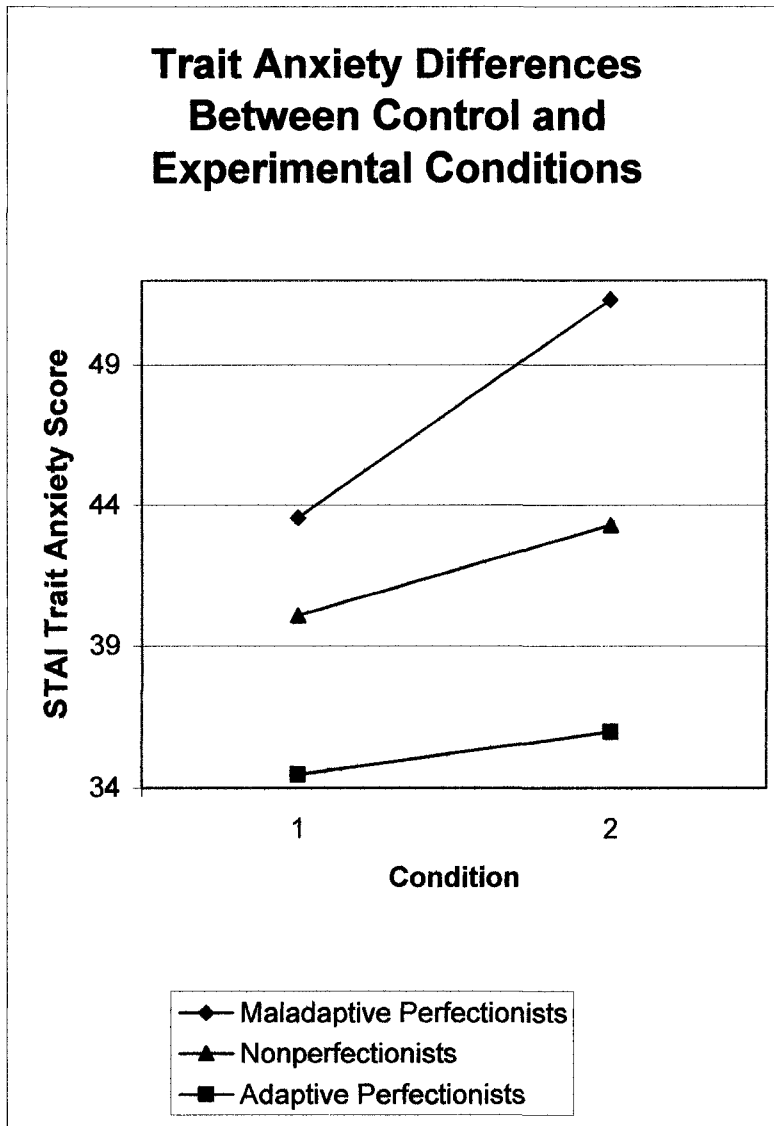


Figure 6

Trait Anxiety Interaction between Condition and Perfectionism Group



APPENDIX A
Prospectus

UNIVERSITY OF OKLAHOMA
GRADUATE COLLEGE

DIFFERENCES IN THE RELATIONSHIP BETWEEN ANXIETY AND
PERFECTIONISM ON THE BASIS OF CONTEXT

Dissertation Proposal

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirement for the

degree of

Doctor of Philosophy

By

Zachary A. Borynack
Norman, Oklahoma
March 31, 2003

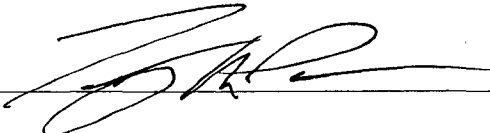
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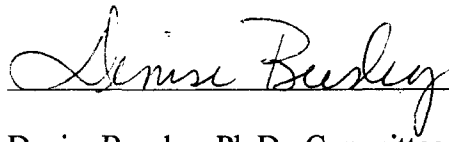
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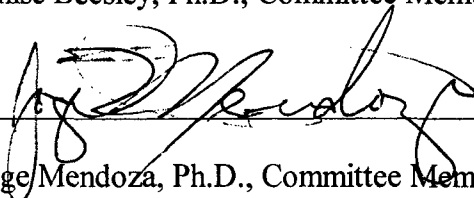
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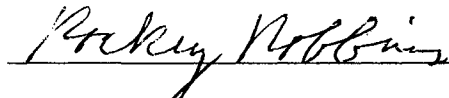
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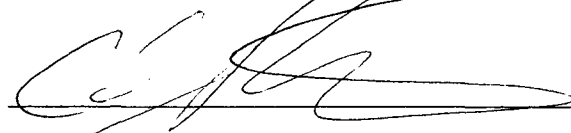
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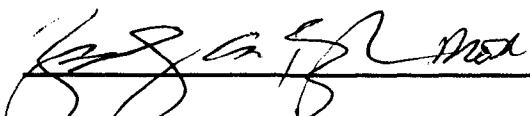
1. 
Terry M. Pace, Ph.D, Committee Chair

2. 
Denise Beesley, Ph.D., Committee Member

3. 
Jorge Mendoza, Ph.D., Committee Member

4. 
Rocky Robbins, Ph.D., Committee Member

5. 
Cal Stoltenberg, Ph.D, Committee Member


Zachary A. Borynack, Doctoral Candidate

Abstract

The purpose of this study is to investigate the relationship of anxiety to perfectionism in the context of academic performance. Approximately 240 participants will be recruited from an undergraduate psychology course in a university in the south central region of the United States. These participants will be randomly assigned to one of two conditions. The experimental condition will be presented with an academic scenario using guided imagery, while the control condition will not. Both conditions will complete the Almost Perfect Scale-Revised (APS-R), the Multidimensional Perfectionism Scale (MPS), and the State-Trait Anxiety Inventory (STAI). A cluster analysis will be conducted in order to define adaptive, maladaptive, and non-perfectionists. Other statistical analyses will be conducted in order to examine relational differences between anxiety and perfectionism between and within both conditions.

CHAPTER ONE

Introduction

When one thinks of the term “perfectionist,” words and phrases such as extremely high standards, “nit-picky,” never satisfied, cannot settle for second-best, and a number of others come to mind. It would seem that those who are not perfectionists look upon this type of behavior as negative while some, usually those who are perfectionists, may see this type of behavior as advantageous. Like most labels in society, people may have ambivalent feelings toward perfectionism and perfectionists. Perfectionists are wanted and needed in our society because they represent the “best of the best,” for the most part.

But, perfectionism can also have a negative effect on psychological outcome (Flett, Hewitt, & Dyck, 1989; Hewitt & Flett, 1991b; Minarik & Ahrens, 1996;). For example, would you rather have someone who strives for perfection performing your operation, representing you in court, or piloting the aircraft on which you are a passenger? In answering this question, consider the perfectionist who is out of control and cannot function as a result of his/her extreme desire to be perfect. They are so much of a perfectionist that they become depressed, anxious, are unable to make decisions, even exhibit procrastinating behaviors. Now ask yourself that same question, “Would you rather have someone who strives for perfection performing your operation, representing you in court, or piloting the aircraft on which you are a passenger?” The answer, now, may be “certainly not.” This is the essence of the ambivalent nature of the psychological construct of perfectionism.

There are other confusing and difficult questions that research still has not conclusively and comprehensively answered (Blatt, 1995; Hamachek, 1978; Pacht,

1984). For example, when measuring perfectionism it is still difficult to discriminate the normal versus neurotic types of perfectionists, measure the actual degree of perfectionism that one exhibits, or even define the term comprehensively. After an assessment of an individual for perfectionism, there may be those who report as “false-positives” on this dimension as well as those who report as “false-negative.”

A “false positive” would be one who reports a high number of perfectionistic symptoms, but really is not a perfectionist. Conversely, a “false negative” would be one who reports a low number of symptoms, but really is a perfectionist. But, is perfectionism a categorical or a continuous construct? In understanding the construct of perfectionism, it would be very important to determine the accuracy of an individual’s level of perfectionism. Quite similarly, it could be useful to determine if certain levels of perfectionism break a threshold that can accurately categorize perfectionists from non-perfectionists. As previously stated, however, there may be those who function better or worse as a result of perfectionism. With this in mind, the presence of perfectionism does not just become important to detect. The effect of perfectionism on the individual’s functioning is just as important.

It seems plausible that people would be perfectionists in different areas of their life. Some may have one area in which they set very high standards, but some may set these standards in many or all areas of his or her life. In this way, perfectionism could be thought of as a context-based or trait-based construct. Some research has been conducted on perfectionism in relationships and in academics (Haring, Hewitt, & Flett, 2001; Parker, 1997). These would be considered two potential contexts of a person’s life in which they may exhibit perfectionistic qualities. Most of the research, however, has been

focused on perfectionism as a trait-based construct (Burns, 1980; Frost, Marten, Lahart, & Rosenbate, 1990; Hewitt, & Flett, 1991a; Slaney, Mobley, Trippi, Ashby, & Johnson, 1998). This seems too broad of an approach, given the complexity of perfectionism and human personality. Much of the results of correlational research studies done with perfectionism and psychological outcome have shown low to moderate correlations (Rice, Ashby, & Slaney, 1998). This is less true when accounting for the positive and negative effects of perfectionism. However, some of the variance could be lost due to the focus of this construct being trait-based. If specific contexts were considered, results may show much higher correlations to individual functioning and levels of perfectionism when considering its positive or negative effects.

It is important to distinguish what would be considered context-based perfectionism from state-based perfectionism. The concept of state-based perfectionism would be more specific to the situation that one exhibits perfectionistic tendencies. For example, someone who may be a state-based perfectionist might only exhibit perfectionistic behaviors and thoughts at a specific moment or in relation to some specific event. With respect to the consistency of experiencing state-based perfectionism in one specific context, one might assess that person to have more of a context-based perfectionism. However, this may not be true at all. It would seem that the context-based perfectionist would exhibit these behaviors and thoughts in the same context even in the absence of a specific situation that could precipitate them. In effect, the context-based perfectionist would exhibit perfectionistic thoughts and behaviors in that context most of the time.

This can be confusing when one considers trait-based perfectionism as well. Theoretically, the trait-based perfectionist would exhibit these thoughts and behaviors

across contexts, regardless of the situation. But, how does one distinguish trait-based perfectionism from state-based perfectionism. This would seem to be related to experiencing similar situations, but approaching them differently. As a result, a state-based perfectionist might approach one situation from a perfectionistic perspective, but approach a similar situation at a different time, in a different context, from a non-perfectionistic perspective. This would imply that other factors may have a more powerful impact on that individual's perfectionistic approach to situations.

Relating perfectionism to anxiety would be particularly important since these disorders, and other subclinical levels of anxiety, are more context-dependent. For example, Post-Traumatic Stress Disorder, one type of anxiety disorder, is highly dependent on the context of the stressful situation to which the patient responds. Specific phobias are other examples of anxiety disorders that are also highly context dependent. Uncovering the function of perfectionism in these types of disorders may provide useful information to the further understanding and treatment of them.

The purpose of this study is to determine if there is evidence of a contextual basis for perfectionism and if this predicts Anxiety, as measured by the STAI, better than trait-based perfectionism. In doing so, it will be important to observe differences in scores on the measurement of context-based and trait-based perfectionism. In addition, it will be important to observe differences in magnitude and significance in their correlation with measure of anxiety.

Research Questions

1. Do people measure differently in the construct of perfectionism, as measured by the Almost Perfect Scale - Revised (APS-R), in a specific context as compared to how they measure on this construct in their life in general?
2. Would a context-based measure of perfectionism better distinguish the positive from the negative effect of perfectionism than a trait-based measure of perfectionism (APS-R)?
3. Would a context-based measure of perfectionism better distinguish perfectionists from non-perfectionists than a trait-based measure of perfectionism (APS-R)?
4. Would a context-based measure of perfectionism be more reliable and accurate in relating itself to the psychological construct of anxiety, as measured by the State Trait Anxiety Instrument (STAI)?

CHAPTER TWO

DIFFERENCES IN THE RELATIONSHIP BETWEEN ANXIETY AND
PERFECTIONISM ON THE BASIS OF CONTEXT*Problems In Defining Perfectionism*

Defining any psychological construct in a comprehensive manner presents many different challenges. People may have different aspects and issues that they feel are relevant and important that either conflict with one another in some ways or do not entirely address all the issues at hand. In this way, a multidimensional construct can be very complex and confusing. Hence, a clear and concise definition or explanation for it can be a monumental undertaking. At what point do you sacrifice comprehensiveness for conciseness? This section will attempt to address most of the issues addressed in reviews of this body of literature. It will initially be focused on Hamachek's, Burn's, and Pacht's problems with defining this construct, which were addressed in the 1970's and 1980's. Following that, the focus will be turned to the more recent questions of the definition posed by Rice and Slaney.

Numerous researchers have identified the difficulties in defining the psychological construct of perfectionism. The Webster's dictionary definition leaves one in the same state of confusion about this construct as they were thirty years ago: not being able to distinguish between normal and neurotic perfectionists. It defines perfectionism as a tendency to be dissatisfied with anything less than perfection. This clearly falls short of the mark of a good definition given what research has illuminated the public about this psychological construct. At best, it distinguishes the perfectionists from the non-perfectionists. Frost, Marten, Lahart, and Rosenbate (1990) indicated the difficulties of previous research endeavors in defining the construct of perfectionism, but that it has

been hypothesized to play a major role in many different psychopathologies. Currently, researchers are still having problems with a clear definition of perfectionism, but they have made much progress.

Perfectionism has been regarded as a trait-based construct, which may come from theoretical orientations of researchers investigating the nature of it. There are several theories that may serve to explain the existence of perfectionism as a trait-based psychological construct. Mostly closely linked to the idea of perfectionism is Adlerian theory. Adlerian theory is a psychoanalytic theory that is very different from how Freud conceptualized the psyche. In general, Adler holds that individuals are born inferior, a condition against which they fight during their lives in order to reach self-actualization. People strive to achieve for self-improvement and superiority. Striving to be perfect is overtly stated in Adler's theory. When striving for perfection is done for practical reasons, it is thought to be normal. However, neuroses can develop as a result of striving purely as a result of concern about one's superiority. This is highly related to perfectionism by its relationship with striving towards goals and having high standards for performance.

Another theory related to the concept of perfectionism is Behavioral theory. According to Skinner's behavioral theory, an individual's behavior will increase when positively reinforced and decrease when negatively reinforced or punished. Simply stated, the notion of perfectionism according to this theory would be explained by the need for reinforcement. According to Bandura, if reinforcement is only given when perfection is attained, the individual will learn through that experience that perfection is needed to gain reinforcement. When less than perfect results are produced, the individual

may expect to be punished, an outcome that is aversive to the individual. Therefore, setting the highest standards in all areas, from the generalization of behavioral reinforcement, results in perfectionistic tendencies. Problematic, perfectionistic behavior, according to this theory, occurs when the level of perfection is so high that it cannot be attained, despite the belief by the individual that it can. This can also result in depression and/or anxiety. Normal, perfectionistic behavior is characterized by setting realistically high standards that have been reinforced as a result of having achieved those results, or similarly high ones, in the past.

These two theories are very different from one another, yet they are able to explain perfectionism similarly. That is to say that they can account for setting high standards and the appropriate or inappropriate reaction to achieving them. Additionally, they explain the purpose or realistic nature of the high standards that are being set in terms of normality and abnormality. Finally, they both explain perfectionism in terms of it being a trait-based construct. These theoretical bases of perfectionism suggest that individuals are either perfectionistic, normal or neurotic, or nonperfectionistic and they do not serve to account for different types or levels of perfectionism in individuals based on different contexts or situations.

Dimensions of Perfectionism

Most of the research points to Hamachek (1978) as the provider of the first psychological definition of perfectionism. He defined the term by distinguish normal versus neurotic perfectionists. He asserted that normal perfectionists are those who “derive a real sense of pleasure form the labors of a painstaking effort...feel free to be less precise...need approval as much as anyone else...and use it as encouragement to

continue on and even improve their work.” (p. 27). He described neurotic perfectionists as those whose efforts “...never seem good enough...unable to feel satisfaction...create anxious feelings, confusion, and are emotionally drained before a task has even begun...are motivated by a fear of failure” (p.28). This is less of a definition and more of a description of two different types of perfectionists. But what is the distinguishing factor if there is such a thing?

Burns’ (1980) attempt to define this construct was very similar to Hamachek’s (1978) definition. His definition focuses on the unrealistic nature of the goals that are set for the maladaptive perfectionist. While he distinguishes what Hamachek describes as neurotic versus normal perfectionism using different terms, essentially he states that there is a difference between healthy pursuits of a goal and that, which is unrealistic and generally unattainable. Like Hamachek’s, this definition, while pointing research in a clear direction, lacks the clarity needed to accurately measure this construct or even accurately categorize those who are normal versus neurotic perfectionists.

Pacht (1984), on the other hand, prefers to only use the term “perfectionist” in the context of psychopathology. This could be a serious problem inherent in measuring and defining the construct. If perfectionist are concerned about being perfect and this is considered a negative thing, then the use of defense mechanisms such as denial could be widespread among these individuals. As a consequence, using self-report in measure would present a serious problem in measuring perfectionism in individuals, given this negative slant on the construct.

There have been three related outgrowths of Hamachek’s and Burn’s models of perfectionism that attempt to operationalize perfectionism multidimensionally. Frost

identified six dimensions of perfectionism that were focused on what aspect of an individual's life caused them to have perfectionistic tendencies. These dimensions were Parent Expectations, Parent Criticisms, Concerns over Mistakes, Personal Standards, Organization, and Doubts over Actions.

Hewitt and Flett (1991a) identified three dimensions of perfectionism related to the subject's orientation and focus of perfectionistic behaviors. These were self-oriented, others-oriented, and socially prescribed perfectionism. Self-oriented perfectionism is described by the authors as perfectionism that is directed on the self. For example, these individuals place extremely high standards upon themselves and tend to blame themselves when these standards are not met. This seems very consistent all the other measures of perfectionism, including the F-MPS, Burns Perfectionism Scale, and APS-R. Other-oriented perfectionism, however, is a dimension that is directed at individuals who place extremely high standards on others and then criticize them for not meeting those very standards. These individual place a high level of importance on the idea of other's being perfect. Essentially, other-oriented perfectionism is self-oriented perfectionism directed outward. Finally, socially-prescribed perfectionism is described by the authors as perfectionistic behaviors that are due to the perception that significant others have set extremely high standards for them, critically evaluate these behaviors, and pressure them to be perfect.

Recently, Slaney, Mobley, Trippi, Ashby, and Johnson (1996) identified another salient component to the construct of perfectionism called Discrepancy, which is the perception that one consistently fails to meet the high standards one has set for oneself. In this model, the dimensions are labeled as adaptive perfectionists, maladaptive

perfectionists, and non-perfectionists. Adaptive and maladaptive perfectionists are characterized as having extremely high standards, while they are distinguished from each other on their level of discrepancy. Adaptive perfectionists are characterized as having low levels of discrepancy, while maladaptive perfectionists are characterized as having high levels of discrepancy. Non-perfectionists are distinguished from adaptive and maladaptive perfectionist in that they do not have high standards.

Another interpretation to the dimensions of Slaney, et al. (1996) is provided by Rice and Mirzadeh (2000). He also identified three dimensions of perfectionists: maladaptive, adaptive and non-perfectionists. The distinguishing feature between perfectionists and non-perfectionists were the need for orderliness and personal standards. Maladaptive and adaptive perfectionists differed on their level of concerns over making mistakes, parental expectations and criticisms, and self-doubt. Maladaptive perfectionists differed from adaptive and non-perfectionists on their levels of cognitive distortions, especially those related to the distress of depression. They also differed from adaptive and non-perfectionists on self-efficacy and interpersonal control (LOC). So maladaptive perfectionists hold themselves to high standards, believe that they must be perfect or they have failed, and hold strong beliefs that their results are due to external forces. Qualitative findings indicated that the term “perfectionist” is considered a pejorative term by those identified as such.

Measurements Of Perfectionism

In this section, the instruments that have been used to measure perfectionism will be described. In general, the older instruments will be outlined and then the three most recently developed instruments, the F-MPS, MPS, and the APS-R, will be discussed in

detail. A comparison between the first two will be outlined along with their conclusions. Finally, comparison of the APS-R with the F-MPS and MPS will be discussed.

The Multidimensional Perfectionism Scale (F-MPS) developed by Frost et al. (1990) is distinguished from the previously developed perfectionism scales in that it is multidimensional. There are thirty-five items divided into six dimensions or subscales in this instrument. This instrument is a self-report questionnaire to which items are rated on a five-point Likert scale based on the level to which the respondents agree. These subscales are Concerns over Mistakes (CM), Personal Standards (PS), Parent Expectations (PE), Parent Criticisms (PC), Doubts over Actions (D), and Organization (O). The CM scale consists of nine items and measures the respondent's worries and fears with regard to making mistakes. The PS scale contains seven items and measures the respondent's assessment of their setting very high standards and the importance that these high standards hold in self-evaluation. The PE scale contains five items and measures the respondent's belief that their parents set high goals for them. The PC scale contains four items, which measure the respondent's assessment of the level of criticism of their parents. The D scale contains four items which measure the respondent's belief about the amount of doubt that others have about their ability to accomplish tasks. Finally the O scale contains six items, which measure the respondent's tendency to be orderly and organized. This last scale, according to Frost et al. (1990), is a separate from the other scales, but reflects the association that orderliness has had with perfectionism in the past.

Frost decided on including these subscales based on his analysis of the available research in the area of perfectionism. The rationale for these six scales is consistent with

the research of perfectionistic behaviors. Most researchers have decided that concerns over mistakes and setting high personal standards are the most salient features of perfectionism. This instrument devotes sixteen of its thirty-five items to these two scales (CM and PS scales). However, this is not enough to measure a construct as complex as perfectionism. This does not distinguish “adaptive” from “maladaptive” perfectionism. Intuitively, one thinks that there are plenty of individuals who set high standards and are concerned over their mistakes. That is the nature of striving for improvement and is not necessarily maladaptive.

Frost et al. (1990) decided that there were other features to perfectionism that should be tapped and therefore included in the F-MPS in addition to the PS and CM scales. Research indicated that there were also considerable doubts over performance in perfectionists. Reed (1985) described the main concern over this aspect of perfectionism as uncertainty as to when a task is complete. Therefore, Frost added the Doubts over Actions scale (D). The question that remains is whether the perfectionist defines complete as completed perfectly or completed functionally. It would seem that the former would be essential in describing the perfectionist, and that the latter would be more associated with someone with obsessive-compulsive tendencies.

To discriminate between the two aspects of completeness, Frost decided to include the Organization subscale. Also, organization has been a description in perfectionism according to Frost, Hollander (1965), and Slaney et al. (1996). This feature is related to the daily task of meeting the standards that have been set. The same question of its relatedness to obsessive-compulsive behaviors arises. How does one distinguish the origin of this behavior as perfectionism or obsessive-compulsive behavior?

Frost et al. (1990) decided to include the two other subscales, Parent Expectations and Parent Criticism, based on the work done by Burns (1980), Pacht (1984), Hamachek (1978), and Hollander (1965) indicating that there is some parental connection to the etiology of perfectionism. Most would agree that, of course, these relationships are the most important in everyone's life and serve as the template for most of their important future relationships. The impairment of this relationship of parent-child has an impact on many other dimensions of an individual's personality. Even current research is indicating that this is an important feature in those who are perfectionists. But, what specific role does it play in perfectionism? Is it merely that perfectionism is predetermined by the parent-child relationship or is the child so motivated by important people in their life that this templates the focus of their motivation throughout their life. In other words, is one a perfectionist because of the conditional love that a parent gave their child or is it based purely on a high level of parental criticism? One could propose that conditional praise or overly critical statement directed at the child may account for the difference between adaptive and maladaptive perfectionism and that unconditional love breeds the non-perfectionist. Of course there are very few, if any, parents who truly love their children unconditionally.

The psychometrics of this instrument appears to be very high. The internal consistency alpha of the subscales ranges from .77 to .93. The overall perfectionism measure has a consistency alpha of .90. The F-MPS is related to other measures of perfectionism as well, including the Burns' Perfectionism Scale and the Multidimensional Perfectionism Scale developed by Hewitt and Flett (1991a). A problem with the development of this scale is in the sample population on which it was

normed. Only female subjects were used in its development and correlation with other scales and other measures of psychopathology, including depression.

To summarize, the F-MPS seems to tap a wide range of possible predictors of perfectionism. The psychometrics of this instrument indicate that it is highly reliable and valid. Is this broad approach, however, the best approach to take in measuring this construct? Because the nature of perfectionism is so complex, one needs a very discrete instrument to measure only those aspects that relate specifically to perfectionism so as to not contaminate the results. Alternatively, if an instrument is too specific there may be many false negative that result and what may be a precise instrument may omit those with behaviors slightly deviant from the norm. A major contribution of development of this scale, however, was the introduction of the idea that perfectionism is truly a multidimensional construct. Many researchers have supported this idea over the past ten years.

Another Multi-dimensional Perfectionism Scale, the MPS, was later developed by Hewitt and Flett (1991a). The MPS is a self-report questionnaire consisting of forty-five items that may be rated on a seven point Likert scale by the respondent. Their scale is divided into three dimensions or subscales, each with fifteen items. They are the self-oriented, other-oriented, and socially prescribed perfectionism. The developing authors of this scale direct the measurement of perfectionism, not to the behavior patterns of the individual, but measure to whom the behavior is directed. The authors of this scale contend that little attention, if any, has been given to the social aspect of this personality construct. Previous scales have focused mainly on the nonsocial aspects of perfectionism.

The authors developed this scale by generating a large pool of questions that were developed by 156 psychology students, 52 of whom were men and 104 of whom were women. They used items that had a mean score between 2.5 and 5.5 on the seven point Likert scale, correlated positively with their respective subscale (r greater or equal to .40), correlated less with the other subscales (r less than or equal to .25), and was considered socially undesirable (correlated with the Marlow-Crowne Social Desirability Scale; r less than or equal to .25). Forty-five items were retained from the original pool of one hundred and twenty-two.

In validating this scale, the authors conducted a study involving 1,106 university students (399 men and 707 women) and 263 psychiatric patients (121 men and 142 women). They administered the MPS to all the subjects. A subset of the college students had a significant other of the subjects rate them and clinicians rated a subset of the psychiatric patients for observer ratings. Internal consistency of these subscales was .79 for other-oriented perfectionism, .86 for socially prescribed perfectionism, and .89 for self-oriented perfectionism. A principal components factor analysis indicated three factors accounting for 36 % of the variance, fifteen of which loaded separately on each factor. The factor loadings were moderate to low, ranging from .24 to .66. The observer rating was significant for all three factors in both the student and psychiatric population. Their correlations were moderate, ranging from .35 to .61. Interestingly, this scale was not validated by correlating it with any previously designed perfectionism scale. The F-MPS had not been developed yet, but neither the Burns Perfectionism Scale nor the Perfectionism Scale from the Eating Disorders Instrument (EDI; Garner, Olmstead, & Polivy, 1983) was used in determining construct validity. Instead, the authors chose to

use the Attitudes Towards Self Scale (Carver, LaVoie, Kuhl, & Ganellen, 1988), Self- and Other-Blame Scale (Mittelstaedt, 1989), Authoritarianism Scale (Heaven, 1985), General Population Dominance Scale (Ray, 1981), Fear of Negative Evaluation Scale (Leary, 1983), Irrational Beliefs Scale (Jones, 1968), the Locus of Control Scale (Rotter, 1966), Narcissistic Personality Inventory (Raskin & Terry, 1988), and the Symptom Checklist 90-Revised (SCL-90; Derogatis & Melisaratos, 1983).

The results of the construct validity study indicated, in general, relationships that were expected. Self-oriented perfectionism was significantly and moderately correlated with “high self-standards.” Other-oriented perfectionism was significantly and moderately correlated with “other-blame,” “total narcissism,” “authority,” “exploitativeness,” and “entitlement.” Socially prescribed perfectionism was significantly and moderately correlated with “self-criticism,” “overgeneralization,” “self-blame,” “other-blame,” and “fear of negative evaluation.” In addition, it is noteworthy to report that every subscale of the SCL-90 was significantly and moderately correlated with socially prescribed perfectionism and significantly and mildly correlated with self-oriented perfectionism, whereas other-oriented was only significantly and mildly correlated with the “phobias” and “paranoia” subscales of the SCL-90.

According to other research in this area, it is generally agreed upon that high self-standards are an essential component to perfectionism. This was not found in socially prescribed perfectionism of the Hewitt and Flett (1991a) model. Only self-oriented and other-oriented perfectionism was significantly correlated with this behavior. In addition, “other-blame” was found to be significantly and moderately correlated with both socially prescribed perfectionism and other-oriented perfectionism. This finding seems to purport

that “other-blame” is not unique to other-oriented perfectionism and that there may be some overlap here. Also, the research did not provide a factor analysis table with each item and the loading value for each factor. This overlap could be evidence that other-oriented perfectionism is not a separate factor in perfectionism. In addition to these findings, “social importance of goals” was significantly and moderately correlated with all three factors of the MPS. These correlations were very close in magnitude ranging from .29 to .36. In fact, “minimum social standards” was more significantly correlated with other-oriented perfectionism, providing further evidence that it may not be a separate factor. The possibility exists that the results for socially prescribed perfectionism measured something other than perfectionism given the lack of evidence that those individuals did not set high self-standards as a whole. It also appears that the self-oriented subscale is measuring only the adaptive features of perfectionism and that the socially prescribed subscale is separately measuring the maladaptive features of this construct.

A study comparing the F-MPS (Frost et al. 1990) and the MPS (Hewitt and Flett, 1991a) was conducted by Frost, Heimberg, Holt, Mattia, and Neubauer (1993) to determine how they related to each other and other psychological constructs. They arrived at numerous hypotheses based on their review of both scales. They hypothesized that the Other-Oriented scales would not be related to the F-MPS. Additionally, they predicted that the Socially Prescribed subscale of the MPS would be correlated with Frost’s Parent Expectation, Parental Criticism, and Concern over Mistakes subscales. Finally, they hypothesized that the F-MPS subscale of Personal Standards would be related to the MPS subscale of Self-Oriented Perfectionism.

There is considerable research that suggests that perfectionism is related to depression and other negative psychological constructs (Hamachek, 1979; Pacht, 1984; Hewitt and Flett, 1991b; and Frost et al., 1990). The authors of this study also hypothesized that perfectionism would be related to high levels of positive affect and low levels of negative affect. Frost et al. included the Beck Depression Inventory (BDI; Beck, 1978) and the Positive Affect-Negative Affect Scale (PANAS; Watson, Clark & Tellegen, 1988) to provide evidence of their predictions about their relationship to other psychological constructs.

Their results indicated some unique relationships with the subscales of the MPS and F-MPS, most of which supported their hypothesis. First, there seemed to be a significant relationship between the Personal Standards and the Self-Oriented perfectionism ($r=.62$). However, this scale also correlated significantly with the Other-Oriented perfectionism subscale ($r=.33$), just not in as high a magnitude. Socially Prescribed perfectionism was significantly correlated with the F-MPS subscales of Parent Criticism ($r=.49$), Parent Expectations ($r=.49$), and Concern over Mistakes ($r=.49$) also. In addition to the unforeseen relationship of Other-Oriented Perfectionism to the Personal Standards subscale, it was also significantly correlated with Concern over Mistakes ($r=.22$), and Parental Expectations ($r=.19$). Socially Prescribed perfectionism further obscured the results with its significant correlation with Personal Standards ($r=.16$) and Doubts over Actions ($r=.28$). Self-Oriented perfectionism did the same with it being significantly correlated with Concern over Mistakes ($r=.38$), Parental Expectations ($r=.24$), Doubts over actions ($r=.16$) and Organization (.29).

The results of the correlation of the PANAS with the F-MPS and MPS showed some very clear indications that the Personal Standards and Organization subscale was a good measure of the adaptive nature of perfectionism, while the Concern over Mistakes, Parental Concerns, and Doubts over Actions was a good measure of the maladaptive nature of perfectionism. These correlations were significant, but low to moderate in magnitude. Parental Expectations was not significantly correlated with either positive or negative aspects of perfectionism according to the results of the PANAS. The clarity of these results are reflective of the fact that the adaptive subscales of the F-MPS were not related in any way to the negative affect subscale of the PANAS and the maladaptive subscales were not related in any way to the positive affect subscale of the PANAS. The BDI correlated significantly but low to moderate with only the maladaptive subscales of the F-MPS, except for Parental Expectations.

The results of the correlations with the PANAS and the MPS were also very clear and similar in magnitude. Socially Prescribed perfectionism was significantly correlated with only the BDI ($r=.23$) and the negative affect subscale of the PANAS ($r=.24$). Self-Oriented perfectionism was significantly correlated with the positive affect subscale of the PANAS ($r=.19$) only. Other-Oriented was not correlated with any of these measures. These results seem to point to a maladaptive aspect of perfectionism measured by the Socially Prescribed subscale of the MPS and the Concern over Mistakes, Parental Criticism, and Doubts over Actions subscales of the F-MPS. Additionally, the results seem to point to an adaptive aspect of perfectionism measured by the Self-Oriented perfectionism subscale of the MPS and the Personal Standards and Organization subscales of the F-MPS.

These results, while confusing, seemed to be interpretable in an organized way according to Frost et al. (1990). They suggested that while the Socially Prescribed perfectionism subscale was correlated with Personal Standards, generally viewed as a positive aspect of perfectionism, that correlation was quite low compared to the other F-MPS subscales, the negative ones, with which it was more strongly related. This result suggested that Socially Prescribed perfectionism might be measuring the negative aspects, or maladaptive qualities, of perfectionism. Alternatively, while Self-Oriented perfectionism was correlated with three of the four negative subscales of the F-MPS, they were quite low when compared to Personal Standards, a positive subscale of perfectionism. Though the Organization subscale was correlated less than some of the negative subscales of the F-MPS, it was regarded as a general positive measure of perfectionism. The Other-Oriented perfectionism subscale seemed to be measuring both positive and negative subscales of the F-MPS equally.

A factor analysis study of this data indicated that there were in fact two factors being measured with these two instruments. Frost et al. (1993) labeled these two factors maladaptive evaluation concerns and positive striving. Personal Standards and Organization of the F-MPS loaded the highest on the positive striving factor with factors equal to .85 and .61 respectively. None of the other factors had a loading of more than .31. In addition, Self-Oriented perfectionism of the MPS loaded the highest on this factor with a value of .82. The Socially Prescribed and Other-Oriented perfectionism only had loadings of .12 and .54 respectively. Though this may seem moderate for the Other-Oriented perfectionism, it was expected since it seemed to be measuring both positive and negative aspects of this construct.

The maladaptive evaluation concerns factor revealed slightly clearer findings for both instruments. The four subscales of the F-MPS previously hypothesized to be maladaptive concerns loaded very high on this factor. Personal Standards and Organization, the positive striving factors only had loadings of .10 and -.12 respectively. In addition, the Socially Prescribed perfectionism subscale of the MPS loaded much higher than the other two subscales. Its loading factor was .79, while the other two subscales only had loadings of .23. Again, this supports the idea that there are clear adaptive and maladaptive aspects of perfectionism, they are measured by these two instruments, and there is some consistency between the subscales of these instruments relative to this measurement.

A third instrument used to measure perfectionism is the Almost Perfect Scale—Revised (APS-R; Slaney et al., 1998). The original APS was described as having problems with measuring the negative aspect of this construct. While the adaptive APS subscales of high-standards and orderliness are highly related to the adaptive nature of this construct and were retained in the APS-R, the negative APS subscales of anxiety, procrastination, and difficulty in interpersonal relationships were not well supported in the research as negative aspects of perfectionism. The developers of the APS-R decided that the concept of discrepancy best captured the negative aspect of perfectionism and decide to use it as the subscale to measure the maladaptiveness of this construct. In addition to this aspect of the revision, the research team also clarified and strengthened the “standards” subscale of the APS.

The final product of the APS-R is a self-report questionnaire instrument that contains twenty-three items within three subscales. The Standards subscale contains seven items,

the Orderliness subscale contains twelve items and the Discrepancy subscale contains seven items. The instrument is based on a seven-point Likert scale that range from strongly disagree to strongly agree. Discrepancy is defined as “the perception that one consistently fails to meet the high standards that one has set for oneself (Slaney, 1998, p.3).

Slaney, et al. (1998) began their revision of the APS with 39 items and conducted a confirmatory factor analysis (CFA) in deciding which items to retain and whether there were three factors in the construct identified as perfectionism. The CFA resulted in three factors and twenty-three items, after eliminating items with less than a .50 loading on a factor. Item number one was retained in the Discrepancy factor because it loaded highest there. The factors range from .49 to .83 on the Discrepancy subscale, .50 to .75 on the High Standards subscale, and .73 to .85 on the Order subscale. Internal consistency was strong for all three subscales, which were .92 for Discrepancy, .85 for High Standards, and .86 for Order. In addition, these subscales showed only a moderate, non-significant relationship between High Standards and Order ($r=.42$), Standards and Discrepancy ($r=-.12$), and Order and Discrepancy ($r=-.03$).

This scale was cross validated with the F-MPS (Frost et al., 1990), MPS (Hewitt & Flett, 1991a), Beck Depression Inventory (BDI, Beck, 1978), Rosenberg Self-Esteem Scale, Penn State Worry Scale (PSWS), and Grade Point Average (GPA). Results indicated that depression, one of the most widely correlated affective measures with perfectionism, was significantly correlated with Discrepancy ($r=.49$) and that self-esteem was also correlated with Discrepancy ($r=-.44$). Upon observation of the validity measures between the other two perfectionism instruments, Discrepancy was correlated

with self-oriented perfectionism ($r=.23$) and socially prescribed perfectionism ($r=.45$), but not with other-oriented ($r=.00$). Additionally, Discrepancy correlated the highest the maladaptive aspects measured in the F-MPS. Those were with “concern over mistakes” ($r=.55$) and “doubts over actions” ($r=.62$). The High Standards subscale correlated highly with the adaptive aspects, “personal standards” ($r=.64$) and “organization” ($r=.31$) of the F-MPS also. “Organization” of the F-MPS, however, correlated much stronger with the Order subscale of the APS-R ($r=.88$).

Overall, it appears that the APS-R provides a succinct, discrete measurement of both the positive (adaptive) and negative (maladaptive) aspects of perfectionism. These results also provide further evidence that the MPS subscales may be measuring the adaptive (self-oriented) and maladaptive (socially prescribed) aspects of perfectionism on two separate scales. Additionally, given the weak and often lack of a relationship between other-oriented perfectionism and any of the other subscales of the F-MPS and APS-R in this cross-validation, the other-oriented subscale of the MPS may not have sufficient construct validity in measuring perfectionism.

Categorizing Perfectionists

Perfectionists can be categorized in different ways and these ways tend to be based on the dimensions of perfectionism being measured. If one were to use the MPS, developed by Hewitt and Flett, one would categorize perfectionists into the dimensions of Self-Oriented, Other-Oriented, or Socially-Prescribed perfectionists. Alternatively, if one were to use the APS-R, developed by Slaney et al., one would categorize perfectionists into the dimensions of Adaptive, Maladaptive, or Non-perfectionists. The instrument

used to measure perfectionism clearly has an impact on the way one categorizes perfectionist.

However, a question of whether perfectionism is a categorical or continuous variable should be posited. How does one correctly categorize individuals into the correct grouping on any given dimension? This is a statistical question and one that has been specifically addressed by Parker (1997) and Rice and Mirzazeh (2000). They assert that the Cluster analysis is a valid and reliable statistical procedure with which to categorize individuals into Adaptive, Maladaptive, or Non-Perfectionists. Prior to this, the median-split method had been used and cutoff scores were calculated. This continues to be true in categorizing perfectionists into Self-Oriented, Others-Oriented, or Socially-Prescribed perfectionists.

The cluster analysis appears to be particularly suited for this type of categorization of perfectionists. First, cluster analysis is a multivariate statistical analysis, which would be the preferred type of analysis, since the dependent variables (categories) are more than two in number (Adaptive, Maladaptive, and Non-Perfectionists). Second, the independent variables, which are the subscales of the APS-R (Standards and Discrepancy), are quantitative in nature. And finally, and most obviously, one wishes to assign individuals into one of a number of categories.

According to Borgen and Barnett (1987), the cluster analysis is a multivariate statistical analysis used to identify homogeneous groups within a data set. Clustering algorithms are used to determine groupings by looking at the closeness of variable scores to each other. Agglomeration coefficients, as well as theoretical expectations, are used to determine the number of clusters in a data set. The theoretical expectation of the number

of groups of perfectionists is three, based on the APS-R. They would be Adaptive, Maladaptive, and Non-Perfectionists.

Two types of cluster analyses can be used to determine the number of clusters. First, the K-Means Cluster Analysis assumes a theoretical expectation and requires the statistician to enter the number of expected clusters. Second, the Hierarchical Cluster Analysis produces an agglomeration schedule and agglomeration coefficients. These are similar to the Eigenvalues found in a factor analysis and are used to determine a cut-off point for the number of clusters. These two statistics provide information about the homogeneity within clusters and the heterogeneity between clusters and are useful in decision-making about the number of clusters that should be used. Increases in agglomeration coefficients that are large indicate that clusters have been identified that are more different from each other than smaller agglomeration coefficients. The two methods can be likened to an exploratory (hierarchical method) versus a confirmatory (k-means method) cluster analysis similar to the theory supporting the use of exploratory and confirmatory factor analyses.

Studies have used cluster analysis to determine perfectionism clusters in the past (Gilman, LoCicero, & Ashby, 2001; Parker, 1997; and Rice & Mirzadeh, 2000). In these studies, three clusters were indicated. These clusters were similarly identified as Adaptive, Maladaptive, and Non-Perfectionists. These clusters were shown to be useful in examining differences in attachment, adjustment, and other individual characteristics of students between all three clusters. Differences between individuals of different clusters were analyzed using Analysis of Variance (ANOVA) and/or Multivariate

Analyses of Variance (MANOVA) techniques, using cluster groups as the independent variables and other measures of functioning as the dependent variables.

Negative Psychological Consequences of Perfectionism

In this section, the specific vulnerabilities that perfectionism places on individuals to negative psychological consequences will be reviewed. One must acknowledge that though depression, anxiety, and other emotional and/or behavioral concepts have been related to perfectionism, this review also addresses studies of individuals who were not diagnosed with mood or behavioral disorders. The basis of correlations of perfectionism with negative psychological problems in previous studies that were cited was their scores on certain instrumental measures of these problems. No diagnoses were noted for these individuals. Therefore, it is not sufficient to say that depression is associated with perfectionism unless subjects scoring high on a perfectionism scale were diagnosed as meeting the criteria for depression. Scores on the BDI, SCL-90, or PANAS are not sufficient in making this sort of statement. This section will outline mainly, the effect of perfectionism on depression. Other psychological consequences of perfectionism, such as self-esteem, stress, specific disorders, relationship satisfaction, and other personality characteristics will be discussed later in this chapter.

In a review by Blatt (1995), the author describes two main classes of depression that are related to perfectionism. One results from severe disruptions of interpersonal relations and the other results from threats to feelings of self-esteem and self-worth. The research that led to these two main classes of depression ultimately asserted that they are both related to suicide gestures, but in different ways. Blatt summarized that ultimately the interpersonal class of depression that resulted in suicide was ultimately from

medication overdose. Alternatively, the individuals who were in the self-critical class of depression were more at risk for more lethal means of suicide. These individuals were also more at risk for suicide over all and this was, in part, linked to perfectionistic tendencies.

Self-critical depression, according to Blatt (1995), is highly related to parental relationships and attachment. This is significant, because current research suggests that this is a necessary ingredient in perfectionism, along with the negative aspects of the construct. Studies have shown that parental criticism and parental expectation are linked to perfectionism (Frost et al., 1990). Blatt (1995) asserts that these problems in parental relationships teach children to be dependent on the evaluation of others in their performance by withholding love, warmth, support, and praise. Coincidentally, these same parents usually have high perfectionism tendencies themselves, and mothers were particularly linked to their children in this way. However, Blatt also acknowledges that the setting of high standards by parents or perception of this by children is unclear.

Blatt (1995) also describes an interdependent developmental model that explains the importance of both the interpersonal and self-critical classes of depression. Perfectionism is related to this through its self-oriented and socially prescribed dimensions (Hewitt and Flett, 1991a). Many developmental theorists, such as Erickson (1950) and Freud (1957), support the idea that both the development of interpersonal relatedness and self-definition are necessary and integrated processes that are interdependent of each other. The development of good interpersonal relatedness is dependent on the level and development of one's self-concept and identity. That is, one cannot have meaningful and diverse relationships without a well-developed sense of self. Alternatively, the development of a

sense of self is necessary in order to be able to form interpersonal relationships. These two processes are operating in an interdependent fashion when the self becomes more developed as a result of experiencing more mature forms of interpersonal relationship, which develops the individual's interpersonal relatedness. This increase in interpersonal relatedness, then, allows the self to become more differentiated. It is a cyclic and contingent process that explains how the two different classes of depression are related to each other.

Research in the study of perfectionism has been useful in understanding its role in depression. In a study by Hewitt & Flett (1991b), it was found that depressed patients had higher levels of self-oriented perfectionism than either the psychiatric or normal control subjects. This was a quantitative, experimental research design. The purpose of this study was to test the hypothesis that self-oriented, other-oriented, and socially prescribed perfectionism related differently to unipolar depression. The study used a depressed group (22 acute, inpatients composed of 6 men and 16 women diagnosed with unipolar depression in accordance with the DSM-III-R and a Beck Depression Inventory (BDI) score of 9 or greater), a normal group (22 normal control subjects composed of 6 men and 16 women that were match on age and gender with the depressed group and excluded if they had a BDI score of 8 or greater or had had any psychological treatment in the previous 2 years), and an anxiety group (13 patients composed of 4 men and 9 women diagnosed with an anxiety disorder based on the DSM-III-R; 4 simple phobias, 4 generalized anxiety disorders, 3 OCD, and 2 panic disorders; they were excluded if they were comorbid depression). The researchers used the Frost Multidimensional Perfectionism Scale (F-MPS), which has subscales that correspond with the three

orientations of perfectionism as described above, the BDI, and the Endler Multidimensional Anxiety Scales-State (EMAS-S).

A major limitation of this study revolves around the selection of the subjects. First, no test was done to see if the depressed group had any symptoms of anxiety, which is very often comorbid with depression. The anxiety group did have this procedure done. Second, a score of 9 on the BDI is not difficult to get and could be a result of self-report error. The BDI consists of 21 items of depression to rate from 0 to 3 with a range of scores from 0 to 66. A score of 9 is very low. Third, the subjects differed in education level significantly. The depressed group's mean education was 11.27 years and the normal group's mean education level was 14.23. This is important because for one group the average mean is less than a high school graduate and the other group is 2+ years of college. When considering perfectionism, there is likelihood that one group would have differences based on high standards of education.

Another study tested whether perfectionism dimensions interacted with specific stressors to predict depression (Hewitt & Flett, 1993). This was a quantitative, correlational research design. Their hypothesis was that self-oriented perfectionism would interact only with achievement stressors in predicting depression and socially prescribed perfectionism would interact only with interpersonal stressors in predicting depression. Their use of scales to measure perfectionism (F-MPS), depression (BDI), stress (Hassles Scale), achievement stressors (Sociotropy-Autonomy scale), and interpersonal stressors (Self-Criticism-Dependency scale) was good and all have decent psychometric properties. A subjective item analysis, however, should be done to determine the reasonable usefulness of these scales and to help identify problems. Their

sample size was $N=51$ for the depressed patient sample and $N=94$ for the general psychiatric sample. However, the type of subjects used were a problem in this study. Criteria for selection of that data were not discussed. Their level of depression was not stated. These subjects were only referred to an acute psychiatric unit for treatment of depression. No analysis of comorbid disorders was done. However, a heterogeneous sample was used as a control to compare the results because of comorbid diagnoses with depression. This sample consisted of depressed, psychotic, and adjustment disorder subjects. This was about 60% of the sample and the rest was not described. They used similar exclusion criteria in this sample. There was no reliability data for diagnoses in both samples as well.

The results of this study indicated that both samples provided partial support that self-oriented perfectionism interacted only with achievement stressors to predict depression (Hewitt & Flett, 1993). Socially prescribed perfectionism interacted with interpersonal stress in sample 1 and with achievement in sample 2 to predict depression. However, other personality variables including socially prescribed perfectionism accounted for unique variance in depression ($r=.54$, $p<.001$). These results suggest that perfectionism is related to depression and that perfectionism dimensions may contain vulnerability factors to depression.

A longitudinal study was done by Hewitt, Flett, and Ediger (1996) to test whether perfectionism dimensions interact with specific stress over time. This was a quantitative, causal-comparative research design. This study tested whether perfectionism dimensions interact with specific stress to predict depression over time. Subjects were acquired by mailing out consent forms of which 156 of them were return from a total of 403 that were

sent out. Of the 156, only 121 were usable. The sample consisted of 103 current and former patients, due to dropout, who belong to the Society for Depression and Manic Depression of Manitoba (SDMDM), which is a convenience sample. Problems with this sampling method are that we do not know if everyone who joined had a bonafide diagnosis of depression. I am also concerned with maturation issues, since measures were taken at four months in the future. In addition, the sample was predominantly married, white individuals on medication for depression.

The results of this study were slightly different than the previous study done relating perfectionism and stress to depression. Socially prescribed perfectionism predicted a main effect for Time 2 depression after 4 months. It did not, however, interact with achievement or social stress to predict Time 2 depression. Self-oriented perfectionism interacted only with achievement stress to predict depression at Time 2. These results provide additional support that perfectionism dimensions are related to vulnerability to depression over time.

Rice et al. (1998) conducted a study examining the mediating effect of self-esteem between perfectionism and depression. This was a quantitative, correlational research design. This study used a convenience sample of college students ($N=464$) in order to examine the association of adaptive and maladaptive perfectionism and the mental health outcomes of self-esteem and depression. The study used the F-MPS, APS, Rosenberg Self-esteem Inventory, and the BDI. The subjects came from three different groups and the researchers did analyses to determine if the groups could be combined. I am suspect of site differences and contextual difference that may have influenced the report of the

subjects. I am also suspicious of individual differences due to the large age range (18-62 years, $M=23.66$, $SD=6.69$). All of them were White, European American.

The results of this study indicated that maladaptive perfectionism was negatively associated with self-esteem ($r=-.63$) and positively associated with depression ($r=.44$). However, self-esteem was shown to mediate the effects of maladaptive perfectionism with depression. That is, as self-esteem increased, the relationship between maladaptive perfectionism with depression was reduced. Those participants classified as having high self-esteem had very little change in depression scores regardless of their levels of maladaptive perfectionism.

The relationship between perfectionism and anxiety has not received nearly the specific attention in studies as the relationship between perfectionism and depression. However, many studies that have investigated the relationship between perfectionism and other constructs have included measures with subscales related to anxiety and examined its association with perfectionism only tangentially (Flett, Hewitt, & Dyck, 1989; Frost, 1990; Slaney, et al., 1998).

Anxiety and Perfectionism

Perfectionism is an important component with respect to anxiety. However, the research on perfectionism does not quite support this statement. Anxiety has only shown to be mildly related to perfectionism and much less so than depression. Diagnostically, perfectionistic thinking is an important criterion in the diagnosis of Obsessive Compulsive Personality Disorder (OCPD). In fact perfectionism and excessive orderliness, a subcomponent thought to be highly associated with perfectionism, are two primary characteristics of OCPD (APA, 1994). In fact, when one reads the diagnostic

criteria for OCPD, one might think that little distinguishes it from perfectionism. There are allusions to extremely high standards and extreme orderliness combined with a conscientious attitude of preventing errors.

However, diagnoses are not the only seeming relationship that perfectionism has with anxiety. Anxiety is not just a “disorder” or diagnosis. There appears to be other types of anxiety, most of which are less severe as the list of anxiety disorders. For example, Frankel (1959) describes a sort of “existential anxiety” which is not the same as the DSM-IV category of Anxiety disorders. Another way anxiety has been operationalized is on the basis of state and trait components of the construct (Spielberger, 1983).

Existential anxiety seems to be a subclinical form of anxiety that denotes worry and concern, but does not impede with everyday functioning. Perfectionism is related to this in that worry and concerns about making mistakes, not meeting parental expectation, and failure are all aspects of perfectionism that are in common with anxiety. These aspects are found in all of the instruments used to measure perfectionism, including the Frost MPS (Frost et al., 1990), the MPS (Hewitt and Flett, 1991a), and the APS-R (Slaney, et al, 1998).

In developing and validating the perfectionism measures, anxiety was determined to have some relationship with perfectionism. For example, Frost (1990) found that anxiety as it is measured by the Brief Symptom Inventory was significantly related to overall perfectionism ($r=.439$, $p<.01$) and two of the subscales in the F-MPS: Concerns over Mistakes ($r=.354$, $p<.01$) and Doubts over Actions ($r=.596$, $p<.01$). However, the remaining subscales did not correlate significantly with anxiety.

In developing the APS-R, Slaney et al. (1998) decided to remove the procrastination and anxiety subscales, which measured maladaptive aspects of perfectionism. This seems contrary to the thought that anxiety may be related to perfectionism, however, these subscales were not providing any additional psychometric data that improved this instrument. This occurred despite the fact that the anxiety subscale had a high factor loading for maladaptive perfectionism ($r=.68$).

Spielberger (1983) developed the State-Trait Anxiety Scale (STAI), which is used to measure these two components of anxiety. Essentially he theorizes that there are two different and distinct aspects of anxiety: State-Anxiety (S-Anxiety) and Trait-Anxiety (T-Anxiety). Borynack (2003) asserts that there may be evidence of Trait and Context components of perfectionism that is similar and related to these two dimensions of anxiety. Given these two parallels between perfectionism and anxiety, it may have been difficult to correlate perfectionism and anxiety in the past due to the masking of the perfectionists who are focused in one or two specific contexts. These types of perfectionists may not endorse items on a perfectionism scale that are trait-based. This may also be true for those with state-based anxiety. For example, an individual with state-anxiety might score low in perfectionism due to instruments that measure perfectionism being more trait-oriented. Further, Spielberger asserts that, "People with high T-Anxiety exhibit S-Anxiety elevations more frequently than low T-Anxiety individuals because they tend to interpret a wider range of situations as dangerous and threatening (Spielberger, 1983, p. 6)." Therefore, not distinguishing state from trait anxiety seems to suppress the existence of state anxiety if instruments only measure the trait component.

The similarities of perfectionism and anxiety along the dimensions of trait versus state/context may have diagnostic implications for Post Traumatic Stress Disorder (PTSD). Criterion C of PTSD requires that there be persistent avoidance of stimuli or situations associated with the trauma that was experienced (APA, 1994). This notion sounds like avoidance of these specific contextual situations due to fears and may be related to state-anxiety and contextual perfectionism. However, one diagnosed with PTSD may not endorse the trait-based items of perfectionism scales, unless they were first exposed to a situation similar to their trauma and then instructed to respond to the items on a perfectionism scale based on that context or situation.

Another relationship that perfectionism has with anxiety is in the area of performance evaluation, or standards. Additionally, the response between one's preconceived goal and actual performance evaluation, as described by Slaney et al. (1998) as Discrepancy, may play a specific role in anxiety. "Circumstances in which failure is experienced or an individual's personal adequacy is evaluated are generally more threatening to person's with high T-Anxiety (Spielberger, 1983, p.6)." This appears to suggest that there may be some relationship to maladaptive perfectionism and T-anxiety. At the same time, one might surmise that S-anxiety may be more related to the perfectionism that one exhibits in a specific situation or context and therefore may be more adaptive in nature and related to adaptive perfectionism. This hypothesis, however, has not been addressed or tested in research studies yet.

Trait vs. Context as Another Dimension of Perfectionism

It would seem plausible that people would be perfectionists in different areas of their life. Some may have one area in which they set very high standards, but some may set

these standards in many or all areas of his or her life. In this way, perfectionism could be thought of as a context-based or trait-based construct. Some research has been conducted on perfectionism on couples in relationships, in academic populations, and with respect to body image (Cash & Szymanski, 1995; Gilman, et al., 2001; Haring, Hewitt, & Flett, 2001; Klein & Dubow, 2001; Parker, 1997; and Shea, 1999). These would be considered other potential contexts of a person's life in which they may exhibit perfectionistic qualities. Most of the research, however, has been focused on perfectionism as a trait-based construct. This seems too broad of an approach, given the complexity of perfectionism and human personality. Much of the results of correlational research studies done with perfectionism and psychological outcome have shown only low to moderate correlations (Rice, et al., 1998). This is less true when accounting for the positive and negative effects of perfectionism. However, some of the variance could be lost due to the focus of this construct being trait-based. If specific contexts were considered, results may show much higher correlations to individual functioning and levels of perfectionism when considering its positive or negative effects.

It is important to distinguish the idea of context-based perfectionism, the focus of this study, from state-based perfectionism. The concept of state-based perfectionism would be more specific to the current situation that one exhibits perfectionistic tendencies. For example, someone who may be a state-based perfectionist might only exhibit perfectionistic behaviors and thoughts at a specific moment or in relation to some specific event. It would seem that the context-based perfectionist would exhibit these behaviors and thoughts in the same context even in the absence of a specific situation that could

precipitate them. In effect, the context-based perfectionist would exhibit perfectionistic thoughts and behaviors in that context most of the time.

Theoretically, the idea of contextual perfectionism can be explained in many different ways, just as trait based perfectionism. One theory that explains why people may be perfectionists in some areas, but not in others is Bandura's social learning theory. Social learning theory combines intrapersonal factors with behavioral and environmental factors. Basically, according to Bandura, these three aspects are interdependent on each other. In terms of perfectionism, one may ask whether opportunities existed that promoted perfectionistic behaviors in certain contexts or environments. These opportunities must have been perceived by the individual's intrapersonal factors and result in perfectionistic thoughts and behaviors. Alternatively, the individual may apply perfectionistic thoughts and behaviors to an environment in which opportunities did not exist that promoted his/her behavior and thoughts. The degree to which these three aspects complement each other would determine how perfectionistic the individual was. If the individual did not have perfectionistic perceptions or behaviors in a specific context, the individual would most likely be classified as a Nonperfectionist in that context. However, the individual may be Adaptive or Maladaptive in his/her perfectionistic thoughts and behaviors in other situations. Adaptive perfectionists would think and behave in environments that allowed for these behaviors to provide some benefit. Alternatively, Maladaptive perfectionists would think and behave in environments that did not allow these behaviors to provide some benefit.

A second theory that may explain perfectionism is interpersonal/psychodynamic theory. According to Sullivan, the self is an open system interacting with the

environment. He theorized that the self seeks homeostasis in terms of anxiety reduction. That is, tensions emerge from needs and anxieties. Consequently, individuals constantly seek to interact with the environment in order to bring their “self” into harmony with the environment through anxiety reduction. The need to be perfect can be applied to this theory as easily as any other need. However, this theory applies to contextual perfectionism best in terms of its specific application to interpersonal relationships. According to Sullivan, it is through various social relationships that individuals fulfill their need reduction. Relational perfectionism seems to be explained well through this theory. Some people may have the need to be perfect in relationships. How this perfection is attained is very subjective and determined by the individual. Nevertheless, the realistic nature of the perfection that is needed can serve as a basis for Adaptive or Maladaptive forms of perfectionism. Those who have unrealistic views of what a perfect relationship is and attempts to attain this type of relationship would be viewed as a Maladaptive perfectionist, while the converse would be viewed as Adaptive. Nonperfectionists would not concern themselves with being in a perfect relationship to reduce anxiety tensions.

These two theories serve to explain how perfectionism may operate, but only in specific contexts. That is, they account for individuals who only think and behave perfectionistically in confined situations. This is not to suggest that there are no trait-based perfectionists, only that this may be another dimension of perfectionism that has not been adequately addressed.

Research of Perfectionism in Specific Contexts

There have been articles that have predicted perfectionism and the affects of perfectionism in populations of academic children, marital relationships, and in populations of religious individuals (Gilman, et al., 2001; Klein & Dubow, 2001; Sorotzkin, 1998; Parker, 1997; Shea & Slaney, 2000; and Haring, et al., 2001). However, no studies exist that validate the concept of a contextual basis of perfectionism in comparison to a trait-based concept of this construct. These studies have confirmed many of the finding of other empirical articles that measured perfectionism in non-specific contexts.

In the study conducted by Gilman et al. (2001), they studied 185 middle school students as an exploratory investigation. They were able to distinguish adaptive from maladaptive perfectionists, as one would expect. This study used cluster analysis to distinguish the adaptive perfectionists, maladaptive perfectionists, and non-perfectionists from one another. Maladaptive perfectionists reported more negative relationships with their family and school experiences, along with greater emotional distress. Adaptive perfectionists scored higher on a number of self-reported measures of academic, intrapersonal, and interpersonal measures.

Another study examining the academic setting of perfectionism, investigated the relationship of perfectionism and anxiety among gifted and non-gifted children. They used a sample of gifted, N=83, and non-gifted, N=100, children in 5th to 7th grades. In this study, the researcher modified the F-MPS (Frost, 1990) items to reflect academic and social domains for perfectionism. Both groups showed correlations between academic perfectionism and academic anxiety. However, there were certain aspects of academic perfectionism that were stronger predictors of academic anxiety, which were Concerns

and Parental Pressure. This study suggested that perfectionism may be better understood from a domain-specific perspective.

Relationship satisfaction has been another context of the study of perfectionism. In a study by Shea and Slaney (2000), the researchers were interested in studying the relationship between perfectionism and relationship satisfaction. The Dyadic APS-R was developed by the researchers specifically for this study. There were 327 university students who participated in the development of the Dyadic APS-R portion of the study. Sixty-three partners of these students agreed to participate in the second part of this study. The results indicated that the Dyadic APS-R significantly predicted one's own and one's partner's relationship satisfaction better than the APS-R alone.

Another study in the contexts of interpersonal relationships was conducted to explore the relationship between perfectionism and interpersonal coping strategies (Haring et al., 2001). A sample of 76 couples that had been together for less than four years were used in this study. The researchers used the MPS (Hewitt & Flett, 1991a) as a measure of perfectionism and multiple measures to measure marital functioning. The results indicated that coping strategies mediate the relationship between perfectionism and relationship maladjustment. Increased marital distress is predictive of perfectionistic couples that use more negative coping strategies when dealing with marital disagreement.

Another context in which perfectionism has been studied is in religious individuals. Sorotzkin (1998) conducted a review of the literature that summarizes understanding and treating perfectionism in religious adolescents. He validates the distinction of pathological perfectionism in their reaction to less than perfect performance. Sorotzkin addresses the significant problem with perfectionism in Orthodox-Jewish adolescents,

which often leads to severe depression, narcissism, obsessive-compulsive disorders, and others. The religious context is important because frequently religious people are encouraged to be idealistic, rather than realistic and emphasizes performance over belief and attitude. The prevalence of perfectionism in the context of religion further legitimizes the need to address this construct as a context-based one.

The previous studies described three contexts of perfectionism: academia, relationships, and religion. However, there are other contexts that have not been addressed at all or adequately in the literature that seem to warrant further exploration. The occupational context seems to be one of these. This is one in which people spend a great deal of time and effort in their lives and success in this area, or even life perhaps, is frequently based on performance in this area. As a whole, perfectionism has not been addressed as a context, but merely studied within contexts as a trait-based construct.

Trait and Context Related to Adaptive/Maladaptive Perfectionism

Qualitative studies suggest that adaptive perfectionism is more related to context-based perfectionism and that maladaptive perfectionism is more related to trait-based perfectionism (Ashby, 2002). This makes sense from an intuitive point of view, in that those whose perfectionism is pervasive across contexts (trait perfectionism) would be categorized as maladaptive perfectionists. The converse also makes sense, which is those whose perfectionistic tendencies are only present in certain contexts of their life (academics, work, relations, etc.) would be categorized as adaptive perfectionists.

This idea, however, may be questioned in terms of those who may be so perfectionistic in certain contexts of their life, that they actually are maladaptive. Or, one may question this hypothesis in terms of those with only one or two primary roles in their

life, but are highly perfectionistic in those roles. An example of this may be an undergraduate college student with no job and who is not in an intimate relationship. This hypothesis still needs to be tested in quantitative studies, as none have been conducted as of yet.

Guided Imagery as a Method of Tapping Context

One concern about conducting research in this area is the method of tapping context. How can this be accurately achieved? There are no measures of perfectionism that have been normed to tap perfectionism across different contexts, other than the Dyadic Almost Perfect Scale-Revised (Shea & Slaney, 2000). However this scale only looks at the single context of relational perfectionism and cannot compare the results among other contexts.

Methodology that is geared at simulating context is risky due to the ability of participants to be engaged in the simulation. In addition, some contexts would be much more difficult to simulate than others. For example, participants who were not in a romantic relationship would have difficulty fully engaging in a scenario that simulated this situation. Further, it would be difficult to select individuals that were known to have perfectionistic tendencies in a specific context, even if that context were easy to simulate. Populations of academic students, those in romantic relationship, those who have professional careers would have to be carefully selected for these studies.

Guided-imagery is one method that may provide an adequate level of relevance and engagement for participants in order to tap context. Providing a physical environment and visual imagery may assist in improving the context that the researcher is simulating. Guided imagery also tends to have the added benefit of tapping cognitions, emotions, and

memory, which are more likely to improve the relevance of the situation and engagement of the participants. Further, finding participants for whom the guided-imagery scenario is a potential current issue would provide even more relevance for the participants.

Purpose of this Study.

The purpose of this study will be to detect contextual difference in the measurement of perfectionism and its relationship to anxiety. To do this we will look at how participants respond in general to instruments that measure perfectionism and anxiety and how participants respond to instruments that measure perfectionism and anxiety after being presented with a particular scenario. It is hypothesized that a cluster analysis conducted to categorize perfectionists, both adaptive and maladaptive, and non-perfectionists will result in a better fit to the model of perfectionism for the experimental condition. Additionally, it is hypothesized that there will be between group differences with respect to mean standards scores for the adaptive and maladaptive perfectionists. It is further hypothesized that there will be between and within group differences with respect to mean anxiety scores for adaptive and maladaptive perfectionists.

Hypothesis #1: For each condition (control and experimental), the data will cluster participants into three distinct groups (Adaptive Perfectionists, Maladaptive Perfectionists, and Non-Perfectionists) based on their responses to the Standards and Discrepancy subscales of the APS-R. Further, Standards and Discrepancy will be significantly higher in the experimental group as compared to the control group.

Hypothesis #2: There will be a significantly higher mean State Anxiety, as measured by the STAI, score in the experimental condition as compared to the control condition.

Further, each of the Perfectionist groups will have a higher mean State Anxiety score in the experimental condition as compared to the control condition.

Hypothesis #3: Trait Anxiety, as measured by the STAI, will correlate moderately to strongly with the Discrepancy subscale of the APS-R among all participants in the study. However, a stronger correlation will be found in the experimental condition as compared to the control condition.

Hypothesis #4: Maladaptive Perfectionists will have a significantly higher mean Trait Anxiety score, as measured by the STAI, in both conditions (control and experimental). Further, the State and Trait Anxiety scores, as measured by the STAI, of Maladaptive Perfectionists will increase significantly more in the experimental condition than those of the Adaptive and Non-Perfectionist groups.

Hypothesis #5: Adaptive Perfectionists will show no significant increases in their mean Trait Anxiety score, as measure by the STAI, in the experimental condition as compared to the control condition.

CHAPTER THREE

METHOD

This is a quantitative, experimental study that will investigate the validity of a contextual basis of perfectionism with regard to its relationship with anxiety. This hypothesis will be confirmed if a significant difference exists in a specific context for individuals.

Participants

This study will sample approximately 240 volunteer introductory psychology students at a public university in the south central region of the United States. Participants will be sampled using a purposive sampling technique and will be assigned to one of two conditions: (1) a context-based perfectionism group (Context-P) or (2) a trait-based perfectionism group (Trait-P). The Context-P group (experimental condition) will consist of approximately 120 participants and the Trait-P (control condition) consist of approximately 120 participants. This population will be used because it is the most relevant for the academic context that is to be studied in this experiment.

Materials

Demographic Questionnaire. This is a survey that will gather important demographic data such as sex, age, race, and classification, GPA, and Major.

Scenario. The scenario that provided the stimulus for the experimental group was a one page, typed summary (approximately ten minutes in length) of a contextual situation involving their receiving the results of an exam, after having turned in a term paper (Appendix 1). The scenario was presented using guided-imagery techniques in slow, relaxing tone. It began by attempting to focus the students on the task at hand and some

relaxation breathing. Further, the scenario called attention to the instructor giving the students information about the term paper about which they were unaware prior to turning the paper in. This information detailed how the instructor wanted the students to write in a specific format and to include specific content in their paper. The scenario told the participants that they did not write in that format and did not include the one specific content in their paper. It also presented the participants with a situation in which they did not prepare for the type of exam they were preparing to take during that class period.

Scenario Survey. This survey was created in order to measure the degree of relevance, realism, and engagement of the participants. It is a self-report survey that consists of four items. Participants respond by choosing the degree to which they agreed with the item. This survey is found in Appendix 2. The items are (1) I felt engaged in the scenario of the guided imagery, (2) the scenario in the guided imagery was relevant to my academic life, (3) I identified with the scenario in the guided imagery, and (4) I was able to place myself in the scenario of the guided imagery. The responses ranged from one to five on a Likert scale with 1=not at all, 2=slightly, 3=moderately, 4=strongly, and 5=very strongly.

Almost Perfect Scale-Revised (APS-R; Slaney, et al, 1998). This scale consists of 23 items and has three subscales: High Standards, Discrepancy, and Orderliness. High Standards is a measure of the level of perfectionism and Discrepancy is a measure of maladaptiveness of perfectionism. The items are measured on a one to seven point Likert scale. Higher scores mean higher perfectionism and maladaptiveness. Cronbach's coefficient alphas for the subscales ranged from .85 to .92.

Multidimensional Perfectionism Scale (Hewitt & Flett, 1991a). This scale consists of 53 items and has three subscales: Self-Oriented Perfectionism, Others-Oriented Perfectionism, and Socially Prescribed Perfectionism. Self-Oriented Perfectionism measures the degree to which perfectionism is oriented inward and standards are applied to the self. Others-Oriented Perfectionism is the degree to which perfectionism is directed toward other people and high standards are applied to them. Socially Prescribed Perfectionism measures the degree to which one is concerned about how others evaluate them. The items are measured on a one to seven point Likert scale. Higher scores mean higher perfectionism overall or along the subscales. Internal reliability coefficients are .79 for Other-Oriented perfectionism, .86 for Socially-Prescribed perfectionism, and .89 for Self-Oriented perfectionism.

State-Trait Anxiety Inventory-Form Y (STAI; Spielberger, 1983). This instrument measures both state-based and trait-based anxiety. It consists of 40 items on a 4 point Likert scale. Twenty items comprise the state-based anxiety subscale (Form Y-1) and 20 items comprise the trait-based anxiety subscale (Form Y-2). The Form Y-1 subscale consists of 10 items worded positively and 10 items worded negatively. The reliability coefficients for this subscale range from $r=.91$ to $.93$ for college students. The Y-2 subscale consists of nine items worded positively and 11 items worded negatively. The reliability for this subscales ranges from $r=.90$ to $.91$ for college students. Total and subscale scores are computed by adding the rating for each item in that scale or subscale.

Procedures

Data will be collected on three different days over a one-week period at the end of the spring semester at the end of April. Time slots will be posted on a web site two weeks

prior to the first day of data collection with fifteen spaces open for each group. Each time period will be for thirty minutes. Participants will sign up for a time at their discretion, but will not be told whether they will be part of the experimental or control condition. After they sign up for a time, participants will be e-mailed the location with directions to where their group will meet.

Each condition's group times will alternate between experimental and control conditions on each day. On each day, there will be six groups from which students can choose. The times will range from 9:00 a.m. to 3:00 p.m. The same times were available on the remaining two days, but the experimental and control group times will be switched on the second day. For example, the 9:00 a.m. time on the first day will be a control condition, but on the second day it will be an experimental condition.

The control condition will take place in a conference room at a counseling clinic located off campus. The participants will be given a consent form, demographic questionnaire with instructions for filling out the surveys, and the MPS, APS-R, and STAI. As students arrive to the group they will be asked to take a seat and to read and sign the consent form. When all the participants arrive, they will be quickly guided through the protocol and then explained how to complete each questionnaire/survey. After they are completed, their protocols will be reviewed for completeness and they will be excused from the group. A debriefing sheet will be given to each participant as they are excused.

The experimental condition will take place in a university classroom located on the main campus. The participants will be given a consent form, demographic questionnaire with instructions for filling out the surveys, MPS, APS-R, STAI, and a survey regarding

the scenario. As participants arrived, they will be asked to read and sign the consent form. When all the participants are ready, they will be allowed to complete the demographic questionnaire and then they will be oriented to the protocol. The participants will then be given instructions with regard to the scenario and how to respond to the questionnaire. After that, the participants will be guided through the scenario. Immediately following the scenario, they will be asked to complete the protocol and each protocol will be checked for completeness before they are excused from the study. A debriefing sheet will be given to each participant as they are excused.

Data Analysis Plan.

Reliability and Validity: Cronbach's alpha and correlational analyses will be conducted in order to test reliability and validity estimates of the APS-R, MPS, and STAI

Hypothesis #1: A multivariate cluster analysis (K-means) will be conducted for three groups (dependent variables) with Standards and Discrepancy scores from the APS-R as the independent variables. Two 2x3 Analyses of Variance with Tukey's multiple comparison groups will be conducted for both Standards and Discrepancy as a dependent variable and condition (level-1 is control and level-2 is experimental) and perfectionism group (level-1 is Adaptive, level-2 is Maladaptive, and level-3 is Nonperfectionist) as the independent variables.

Hypothesis #2 and #4: A 2x3 Analysis of Variance with Tukey's multiple comparison groups will be conducted with State Anxiety as the dependent variable and condition (level-1 is control and level-2 is experimental) and perfectionism group (level-1 is Adaptive, level-2 is Maladaptive, and level-3 is Nonperfectionist) as the independent variables.

Hypothesis #3: A correlation analysis will be conducted using Trait Anxiety and Discrepancy as the variables.

Hypothesis #4 and #5: A 2x3 Analysis of Variance with Tukey's multiple comparison groups will be conducted with Trait Anxiety as the dependent variable and condition (level-1 is control and level-2 is experimental) and perfectionism group (level-1 is Adaptive, level-2 is Maladaptive, and level-3 is Nonperfectionist) as the independent variables.

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APPENDIX B
Consent Form

Informed Consent Form

Research being conducted at the University of Oklahoma, Norman campus

By signing this document, I am agreeing to participate in "Differences in the Relationship Between Anxiety and Perfectionism on the Basis of Context" being conducted by Zachary A. Borynack, M.Ed., under the supervision of faculty member Terry M. Pace, Ph.D., of the University of Oklahoma Department of Educational Psychology. The purpose of the study is to explore the relationship of trait/context and perfectionism. Specifically, this study examines whether context is predictor of the relationship between anxiety and perfectionism. Participation should require between 20 to 30 minutes of your time.

Your research packet includes an instructions page, demographic information sheet, and four additional surveys. Please read the instructions page and the instructions for each survey before completing it. Do not include your name or any other identifying information on anything in the research packet. When you are finished with the inventories, place them back in the envelope provided and return them to the researcher.

As there will be no identifying information on any of the surveys, your participation will remain confidential and your confidentiality will be maintained. All research materials will be stored in a locked file cabinet and will be destroyed after a period of no longer than five years. No risks are anticipated in your participation in this project. Should you become uncomfortable at any time while completing the inventories, you may discontinue your participation. Please feel free to let the investigator know if you have any concerns or questions. If you feel you could use some help to resolve problems due to perfectionism, the investigator can give you a list of counseling services. All participants will benefit from complete participation by receiving ½ hour of class credit and gaining information about the topic being investigated. Complete participation includes participating in the exercise and completing the 4 short self-reports. If you have any questions about your participation in this research project, you may contact Zachary A. Borynack at 325-2914 or Terry Pace at 325-5974. If you have any questions about your rights as a research participant you may contact the OU-NC Institutional Review Board at (405) 325-4757.

I understand that my participation in this research project is voluntary and I may withdraw from the study at any time, without any penalty. To participate, I understand that I must be 18 years of age or older. My participation in this study will be confidential and my identity will not be disclosed at any time. I will receive ½ hour of course credit for my participation in this study. However, if I am participating in this research project to obtain course credit and I decide to withdraw from participating, I understand that I will not receive the course credit associated with this research project.

I hereby agree to participate in the above-described research. I understand my participation is voluntary and that I may withdraw at any time without penalty or loss of benefits.

Signature _____ Date _____

APPENDIX C
Demographic Questionnaire (Control)

**Differences in the Relationship Between Anxiety and
Perfectionism on the Basis of Context**

Demographic Questionnaire

Age: _____

Sex (circle one): Male Female

Race: _____

Classification (circle one): Freshman Sophomore Junior Senior
Graduate

Major: _____ (if undeclared, write “undeclared”)

GPA: _____

Instructions

Please complete the three questionnaires provided in this packet labeled (Self Evaluation Questionnaire, APS-R, and MPS). Be sure to read the instructions for each questionnaire also.

APPENDIX D
Demographic Questionnaire (Experimental)

Differences in the Relationship Between Anxiety and Perfectionism on the Basis of Context

Demographic Questionnaire

Age: _____

Sex (circle one): Male Female

Race: _____

Classification (circle one): Freshman Sophomore Junior Senior
Graduate

Major: _____ (if undeclared, write "undeclared")

GPA: _____

Instructions

You will be presented with a scenario by using Guided Imagery. Please listen carefully to the following scenario and try to allow yourself to imagine yourself in the situation that will be described. The brief presentation will ask you to imagine thinking and feeling as you might if you were actually in the situation. When the guided imagery is complete you will be completing the four questionnaires provided in this packet labeled (Self Evaluation Questionnaire, APS-R, MPS, and Scenario Rating Scale).

Please listen to the SCENARIO.

After the scenario is presented, please follow the instructions below.

When completing the questionnaires use your thoughts and feelings about how you would respond to the situation in the scenario as a basis for choosing your answer. Be sure to read the instructions for each questionnaire also. **Now turn the page and complete** each of the questionnaires. Remember to base your answers on your **thoughts and feelings** of how you would respond to the scenario that you have just been presented.

APPENDIX E
Guided Imagery Scenario

Guided Imagery Scenario Script (The investigator will read the following script verbatim to all participants of condition 1 only):

I want everyone to take a few moments to get comfortable (pause for 15 seconds). I will be presenting you with a scenario through guided imagery. It is very important that you participate as fully as possible and try your best to imagine yourself in the scenario.

Everyone close your eyes and take a deep breath. We are first going to briefly do some relaxation breathing. During this part of the exercise, I want you to clear your mind of everything outside of this room. (Investigator has the group close their eyes and takes the group through 5 four-count breathing cycles counts slowly from 1 to 10. This should take about 3 minutes.)

Now that you are relaxed and focused on the task at hand, I want you to imagine that you are in your most important class of this semester, the class that you really need to make an "A" in. Recall the day of the week you have this class, imagine that it is now that day. Recall the time of day that you have this class. Imagine that it is that time of day. You are sitting in the chair you usually sit in during this class. Notice the environment around you in the classroom. Notice the sounds that you hear just before class begins. Notice what you are wearing. Visualize others in your class and the arrangement of the desks. Visualize the instructor and where he or she stands during the class.

Now, as a part of this class, imagine that your final term paper is due today and you will be taking your final exam today. Imagine you are looking at your paper and that you see other students taking out their term papers. You notice that yours is slightly different from other students' papers. You recall that this paper is worth 40% of your grade and you think about the large amount of time and work you put into this paper. You wished you had more time to work on it, though. Imagine you are looking through your paper, checking it for errors. It is a long paper, 15 pages in length. You notice a spelling error on page one and a grammatical error on page 5. There is a smudge on the cover, that you just now saw. At this point, your instructor steps to the front of the classroom to address the class. He or she reminds you of your papers that are due and informs you of some specific things that will be looked for in your paper. Though they are small things, you realize that you have not included them in your paper. Your instructor also reminds you that the format for your paper was to be single spaced. You realize that you double-spaced your paper. As your instructor is telling the class this, you look around and notice the looks on other students' faces. They seem calm and ready to turn their papers in. Imagine you are getting out of your chair to turn your paper in. Notice how you are feeling about this situation. Notice what you are thinking about this situation. You step to the front of the class and lay your paper on the instructor's desk. You make eye contact with the instructor. Notice your feelings and thoughts again. Now you move back to your chair.

The instructor gives the class instructions to remove everything from their desk, except a paper or pencil. You are about to take the final exam. You recall that this exam counts for 40% of your final grade, as does the final paper. The instructor begins to pass out the exams. A stack of exams is given to a student on one side of the class and a stack to a student on the other side of the class. When you receive the exam, you notice that more than half of the questions are essay questions and, though you prepared well for this exam, you prepared mainly for an objective/multiple choice exam. You also know that this instructor does not curve grades. Again pay attention to what you might be feeling (pause) and what you might be thinking (pause).

Now, open your eyes read the next set of instructions and complete your questionnaires. Pay close attention to each item, but don't spent too much time on any one item.

NOTES: In order to facilitate engagement in imagining the scenario, the guided imagery script will be read slowly, in a steady, calm voice, with 3-10 second pauses between each sentence and slightly longer pauses whenever there are directions to pay attention to feeling or thoughts.

APPENDIX F
State Trait Anxiety Inventory (STAI)

Sample Items from the State-Trait Anxiety Inventory

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

1. I feel calm.*
2. I feel strained.
3. I feel satisfied.*
4. I feel nervous.
5. I feel content.*

Instructions (Trait Anxiety subscale): A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement, but give the answer which seems to describe how you generally feel.

1. I feel nervous and restless.
2. I feel rested.*
3. I have disturbing thoughts.
4. I am content.*
5. I feel like a failure.

*reverse-scored items.

Note: Items are scored on scale of 1 to 4: 1=almost never; 2=sometimes; 3= often; 4=almost always.

APPENDIX G
Almost Perfect Scale—Revised (APS-R)

Instructions

The following items are designed to measure attitudes people have toward themselves, their performance, and toward others. There are no right or wrong answers. Please respond to all of the items. Use your first impression and do not spend too much time on individual items in responding. Using a pencil, please mark all of your responses on the computer answer sheet that is provided.

APS-R Scale

Respond to each of the items by using the scale below to describe your degree of agreement with each item. Fill in the appropriate number on the computer answer sheet that is provided. *DO NOT USE THE "0" OR ZERO COLUMN ON THE ANSWER SHEET.

Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

1. I have high standards for my performance. _____
4. I am an orderly person. _____
5. I often feel frustrated because I can't meet my goals. _____
6. Neatness is important to me. _____
7. If you don't expect much out of yourself you will never succeed. _____
8. My best just never seems to be good enough for me. _____
9. I think things should be put away in their place. _____
10. I have high expectations for myself. _____
12. I rarely live up to my high standards. _____
13. I like to always be organized and disciplined. _____
15. Doing my best never seems to be enough. _____
17. I set very high standards for myself. _____
19. I am never satisfied with my accomplishments. _____
21. I expect the best from myself. _____
22. I often worry about not measuring up to my own expectations. _____
23. My performance rarely measures up to my standards. _____
25. I am not satisfied even when I know I have done my best. _____
26. I try to do my best at everything I do. _____
27. I am seldom able to meet my own high standards for performance. _____
29. I am hardly ever satisfied with my performance. _____
31. I hardly ever feel that what I've done is good enough. _____
37. I have a strong need to strive for excellence. _____
39. I often feel disappointment after completing a task because
I know I could have done better. _____

APPENDIX H
Multidimensional Perfectionism Scale (MPS)

Sample Items from the Multidimensional Perfectionism Scale

Instructions: Listed below are a number of statements concerning personal characteristics and traits. Read each item and decide whether you agree or disagree and to what extent. If you strongly agree, circle 7; if you strongly disagree, circle 1; if you feel somewhere in between, circle any of the numbers between 1 and 7. If you feel neutral or undecided, the midpoint is 4.

Self-Oriented Perfectionism

1. When I am working on something, I cannot relax until it is perfect.
2. One of my goals is to be perfect in everything I do.
3. I never aim for perfection in my work.*
4. I seldom feel the need to be perfect.*
5. I strive to be as perfect as I can be.

Other-Oriented Perfectionism

1. I am not likely to criticize someone for giving up too easily.*
2. It is not important that the people I am close to are successful.*
3. I seldom criticize my friends for accepting second best.*
4. Everything that others do must be of top-notch quality.
5. It doesn't matter when someone close to me does not do their absolute best.*

Socially-Prescribed Perfectionism

1. I find it difficult to meet others' expectations of me.
2. Those around me readily accept that I can make mistakes too.*
3. The better I do, the better I am expected to do.
4. Anything I do that is less than excellent will be seen as poor work by those around me.
5. The people around me expect me to succeed at everything I do.

*reverse-scored items.

APPENDIX I
Scenario Rating Survey

GUIDED IMAGERY SCENARIO RATING SCALE

Circle the number to the right of the statement that corresponds with the degree to which you agree with the statement

	Not at all	Slightly	Moderately	Strongly	Very Strongly
I felt engaged in the Scenario of the Guided Imagery	1	2	3	4	5
The Scenario in the Guided Imagery was relevant to my academic life	1	2	3	4	5
I identified with the Scenario in the Guided Imagery	1	2	3	4	5
I was able to place myself in the Scenario of the Guided Imagery	1	2	3	4	5

APPENDIX J
Debriefing Page

DEBRIEFING

Differences in the Relationship Between Anxiety and Perfectionism on the Basis of Context

You have just participated in a study to determine whether anxiety is better accounted for in perfectionism based on a specific contextual or in general. This study examined the context of academics in perfectionism. A positive finding in this study would mean there is evidence that the effects of anxiety tend to be masked in perfectionists when the specific context is not taken into account. A negative finding in this study means that no difference was detected between the anxiety of perfectionists in general and academic perfectionists. A negative finding would therefore fail to support the hypothesis that a contextual basis for perfectionism exists.

Again, please feel free to let the investigator know if you have any concerns or questions. If you feel you could use some help to resolve problems due to perfectionism, the investigator can give you a list of counseling services. If you have any questions about your participation in this research project, you may contact Zachary A. Borynack at 325-2914 or Terry Pace at 325-5974. If you have any questions about your rights as a research participant you may contact the Office of Research Administration at (405) 325-4757.

APPENDIX K
Permission to use STAI



101 University Ave., Suite 200, Berkeley, CA 94704
415.863.0000 Fax 415.863.0001 www.mindgarden.com

Date March 14, 2003

To whom it may concern

This letter is to grant permission for Zachary Borynack

to use the following purchased copyright material:

Instrument. STATE-TRAIT ANXIETY INVENTORY

Author Charles D. Spelberger

for her/his thesis research.

In addition, 5 sample items from the instrument may be reproduced for
inclusion in a proposal or thesis

The entire measure may not at any time be included or reproduced in other published material

Sincerely

Mind Garden, Inc.

A handwritten signature in black ink, appearing to be "K. Borynack", written over a horizontal line.

APPENDIX L
Permission to use APS-R

Re: Permission to use APS-R

Page 1 of 1

Subj: Re: Permission to use APS-R
Date: 4/14/2003 11:42:03 AM Central Daylight Time
From: rslaney@psu.edu
To: Zborynack@aol.com
Sent from the Internet (Details)

Dear Zachary,

I remember you. You can use the APS-R for another year. I'm very much interested in the results of your cluster analyses. I am interested in the dv's you used but also the means and sd's for the APS-R in your clusters. Assuming you got three? We're assembling these with the idea of seeing if cutoff scores seem possible/reasonable.

Bob S.

Dr. Slaney,

Thank you so much for allowing me to use your instrument for a pilot study for my dissertation. I will send you some results if you like. Since, I have finished my pilot study, your permission expired and I was wondering if you would grant me further permission to use the APS-R again. I will complete my study during this calendar year.

Thanks again for all your help. The results looked really good...did a cluster analysis that worked excellent!!!!

Sincerely,

Zachary A. Borynack
University of Oklahoma
Counseling Psychology Doctoral Candidate

--

.....
Robert B. Slaney
Professor and Head
Department of Counselor Education, Counseling Psychology, and Rehabilitation Services
327 CEDAR
Penn State Univ.
University Park, PA 16802
<http://www.ed.psu.edu/cecpr/>
814-865-6643; fax: 814-863-7750
.....

Monday, April 14, 2003 America Online: Zborynack

APPENDIX M
Permission to use MPS



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North Tonawanda, NY 14120-0950
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APPENDIX N
Institutional Review Board Approval



The University of Oklahoma

OFFICE OF COMPLIANCE
HUMAN RESEARCH PARTICIPANT PROTECTION

April 7, 2003

Mr. Zachary A. Borynack
4127 Cove Dr.
Yukon, OK 73099

Dear Mr. Borynack:

Your research application, "Differences in the Relationship Between Anxiety and Perfectionism on the Basis of Context," has been reviewed according to the policies of the Institutional Review Board chaired by Dr. E. Laurette Taylor, and found to be exempt from the requirements for full board review. Your project is approved under the regulations of the University of Oklahoma - Norman Campus Policies and Procedures for the Protection of Human Subjects in Research Activities.

Should you wish to deviate from the described protocol, you must notify this office, in writing, noting any changes or revisions in the protocol and/or informed consent document, and obtain prior approval. Changes may include but are not limited to adding data collection sites, adding or removing investigators, revising the research protocol, and changing the subject selection criteria. A copy of the approved informed consent document(s) is attached for your use.

Should you have any questions, please contact me at 325-4757 or irb@ou.edu.

Sincerely,

A handwritten signature in cursive script that reads "Steven O'Geary".

Steven O'Geary, Ph.D.
Director, Human Research Participant Protection
Administrative Officer
Institutional Review Board - Norman Campus (FWA #00003191)

JSO
FY2003-305

cc: Dr. E. Laurette Taylor, Chair, Institutional Review Board
Dr. Terry Pace, Educational Psychology