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AN EXPLORATION OF DEFENSIVE PESSIMISM, EXPLANATORY STYLE, AND
EXPECTATIONS IN RELATION TO THE ACADEMIC PERFORMANCE OF
COLLEGE AND UNIVERSITY STUDENTS

By

Scott Richard Berry
B.A., Ball State University, 1997
M.A., Spalding University, 2000

A Dissertation
Submitted to the Faculty of the
Graduate School of the University of Louisville
in Partial Fulfillment of the Requirements
for the Degree of

Doctor of Philosophy

Department of Educational and Counseling Psychology
University of Louisville
Louisville, Kentucky

May 2007

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A Dissertation Approved on

April 2, 2007

By the following Dissertation Committee:

Dissertation Director

DEDICATION

This dissertation is dedicated to you.

Bless you in your struggles.

Thank you for the gold you bring to the world.

ACKNOWLEDGMENTS

I want to acknowledge many people for different reasons. First and foremost, I would like to thank my lover, best friend, soul mate, and spouse-- Gloria Berry. Thank you, Glo, for the patience, the support, accommodating my schedule, and showing your faith in me. You made an incredible difference in this process. You do so much for me and I appreciate you. I also want to express gratitude to Mom and Dad. Thank you for instilling a value in education, modeling good work ethic, and being supportive during this process.

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ABSTRACT

AN EXPLORATION OF DEFENSIVE PESSIMISM, EXPLANATORY STYLE, AND EXPECTATIONS IN RELATION TO THE ACADEMIC PERFORMANCE OF COLLEGE AND UNIVERSITY STUDENTS

Scott R. Berry

May 12, 2007

Researchers have studied the concepts of optimism and pessimism as traits, expectations, strategies, and styles of explaining outcomes. Explanatory style and the strategy of defensive pessimism are two of these areas. In general, optimistic explanatory style has been associated with better outcomes including academic performance. Some studies have found that pessimistic explanatory style has been associated with better academic outcomes. One suggestion in the literature was that defensive pessimism might explain the cases where pessimistic explanatory style is associated with better academic outcomes.

To evaluate this explanation, the Academic Attributional Style Questionnaire (AASQ), Revised Defensive Pessimism Questionnaire (DPQ), and Brief Symptom Inventory (BSI) were administered to 188 undergraduate and graduate students from five colleges and universities. Measures of academic achievement included official course and exam grade as reported by the instructor as well as self-reported GPA.

There were no differences in academic performance between groups that made more pessimistic explanations and those who made more optimistic explanations. There were no differences within the group of those with more pessimistic explanatory styles

regardless of level of use of defensive pessimism. Explanatory style was associated with expectations for course grade. There were no differences on outcome expectations or efficacy between defensive pessimists and low exam scorers. Defensive pessimism was associated with multiple psychological symptoms as measured by the Brief Symptom Inventory (BSI).

Further investigation to determine if encouraging a strategy defensive pessimism in those with more pessimistic explanatory styles would lead to improved performance. More research needs to be devoted to the study of the relationships among explanatory style, defensive pessimism, and expectations.

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CHAPTER I
INTRODUCTION

INTRODUCTION

The Chinese character for crisis superimposes the symbol of danger over the symbol for opportunity. Some individuals typify a crisis as a potentially uncontrollable situation with inherent danger while others view it as an opportunity for change. Individuals may exhibit patterns in how they view crises and other negative events as well as positive ones. Psychologists have long been interested in how individuals approach tasks and determine their influence or control over external circumstances. There has been interest in studying how and when people see their glasses as “half empty” or “half full.”

Researchers have studied these concepts of optimism and pessimism as traits, expectations, strategies, and styles of explaining outcomes. Multiple operational definitions and theoretical variations have been examined often in relation to outcomes in numerous domains. Explanatory style is a subset of this general research receiving substantial interest as evidenced by the amount of research in the literature.

Explanatory style is a person’s tendency to offer similar sorts of explanations for different outcomes in his or her life (Peterson, Buchanan, & Seligman, 1995). This style is described in terms of three dimensions: internal/external, global/specific, and stable/unstable and is generally looked at in terms of positive and negative events. Peterson and colleagues (1995) give clear descriptions of these dimensions. The first of

these dimensions focuses on whether the cause is attributed as internal (“It’s me”) versus external (“It’s someone else”). Another dimension of interest is stable (“It’s going to last forever”) versus temporary (“It’s short lived”). The final dimension of explanatory style is global (“It’s going to affect everything that happens to me”) versus specific (“It’s only going to influence this”).

Styles can be categorized as pessimistic and optimistic. A person is described as having a pessimistic explanatory style if negative events are explained as internal, stable, and global. In other words, “It’s me, it’s going to last forever, and it’s going to affect everything that happens to me.” A person with pessimistic explanatory switches dimensions when explaining positive events and attributes the event to external, temporary, and specific factors. For example, “It’s someone else or circumstances, it’s short lived, and it’s only going to influence this situation.”

A person with an optimistic explanatory style matches dimensions with positive and negative situations in a fashion opposite to the person with a pessimistic explanatory style. Good events are perceived as due to internal, stable, and global factors, whereas bad events are attributed to external, temporary, and specific factors.

Explanatory style has been studied in relation to various phenomena including academic achievement. In general optimistic explanatory style is associated with higher academic achievement, but there are some inconsistencies in this research. At times a pessimistic explanatory style has been found be associated with higher academic achievement. Beginning to explain these perplexing, anomalous findings was the focus of this work. The purpose was to understand when and why pessimistic explanatory style is associated with higher academic achievement. Satterfield, Monahan, and Seligman

(1997) suggested some possible explanations for this when they found results in the anomalous direction. The possible use of the strategy of defensive pessimism by their population was one of these suggested explanations. A second purpose of this dissertation was to understand what defensive pessimism's role might be when pessimistic explanatory style is correlated with higher academic achievement. Defensive pessimism is a cognitive strategy in which low expectations are set for performance despite a history of good performance in a specific domain. A person using this strategy plays out all scenarios that may happen and work hard to prepare the upcoming situation. This strategy leads to utilization of anxiety as motivation and subsequently good performance (Norem, 2001). Now a brief overview of the current study's hypotheses will be given.

In this study, there were several hypotheses about those with pessimistic explanatory styles. It was hypothesized that those with pessimistic explanatory styles will have lower expectations than those with more optimistic explanatory styles. It was hypothesized that within the pessimistic explanatory style group, those who utilize defensive pessimism will use their low expectations in order to achieve and will score higher on multiple dependent measures of current academic performance (exam grade, course grade) and past performance (self-report GPA) than those with pessimistic explanatory styles who do not use defensive pessimism. Some hypotheses focused purely on those utilizing defensive pessimism. It was hypothesized that those with defensive pessimism will have similarly low outcome expectations in relation to lower achievers in the sample. It was also hypothesized that those using defensive pessimism will have higher efficacy expectations in relation to the lower achievers in the sample. The procedure that was used to gather data to evaluate these hypotheses will be covered next.

The current approach to testing these ideas used questionnaires given to college students. Ranging from one week to three weeks before an exam, students were administered the Academic Attributional Style Questionnaire (AASQ) and the Revised Defensive Pessimism Questionnaire (DPQ) to serve as measures of explanatory style and defensive pessimism, respectively. The AASQ had positive academic events and expectation questions added to it. Students were also administered the Brief Symptom Inventory (BSI). This instrument was used to measure anxiety, depression, and other mental health factors of relevance. Students reported current GPA, expected grade on exam, and expected course grade. Other information regarding expectations was collected as well as demographic information. Participating students were asked to consent to the collection of their exam grade and course grade from their professor using a confidential procedure. This information was used for outcome measures of academic performance.

The significance of this study is both practical and theoretical. It is important to learn about the relationships between defensive pessimism and explanatory style for several reasons. People with pessimistic explanatory styles generally perform less well in comparison to people with optimistic explanatory styles. At times, people with pessimistic explanatory styles have been found to outperform optimists. If a better understanding of how people with pessimistic explanatory styles succeed is developed, this may help other people with these styles improve performance. Both people who use defensive pessimism and who make pessimistic explanations are likely to use low expectations. Defensive pessimists are able to use low expectations and succeed. Perhaps, there is something to be learned from defensive pessimists to use with those who have pessimistic explanatory styles to help them achieve despite low expectations.

A better understanding of the relationship between explanatory style, defensive pessimism, expectations, and academic achievement may lead to the improvement of interventions and prevention programs designed to improve academic achievement such as attribution retraining programs. When Bridges (2001) was researching explanatory style and academic achievement, he noted the implications of research in this area could lead to university learning centers identifying and treating at-risk students. Theoretically, this work may help researchers gain insight into the relationship of the theoretical constructs of explanatory style and defensive pessimism. This research may also help researchers better understand these cognitive constructs in light of a common denominator that pessimistic explanatory style and defensive pessimism share: low expectations.

IMPORTANT TERMS

Explanatory Style- A person's tendency to offer similar sorts of explanations for different outcomes in his or her life (Peterson et al., 1995). This style is described in terms of three dimensions: internal/external, global/specific, and stable/unstable and is generally looked at in terms of positive and negative events.

Attributional Style-A term most often used interchangeably with explanatory style. Attributional style may refer to dimensions other than internal/external, global/specific, and stable/unstable, although these are most commonly studied.. Some report at least 12 dimensions exist (Joiner, Jr. & Wagner, 1996). A few others considered by Joiner, Jr. and Wagner (1996) were controllable, intentionality, blame, and selfishness (p. 42).

Optimistic Explanatory Style-An explanatory style in which positive events are explained as internal, global, and stable whereas negative events are explained as external, specific, and temporary.

Pessimistic Explanatory Style- An explanatory style in which positive events are explained as external, specific, and temporary whereas negative events are explained as internal, global, and stable.

Internal vs. External-Dimensions of causality that are focused on whether the cause is perceived to be due to the individual (internal) or the due to environmental circumstances or someone else (external) (Peterson et al., 1995).

Stable vs. Unstable-Dimensions of causality that are focused on whether the cause is perceived as lasting (stable) or is temporary or short-term (unstable) (Peterson et al., 1995).

Global vs. Specific-Dimensions of causality that are focused on whether the cause is perceived as that it is going to affect other areas of one's life (global) or is limited to specific area or set of circumstances (specific) (Peterson et al., 1995).

Generality-A dimension that can be formed using the ASQ or AASQ scores on the global and stable dimensions.

CP-A composite score of all three dimensions for the explanation of positive events on the ASQ.

CN-A composite score of all three dimensions for the explanation of negative events on the ASQ or AASQ.

CPCN-A composite score made from subtracting the CN from CP

Learned Helplessness-This occurs when animals face a situation where they have no control. This lack of control is generalized to other situations as an expectation of helplessness and included deficits in motivation, cognition, and emotion (Peterson et al., 1995).

Defensive Pessimism-A cognitive strategy in which low expectations are set for performance despite a history of good performance in a specific domain. A person using this strategy plays out all scenarios that may happen and work hard to prepare the upcoming situation. This strategy leads to utilization of anxiety as motivation and subsequently good performance (Norem, 2001). Those who score high on the Defensive Pessimism Questionnaire (DPQ) are considered defensive pessimists.

Reflectivity-This is the thinking through process part of the definition of defensive pessimism. Reflectivity is one factor from the DPQ that Norem uses in her research for exploratory purposes.

Pessimism-This is the other factor from the DPQ. It focuses on negative expectations for situations. Norem uses this score in her research for exploratory purposes

Aschematic-Those who score in the middle range on the DPQ are considered aschematic for defensive pessimism and strategic optimism.

Strategic Optimism-A cognitive strategy for someone who does not feel anxious about performance in a certain domain, sets high expectations, and avoids thinking about the performance (Norem, 2001). Persons using this strategy prepare and do well. Those who score in the lower range on the DPQ are considered strategic optimists.

CHAPTER II

LITERATURE REVIEW

INTRODUCTION

Two lines of research led to the development of the conceptualization, discussion, and investigation of explanatory style: attribution theory and learned helplessness theory. An attribution is a causal explanation for an event. Heider (1958) described people as “naïve psychologists” that seek causal explanations for outcomes of their behavior. Other psychologists also explored aspects of what became the general field of attribution theory. Kelley and Michela (1980) present a general model for the field of attribution theory. They also acknowledge that there are not one, but several types of attribution theories. The model looks at the sequential process of antecedents followed by attributions which then has consequences (p. 459). The process flows as follows:

Antecedents → Attributions → Consequences

The antecedents focus on information, beliefs, and motivation about a behavior that lead to a person inferring its cause, thus making an attribution. The consequences side of the model focuses on how the attributions affect behavior, expectations, and emotion.

Within the attribution field, there were two main focuses of research. Those within social psychology focused on the link between antecedents and attributions (Weiner, 1990). This sub-area of study is labeled *attribution* theories by Kelley and Michela. The process of interest in attribution theories is of how circumstances affect attributions that

are made by individuals. The second focus came from within personality psychology and the study of individual differences (Weiner, 1990). This focus is concerned with the second half of the general model: the link between attributions and their consequences. Kelley and Michela refer to this sub-area of study as *attributional* theories.

To sum up, attribution theories focus on how circumstances affect the forming of attributions and attributional theories focus on the effects of the attributions. Both theories are concerned with attributions made by people and assume that causal attributions play a central role in behavior (Kelley & Michela, 1980)

Two of the key figures in the study of attribution processes are Bernard Weiner and Harold Kelley. The bulk of Kelley's work is primarily associated with the antecedent and attribution link portion of the model, whereas Weiner's model of achievement motivation focuses on the consequences of attributions. Martinko and Thomson (1998) give solid overviews of Kelley's attributional cube and Weiner's achievement motivation model. Let's first turn to a brief look at Kelley's model.

In theorizing about how individuals make attributions about others, Kelley looked at levels of three types of information across three general classes of causation. The three types of information are consensus, consistency, and distinctiveness. The three general classes of causation are person, entity/stimulus, and situation (Martinko & Thomson, 1998). Using these six concepts, Kelley formed a three by three cube in which each cell formed by information and class of causation can be rated as high or low.

	Person	Stimulus (Entity)	Situation
Consensus	high/low	high/low	high/low
Consistency	high/low	high/low	high/low
Distinctiveness	high/low	high/low	high/low

Consensus refers to whether or not others display the same behavior in the same situation as the individual in question (Martinko & Thomson, 1998). If others frequently display the same behavior in the same situation, then the behavior is considered high for consensus. Consistency is a within-person variable. It examines how typical a particular person's behavior is for the given situation. Consistency would be high if the person has usually performed the same behavior in the same situation (Martinko & Thomson, 1998). Distinctiveness looks at the individual's behavior in different situations. If the person's behavior extends as a general rule to other situations, then it would be low on distinctiveness (Martinko & Thomson, 1998).

These three types of information are used to determine whether the cause of a specific behavior is attributed as being due to the person, the stimulus (environment), or the situation (the specific set of events). Let's look at the example of a student getting into a physical fight in a classroom. If the consensus is low, consistency is high, and distinctiveness is low, then the most likely attribution will be that the person is the cause. In other words, if others are not getting into fights in the classroom (low consensus), the student has been in other fights in this class (high consistency), and if the student gets in fights in lots of other situations (low distinctiveness), the cause is attributed to the specific student.

If the consensus is high, consistency is high, and distinctiveness is high, then the most likely attribution will be that the stimulus is the cause. For example, there are several others in the class getting into fights (high consensus), the student has been in other fights in this specific class (high consistency), and the student is not aggressive in other situations (high distinctiveness). The likely attribution here is that there is something about the stimulus, the specific class, that is causing the fighting behavior.

If the consensus is low, consistency is low, and distinctiveness is high, then the most likely attribution will be that the stimulus is the situation, or specific set of events leading to the behavior. This attribution could be made when other students in the class are not getting into fights (low consensus), the student has never fought in this specific class before (low consistency), and the student does not get into physical altercations in other situations (high distinctiveness). This attribution may be based on something unusual that happened to the student that day or something rare occurring in the classroom that day.

Kelley's work gives rules for general classes or attributions, but not how the information leads to specific attributions (Martinko & Thomson, 1998). Theory and research by Kelley does not look at individual differences in the person, such as effort versus ability distinctions in causes attributed to the person (Martinko & Thomson, 1998). Personality theorists such as Weiner did consider such factors.

Martinko and Thomson (1998) also gave an overview of Weiner's achievement motivation model. The focus in Weiner's model rests primarily with concerns about how an individual explains causes of his or her own behavior. A basic tenet of the model is that attributions for success and failure influence affect, behavior, and future expectations (Martinko & Thomson, 1998). This model in particular is more relevant to the current

proposed study as the focus will be on individual explanations that individuals make about themselves. Weiner initially proposed two underlying dimensions for attributions: locus of causality and stability. Abramson, Seligman, and Teasdale (1978) later added globality.

The locus of causality refers to the degree to which a person believes an outcome was caused by his or her own action. If it is attributed to self, it is described as internal, whereas an external attribution looks to factors outside the self such as environmental influences (Martinko & Thomson, 1998). The stability dimension looks at whether the cause is stable over time. For example, ability is often considered stable in that it is assumed not to change over time. Luck and effort are examples of unstable causes. The globality dimension focuses on the degree to which the cause of the outcome generalizes to other situations. If someone believes they are not a good dancer, this would be a more global attribution, than if someone believes they are only not skilled at square dancing.

Weiner uses these concepts of locus of causality, stability, and globality to help shape his achievement motivation model. For example, if someone attributes an outcome to an internal, unstable, and specific cause such as effort, the person is more likely to expect success in the future since the cause is changeable, not lasting, and limited to one area (Martinko & Thomson, 1998). These dimensions will be explored further following a discussion of learned helplessness and how they are related to attributional or explanatory styles. Next, the historical context of the second line of important research that led to explanatory style will be explored.

The roots of explanatory style also grew, in part, out of research done on learned helplessness. Seligman working with various colleagues (e.g., Overmier & Seligman,

1967; Seligman & Maier, 1967) studied the learned helplessness phenomenon in dogs. Researchers noted that dogs that were shocked and allowed to escape from the situation did so. Other dogs were first put in situations where they could not escape shock then placed in situations where escape from the shock was possible. These dogs, however, did not try to escape. Researchers concluded that dogs had learned to be helpless after determining that nothing they did had an impact on the presence of shocks. The dogs then generalized this expectation to an escapable situation. Learned helplessness lead to deficits in motivation, cognition, and emotion (Peterson et al., 1995).

Lines of research evaluating this process in human subjects were conducted. The original learned helplessness model was not complex enough to explain human behavior (Peterson et al., 1995). A reformulated model of learned helplessness (Abramson, et al., 1978) was developed. This model incorporated the dimensions in explanatory style that are now used: external/internal, stable/unstable, and global/specific.

In general, explanatory style is "...one's tendency to offer similar sorts of explanations for different events. We can identify a style only by looking across different explanations; to the degree that individuals are consistent, we can sensibly speak of them as showing a style of expression" (Peterson et al., 1995, p. 1). More precisely explanatory style is an individual's characteristic way of explaining positive and negative events on three dimensions: internal/external, stable/temporary, and global/specific (Peterson et al., 1995).

Peterson and colleagues (1995) give clear descriptions of these dimensions. The first of these dimensions focuses on whether the cause is attributed as internal ("It's me") versus external ("It's someone else"). Another dimension of interest is stable ("It's going

to last forever”) versus temporary (“It’s short lived”). The final dimension of explanatory style is global (“It’s going to affect everything that happens to me”) versus specific (“It’s only going to influence this”).

Styles can be categorized as pessimistic and optimistic. A person is described as having a pessimistic explanatory style if negative events are explained as internal, stable, and global. In other words, “It’s me, it’s going to last forever, and it’s going to affect everything that happens to me.” A person with pessimistic explanatory switches dimensions when explaining positive events and attributes the event to external, temporary, and specific factors.

A person with an optimistic explanatory style matches dimensions with positive and negative situations in a fashion opposite to the person with a pessimistic explanatory style. Good events are perceived as due to internal, stable, and global factors, whereas bad events are attributed to external, temporary, and specific factors.

Various outcomes have been found to correlate with optimistic and pessimistic explanatory styles. Two meta-analyses (Joiner & Wagner, 1995; Sweeney, Anderson, & Bailey, 1986) conclude that pessimistic explanatory style is correlated with depression. The first analysis focused on college students, psychiatric depressives, and non-psychiatric adults, whereas the second focused on children and adolescents. So, it appears the relationship holds for age, gender, and sample type.

Beyond depression, explanatory styles have also been related to other outcomes such as health (Buchanan, 1995; Peterson, 1995; Peterson, 2000) and happiness (Peterson et al., 1995). Optimistic explanatory style is associated with higher reported marital quality (Fincham, 2000). Other areas explanatory style is linked to include athletic performance

(Peterson, 1990; Rettew & Reivich, 1995) and work success (Corr & Gray, 1995; Schulman, 1995).

A pessimistic explanatory style has also been associated with worse academic achievement than an optimistic explanatory style, but not in all situations (Gibb, Zhu, Alloy, & Abramson, 2002). In some studies a pessimistic explanatory has been associated with better academic performance than an optimistic explanatory style (e.g., Houston, 1994; LaForge & Cantrell, 2003; Satterfield et al., 1997).

Explaining these perplexing, anomalous findings was the primary focus of this work. The purpose was to understand when and why pessimistic explanatory style is associated with higher academic achievement. Later the strategy of defensive pessimism will be explored. This study was guided by the following research questions:

- 1) When and why is pessimistic explanatory style associated with higher academic achievement?
- 2) What might the role of defensive pessimism be when pessimistic explanatory style is correlated with higher academic achievement?

So, when and why is pessimistic explanatory style associated with higher academic achievement? To begin, an examination of the instruments most commonly used to measure explanatory style will be made. Then, an overview of the research associating explanatory style and academic achievement will be presented. This will be followed by a look at the measurement of explanatory style and a more in depth review of these studies.

Many researchers have explored the relationship between explanatory style and academic achievement. Most have found support (Kamen & Seligman, 1985; Nolen-

Hoeksema, Girgus, & Seligman, 1986; Peterson & Barrett, 1987; Peterson, Smith, & Pintrich, 1988; Villanova, Peterson, & Kryger, 1988) or mixed results with partial support (Henry, Martinko, & Pierce, 1993; Musgrave-Marquart, Bromley, & Dalley, 1997; Petiprin & Johnson, 1991; Ritchie, 1999; Schulman, Seligman, Kamen, Oran, Priest, & Burk, 1990; Sinkavich, 1994) for this relationship in the predicted direction, that is that pessimistic explanatory style is associated with lower academic achievement. A few have found no support for the relationship in their studies (Bridges, 2001; Fazio & Palm, 1998; Ralph & Mineka, 1998; Tiggerman & Crowley, 1993). More interestingly, a few (Belgrave, Johnson, & Carey, 1992; Houston, 1994; LaForge & Cantrell, 2003; Robertson, 1993; Satterfield et al., 1997) have found some support for the relationship between explanatory style and academic achievement in opposition to the predicted direction. In other words, pessimistic explanatory is associated with higher academic achievement in these studies. Bridges (2001) and Gibb and colleagues (2002) pointed out the mixed nature and inconsistency of results in this area. Studies have varied in terms of populations, measures, method, statistical approaches, and other considerations. Next an examination of the instruments commonly used to measure explanatory style in academic achievement studies will be made, followed by an in depth look at the aforementioned studies.

EXPLANATORY STYLE

Measurement of Explanatory Style in Academic Studies: The ASQ and AASQ

To better understand the results of studies exploring explanatory style, the main instruments used to measure this in academic achievement studies must be understood. The two primary measures of explanatory style have been the Attributional Style

Questionnaire (ASQ; Peterson, Semmel, von Baeyer, Abramson, Metalsky, & Seligman, 1982) and the Academic Attributional Style Questionnaire (AASQ; Peterson & Barrett, 1987). The ASQ presents subjects with hypothetical good and bad events and then the participant is presented with four questions. The first question asks for one major cause of why the event happened. The second, third, and fourth questions related to the various dimensions of explanatory style. The participant rates the degree to which the cause is internal/external, stable/unstable, and global/specific on a 7-point scale. Composite scores may be obtained for explanations for bad events, explanations for good events, and the difference between these two scores. Composite scores may also be calculated for each dimension and further divided into composite dimension by positive or negative event.

To obtain the composite for explaining negative events (CN), each item containing a bad event is summed and divided by the total number of events. The best score for CN is the lowest score (i.e., the most optimistic). The same procedure is used to determine the composite for explaining positive events (CP), but by scoring only items related to positive events. The best score for CP is the highest score (i.e., the most optimistic). The composite for positive minus composite negative (CPCN) is calculated by subtracting CN from CP.

To score the internal negative (CI-) dimension, the answers to the second question under each bad event are summed and divided by total number of bad events. For the internal positive (CI+), the second question is summed for each positive event and divided by total number of positive events. These same scoring procedures apply for stable negative (CS-), stable positive (CS+), global negative (CG-), and global positive

(CG+) with each stable dimension applying to the third question for the appropriate scenario and each global dimension applying to the fourth question.

Peterson and colleagues (1995) mention several scores that can be produced from an ASQ administration. Composites of the dimensions of interest in explanatory style can be made: composite internal/external (CI), composite stability/temporary (CS), and composite global/specific (CG). Some researchers have combined the average from CS and CG to form a composite-generality, which some have focused only on a specific domain of the ASQ: interpersonal or achievement (e.g., Houston, 1994). The most commonly reported scores are from the composite for explaining negative events (CN), the composite for explaining positive events (CP), and CP minus CN (CPCN).

The AASQ (Peterson & Barrett, 1987) is a modified form of the ASQ, which is focused purely on 12 negative academic events. Thus, only CN and dimensional scores are available from this measure. The AASQ will be used in this study because of the increasing recognition of the notion of specific vulnerability calls for explanatory style to be measured in a specific domain (Abramson, Metalsky, & Alloy, 1989).

Next, studies will be reviewed in depth organized by the level of support for the relationship between pessimistic explanatory style and lower academic achievement or optimistic explanatory style and higher academic achievement. The rationale for using this framework is that there is no apparent pattern for different results based on measure of explanatory style, population, achievement measure, or method. First studies proving the clearest support for the general pattern in the research will be reviewed followed by studies that had mixed results showing partial support for this relationship. Then, studies

providing little or no support will be examined with studies provided support contrary to the general findings finishing up the review.

Studies Providing Support

Several studies have found support for the relationship between explanatory style and academic achievement. The first of these was an unpublished work by Kamen and Seligman (1985; as described in Peterson, 1990). They administered the ASQ to 175 upper level undergraduate students at the beginning of an academic year and collected the students' GPAs at the end of the year. Explanatory style was significantly associated with lower GPAs at the end of the year ($r = -.19, p < .01$). Even when ability measures (i.e., SAT score, College Entrance Examination Board achievement tests, high school rank) were held constant, explanatory style continued to predict academic performance above ability.

Nolen-Hoeksema and colleagues (1986) conducted the first published study in the area. A children's version of the ASQ, the CASQ, was administered to 168 elementary students at the beginning of the school year. The California Achievement Test (CAT) was taken one month after the CASQ. Explanatory style predicted performance on the CAT ($r = -.26, p < .05$).

In line with the previous work by Kamen and Seligman (1985), Peterson and Barrett (1987) studied the relationship between explanatory style and academic achievement in college students. They used a modified version of the ASQ, which focused on 12 negative academic events. This was the first study to use the AASQ. The AASQ was administered to a group of 87 freshmen at the beginning of an academic year. The Beck Depression Inventory was used as a measure of depressive symptoms and

SAT scores as measures of ability were used as covariates. At the end of the academic year, GPAs were obtained. Students who made pessimistic explanations for bad academic events received lower grades even when ability, depression, and gender were used as covariates ($r = -.28, p < .02$). The zero order correlation between explanatory style composite for explaining negative events (CN) and GPA was significant ($r = -.36, p < .01$). Peterson and Barrett also compared the mean GPAs of the top and bottom quartiles of explanatory style, which were 2.62 and 1.99, respectively. The instrument used in the study, the AASQ, which is described above, was to be used by some, but not all researchers who followed and studied the same phenomenon.

Two other unpublished works also provided support. Peterson and colleagues (1988; as described in Peterson, 1990) gave the AASQ to 121 abnormal psychology students and collected their course grades at the end of the year. Explanatory style (CN) was associated with a lower final course grade ($r = -.38, p < .0001$). Villanova and colleagues (1988; as cited in Peterson, 1990) administered the AASQ to 60 introductory psychology students and found that explanatory style (CN) predicted academic achievement ($r = -.39, p < .005$).

After Peterson's 1990 review of 13 studies related to explanatory style and athletic and academic achievement, he concluded that pessimistic explanatory style is associated with poor performance. The research to follow began to paint a less clear picture after this work. The bulk of research supporting a connection between explanatory style and academic achievement were published or written at or prior to 1990. Now the studies with more complex and mixed results with regard to the relationship between explanatory style and academic achievement will be examined.

Studies with Mixed Results

Schulman (1995) reviewed results from a multi-part study that he and his colleagues (Schulman, Seligman, Kamen, Butler, Oran, Priest, & Burke, 1990) reported in an unpublished manuscript. In one part of this study, the ASQ was given to 289 college freshmen at the beginning of the first semester. High School Rank, SAT score, and achievement test scores were collected from the university Admissions Committee in the form of a weighted measure averaging the three measures to form a predictive index (PI). At the end of the semester, GPA was collected. Composite for explaining positive events (CP) of the ASQ and PI interacted to significantly predict GPA. Those who scored above the GPA predicted by the PI were significantly more optimistic explanations (CPCN and CP) than those who scored below the prediction (CPCN: $t = 2.3, p < .02$; CP: $t = 2.8, p < .006$). There were no difference in CN scores, however, and explanatory style did not correlate with GPA. The authors of this study speculated that their results did not replicate the results of previous studies because the freshmen students did not have enough negative academic experiences for the diathesis model to be predictive.

In another part of this study, Schulman and colleagues (1990) replicated their first study with 175 college upperclassmen that were enrolled in abnormal psychology. The sample was a mix of sophomores, juniors, and seniors. The composite for positive minus composite negative (CPCN) correlated significantly with GPA ($r = .23, p < .05$) as well as both CN ($r = -.19, p < .01$) and CP ($r = .22, p < .01$). A t-test was also conducted to compare the best GPA quartile versus the lowest GPA quartile on ASQ scores. CN ($t = 2.1, p < .04$) and CPCN ($t = 2.5, p < .02$) were significantly better for the best GPA quartile, whereas there were no significant differences in CP. This latter finding prevents

this study from being classified as clear support for this review. The authors also note that explanatory style may have been a stronger predictor in a sample with a wider distribution of talent compared to this group from a selective university.

A third part of the study conducted by Schulman and colleagues was also conducted at a highly selective site, West Point. The authors noted that the average SAT of the individuals at officer training school is 1200. The ASQ was given to 1,184 participants at the beginning of summer before classes. CPCN ($F = 3.7, p < .03$) and CN ($F = 5.3, p < .01$) both significantly predicted first year GPA when SAT was partialled out. The ASQ scores did not correlated with first year GPA, however. T-tests were also conducted to compare dropouts of boot camp or classes to those who did not drop out. A more pessimistic explanatory style (CPCN) significantly predicted dropouts ($t = 2.1, p < .02$), but CP and CN did not predict dropping out at a significant level. .

Schulman (1995) reflected on the studies he reviewed and suggests the attributional reformulation of the learned helplessness theory is related to academic achievement. The underlying rationale is that those who are optimistic in explanatory styles are less likely to give up and more likely to persist, which should increase their chances of success.

Petiprin and Johnson (1991) were interested in the effects of gender, item difficulty, and explanatory style on academic performance in a sample of undergraduate students. The ASQ was used and the researchers used CPCN to divide 104 undergraduate students into two groups based on the median score. These groups were labeled self-serving (i.e., optimistic) and self-derogating (i.e., pessimistic). The students were also given a Sequential Number Completion Test which was developed for the study to aid in

one the authors' goals of minimizing effects of previous learning. Two forms were used, Form A had difficult items and moderate items and Form B had easy items and moderate items. An examination of the means showed that self-serving styles ($M = 2.51$) performed better than those with self-derogating styles ($M = 2.09$). A 2 x 2 (Attributional Style x Experimental Group x Gender) analysis of variance was conducted. No two-way interactions were significant, the three way interaction between gender, attributional style, and experimental group was significant, $F(1, 131) = 4.35, p < .039$. Post hoc analyses revealed the only significant difference between self-serving and self-derogating groups were for men in the easy condition.

A study examining explanatory style as a predictor of success in a first computer science course was conducted by Henry and colleagues (1993). The ASQ was given to students ($n = 72$) at the beginning of the year and then final grade was obtained. Those who scored above the median on CPCN and above the median on CP were defined as optimists and those below the median of the CN were labeled with pessimistic explanatory styles. The CN was not related to course grade ($r = -.12, p = .24$), but CP ($r = .26, p = .07$) and CPCN ($r = .24, p = .08$) were marginally significant ($p < .10$) and related to higher grades. The CP was the most useful measure in this study as it also showed that more than 80% of students with A's scored above the mean on this measure. The authors concluded that the study provided moderate support for the relationship of explanatory style and academic achievement. T-tests compared students above and below the means on CP and CPCN on final grade. There was a marginally significant difference between groups on CP ($t = 1.87, p < .10$), but no difference on CPCN.

A study conducted by Sinkavich (1994) also had mixed results and reflected some support. The ASQ was administered to students from 3 sections of educational psychology courses ($n = 45$). A final exam was used as the achievement measure. A regression with final exam as the criterion was run. Explanatory style (CPCN) was not part of the first predictor, but was part of the final model, which explained 41% of the variance in final exam performance. CPCN and final exam score were not significantly correlated ($r = -.14$).

Musgrave-Marquart and colleagues (1997) studied several variables in relation to academic achievement including explanatory style. The AASQ and several other measures were administered to undergraduate psychology majors ($n = 161$) with a mix of upper and lower level students. Cumulative GPA was also obtained. They did not find a significant relationship between scores on the AASQ (CN) and cumulative GPA ($r = -.12$), although academic explanatory style was part of a significant regression equation in predicting GPA. The authors did find a trend for more pessimistic explanatory styles to be associated with lower GPAs, but it was not significant.

Ritchie (1999) gave the AASQ to students from 2-year community/technical colleges ($n = 181$) as part of his dissertation research. The study used self-report grades and SAT score. An average CN of > 5 was defined as high while CN less than 3.5 was defined as low. A regression was conducted with gender and age partialled out. The relationship between explanatory style and academic achievement with was only significant for females ($p = .01$) and white females ($p = .0218$) in the traditional age group (18-22 years).

Studies Providing Little or No Support

Tiggerman and Crowley (1993) studied explanatory style using the AASQ. This version of AASQ had only 9 hypothetical academic events. Students in a behavioral research methods course ($n = 141$) completed the AASQ at the beginning of the class and five months later they were asked about their causal attributions for a grade on an exam. Some also had to re-take the final examination later. A stable negative (CS-) and global negative (CG-) explanatory style was not related to outcome of these re-examinations. Bivariate correlations were calculated with performance. Internal negative (CI-) was not significantly correlated with performance ($r = .20$). Composite generality also was not significantly correlated with performance ($r = .03$).

Ralph and Mineka (1998) used a revised version of the ASQ (i.e., the one used by Needles & Abramson, 1990). They focused on the composite-generality. Undergraduate introductory psychology students ($n = 141$) were administered the ASQ. A grade on a mid-term exam was also obtained. The researchers were interested in other hypotheses, but provided correlational data on composite-generality and exam grade, which was not significant ($r = .02$).

Other studies have not found support for the relationship between explanatory style and academic achievement. Fazio and Palm (1998) used upper level undergraduates ($n = 91$) and administered the ASQ, the Center for Epidemiologic Studies Depression Scale, and collected cumulative GPAs. Significant correlations were found between explanatory style (CPCN) and depression as well as depression and GPA. There was not a significant correlation between explanatory style and GPA ($r = .06, p > .05$). An explanation offered by the authors for lack of significant results was the restricted range

of GPAs. The majority of GPAs were 2.5 or higher and only 2 were lower than 2.0. These authors suggested that associations among explanatory style, depression, and academic achievement might vary depending on class rank of students since their sample consisted mainly of junior and senior students.

Bridges (2001) administered the ASQ to freshman and sophomore undergraduates in introductory psychology courses ($n = 127$). The total score on three multiple-choice exams were combined to form the achievement dependent variable. Correlations between explanatory style and academic achievement were not significant, nor were they in the direction expected (CP: $r = -.08$, CN: $r = .06$, CPCN: $r = .14$).

One of the general research questions for this work was: When and why is pessimistic explanatory style associated with high academic achievement? To further explore this question, the studies with the aforementioned anomalous findings will be discussed.

Studies with Results in Opposite Direction

A few studies have found better academic outcomes for those with more pessimistic explanatory styles or within dimensions of the explanatory style consistent with pessimistic explanations. Belgrave and colleagues (1992) investigated the relationship between explanatory style to self-esteem and academic performance in Black high school ($n = 46$) and college students ($n = 43$). They focused on the ASQ dimensions of composite-internal/external (CI) and composite stability/temporary (CS) and further divided these composites for positive and negative events results in six scores (CI, CI+, CI-, CS, CS+, and CS-). The ASQ and self-report GPA were collected concurrently. High school students and college students had the same pattern of results. In the college

sample, students who felt that causes of negative events were stable had lower grade point averages ($r = -.26, p < .05$). Students who made internal attributions for positive events also had lower grade point averages ($r = -.35, p < .01$). The latter finding is inconsistent with most literature. Belgrave and colleagues suggest this may be due to the African philosophical focus on “We,” which would result in the recognition of the contribution of others to the success and less emphasis on the individual role.

In an unpublished Master’s thesis Robertson (1993) administered the ASQ to 95 ninth through twelve graders and cumulative GPA was obtained from records. The sample included 36 Native Americans and 59 Caucasians. Pessimistic explanatory style (CN) was unrelated to achievement for Caucasians, but, surprisingly, increasing pessimistic explanatory style was associated with increasing academic achievement among Native Americans when controlling for depression ($r = .33, p < .05$). The author suggested that perhaps pessimistic explanatory styles serve to enhance motivation for achievement in certain minority groups.

Houston (1994) used the ASQ and results of exams to measure explanatory style and academic achievement, respectively. Explanatory style was defined using composite-generality, but data for CS (composite stability/temporary) and CG (composite global/specific) were reported separately. She studied undergraduate students in Great Britain.

Houston reported the results of three different related studies. All students were administered the ASQ at the beginning of the year. In the first study, students ($n = 67$; mean of 18.8 years) volunteered to take a voluntary mid-term. Composite-generality correlated positively with performance ($r = .279, p < .05$). Those who made failure

achievement attributions to global and stable causes tended to do well. They also were more pessimistic in anticipating performance. The author notes that the sample was made up of volunteers.

Houston's second study focused on the relationship between composite-generality and mandatory end of term test. Volunteers for the first study came from this group ($n = 165$; mean of 23 years; mode of 18 years). There was a small, but significant correlation between explanatory stability and performance ($r = .127, p = .054$). For the mid-term volunteers, there was significant partial correlation (accounting for depression) between composite-generality and performance with the high generality group performing better than the low generality group ($r = .242, p = .035$). For those who did not participate in the first study, there was no relationship between attributional style and performance

In the third study students received information about an average score on a test for the population and for undergraduates. The participants ($n = 44$; mean age 20.7 years) completed an aspirations questionnaire. They then receive false feedback by receiving a score 19 points lower than they thought they would score.

This study found that students who made stable and to some extent global attributions for negative events, tended to perform better. These components of explanatory style are more consistent with a pessimistic explanatory style. The author suggested that one possibility may be that since only a small percentage of British students attend university, especially the sample used, which was at an "old university," that is may due to the high achieving nature of the sample. The author concluded "gloomy, but smarter" as indicated by the title of the article. There was a significant correlation between IQ score and composite-generality ($r = .355, p = .018$). The high

generality group again outperformed low generality group. CS ($r = .483, p = .001$) was more strongly correlated to IQ than composite-generality. Further a score was calculated based on grades and correlated significantly most with CS ($r = .343, p = .025$), but also with composite-generality ($r = .322, p = .037$).

Satterfield and colleagues (1997) conducted another such study. In their longitudinal study the ASQ was given to law students ($n = 387$) on the last day of orientation and achievement measures were collected over a 3-year period. The study sought to find out if explanatory style could predict law school achievement as measured by multiple dependent variables beyond LSAT and undergraduate GPA.

The researchers predicted that an optimistic explanatory style would be associated with a higher law school GPA, while pessimistic explanatory style would interact with stressors of law school to be associated with lower GPAs. After running zero-order correlations and a multiple regression on the full sample, results showed more pessimistic explanatory styles were associated with higher cumulative GPAs. CPCN was significantly correlated with cumulative GPA ($r = -.125, p < .05$), as was CP ($r = -.135, p < .05$). In both cases, the more optimistic the explanation, the lower the cumulative GPA was. CN was not significantly correlated to cumulative GPA ($r = .05$).

The researchers then trichotomized the sample to test the robustness of their findings. Students who were more than one standard deviation above the mean on CN were upper third (pessimists) for that measure, while those one standard deviation below mean were lower third (non-pessimists). This same dividing principle was applied to CP with upper third being optimists and lower third being non-optimists. The middle groups for CP and CN were labeled as midrange.

Within CN, Non-pessimists had more C's than CN midrange ($t = 6.244, p = 0.000$) and pessimists ($t = 3.501, p = 0.006$). Non-pessimists also had a lower GPA than pessimists ($t = 2.914, p = 0.015$). There was no difference between pessimists and CN midrange on number of C's or GPA. This suggests that law school "C" students tend to be non-pessimists, while the higher achievers were pessimists or mid-range on pessimistic explanatory style (Satterfield et al., 1997).

Within CP, Non-optimists outperformed optimists ($t = 3.270, p = 0.008$) and CP Midrange ($t = 2.331, p = 0.042$) on GPA. Optimists had more C's than Non-optimists ($t = 5.563, p = 0.000$) and CP Midrange ($t = 4.305, p = 0.002$). There was no difference in number of C's between CP Midrange and Non-optimists. This suggests that law school "C" students tend to be optimists, while the higher achievers were non-optimistic (Satterfield et al., 1997).

Although explanatory style was predictive of some achievement behaviors, it was not predictive of moot court performance, law review membership, community involvement, or classroom participation.

The authors hypothesized different potential causes for the puzzling results including, but not limited to prudence and defensive pessimism. So, Satterfield and colleagues inability to replicate results found with undergraduates may be due to a higher level of defensive pessimism in graduate school, characteristics of higher ability groups, something unique about qualities necessary to be a good law school student (i.e., analytical skills), or a combination of these factors.

Another recent study conducted by LaForge and Cantrell (2003) also found support for the relationship between a more pessimistic explanatory style and increasing

academic achievement. LaForge and Cantrell administered the ASQ to 116 junior and senior undergraduate students who were taking the first course required for marketing majors. The ASQ scores using CN were correlated with both cumulative grade point average and total course points. Explanatory style was significantly correlated with grade point average ($r = .28, p < .01$) and with total course points ($r = .19, p < .05$). Since women had higher grade point averages and higher total course points than men, sex was parceled out from the correlations. Explanatory style was still significantly correlated with grade point average ($r = .27, p = .005$). The partial correlation between explanatory style and total course points was no longer significant ($r = .17, p = .08$).

LaForge and Cantrell (2003) speculated about their surprising results. They point to theoretical assumptions underlying the ASQ because it may not account for the literature's reflection that perceived future controllability is crucial to the relationship of learned helplessness and depression. LaForge and Cantrell note that there are studies finding that it can be beneficial for a person to view controllable negative events as caused by internal, stable, and global factors. The authors further suggest that academic events may be perceived as more controllable as a student progresses through the academic system from freshmen to upperclassmen as autonomy increases with selection of major and progressing academic rank. Next, some recent attempts to explain inconsistent results for the relationship between explanatory style and academic achievement will be examined.

Recent Attempts to Explain Inconsistencies in Results

Gibb and colleagues (2002) conducted a study to evaluate one of the possibilities mentioned by Houston (1994), and Satterfield and colleagues (1997). Since both of the

populations studied by Houston, Satterfield and colleagues, and Schulman and colleagues (1990) were considered to be above average intelligence some have suggested that population differences on this trait have affected results. Fazio and Palm (1998) also pointed to a restricted range of GPA scores. Gibb and colleagues' goal was to see if ability (measured by SAT) would moderate the relationship between explanatory styles and cumulative GPA, which was obtained from transcripts. Participants ($n = 109$) were freshmen from the Cognitive Vulnerability to Depression Project that were free of Axis I disorder and scored particularly high or low on both the Cognitive Style Questionnaire (CSQ) and the Dysfunctional Attitudes Scale (DAS). The CSQ is a modified version of the ASQ. The measures were given at the beginning of the year and cumulative GPAs were obtained at the end of the year.

Regression analyses were conducted with SAT entered first with each dimension of explanatory style from CSQ. The next step included entering the interaction term from the SAT and dimension on the CSQ. Two of the three dimensions interacted with SAT scores to predict GPAs. The CSQ-internality and SAT interaction was significant. The CSQ-stability and SAT interaction was also significant. Students with pessimistic explanatory styles and high SAT scores still performed well, but students with pessimistic explanatory styles and low SAT scores did not. Those with optimistic explanatory styles had fairly equivalent GPAs regardless of SAT scores. The authors encourage others to continue to examine differences based on the various dimensions and note that their study is limited by the selection of their population. Based on this study, there is some support to the idea that ability may moderate the effects of explanatory

style on academic achievement. The authors concluded that explanatory style might only affect students negatively if coupled with low ability.

Correlations between dimensions of the CSQ and cumulative GPA were not significant, although CSQ-stable was approaching significance ($r = .18, p = .06$). The other correlations were CSQ-composite ($r = .11$), CSQ-externality ($r = -.02$), and CSQ-global ($r = .08$).

Another Suggested Explanation for the Mixed Results

Another factor mentioned by Satterfield and colleagues in attempting to understand their unusual results was defensive pessimism. Based on the suggestion of Satterfield and colleagues that defensive pessimism was a potential explanation for their results, this suggestion was entertained as a possible explanation for other studies and the phenomenon in general.

In addition to the first research question of: When and why is pessimistic explanatory style associated with high academic achievement, another area needed to be investigated. Satterfield and colleagues suggested levels of defensive pessimism as an explanation for their unique results. This led to another research question: What might the role of defensive pessimism be when pessimistic explanatory style is correlated with higher academic achievement? What is defensive pessimism? Let's explore that question.

DEFENSIVE PESSIMISM

Definitions of Defensive Pessimism and Strategic Optimism

Defensive pessimism denotes a cognitive strategy where individuals set low expectations for performance despite having performed well in a domain in the past (Norem, 2001). This strategy involves individuals mentally rehearsing and reflecting

about potential outcomes especially negative ones (Norem, 2001). Thinking through these mental rehearsals and anticipating all potential problems is then followed by hard work and preparation (Norem 2001). Those using this strategy go from a starting point of feeling anxious and out of control and “harness their anxiety as motivation” (Norem, 2001, p. 77). These individuals perform well despite their low expectations (Norem, 2001).

Norem and Cantor first referred to this term in the 1980s (Norem & Cantor, 1986a; Norem & Cantor, 1986b). Defensive pessimism is probably best understood as an anxiety management strategy that pays off in preparation and subsequent successful performance. Defensive pessimism is contrasted with strategic optimism. This latter concept refers to individuals who do not experience much anxiety in a specific area. These people feel more in control, set high expectations for themselves, and actively avoid thinking about the upcoming stressful experience (Norem, 2001). However, they do what is necessary to prepare and perform well.

Norem and Cantor (1986b) give a good example of how defensive pessimists may look in a scenario where straight-A students who have never experienced test failure consistently predict that they are going to fail a future test:

Nothing their friends do can reassure them; indeed, reminding them of their past success seems only to lead to more anxiety or confusion. These persons proceed to rush home, drink gallons of coffee, study furiously throughout the night and, annoyingly but not surprisingly, receive the highest score in the class. (p. 1209)

Overview of Defensive Pessimism Research

An overview of research on defensive pessimism shows several consistent findings. Early studies used the Optimism-Pessimism Prescreening Questionnaire

(OPPQ), which is made of nine theoretically derived items. More recent research has used the Revised Defensive Pessimism Questionnaire (DPQ), which is often tailored to be domain specific. For example, it is regularly tailored for academic or social situations. Most research is based on a comparison of strategic optimists (SO) and defensive pessimists (DP). Several studies have shown that DPs have a higher anxiety level than SOs (Norem & Cantor, 1986b; Sanna, 1996; Spencer & Norem, 1996). DPs predict lower performance for themselves (Norem & Cantor, 1986b) and have lower expectations for their performances (Eronen, Nurmi, & Salmela-Aro, 1998; Norem & Cantor, 1986a; Sanna, 1996; Spencer & Norem, 1996).

DPs also perform comparably well with SOs (Norem & Cantor, 1986a; Norem & Cantor, 1986b; Norem & Chang, 2002; Sanna, 1996; Spencer & Norem, 1996). There is also evidence that performance suffers when a DPs or SOs are unable to use their preferred strategy in a situation (Norem, 1987; Norem & Cantor, 1986b; Norem & Chang, 2002; Sanna, 1998; Spencer & Norem, 1996).

Defensive Pessimism and Explanatory Style

Norem (2001) points out some important distinctions between pessimistic explanatory style and defensive pessimism. She notes that defensive pessimism is a strategy to prepare for a situation, whereas explanatory style refers to explaining events after the fact. Norem further notes that defensive pessimism does not correlate strongly with a pessimistic explanatory style. Norem (2001) used data from Norem and Sellars (1995) to show the correlations between the DPQ-Academic version and the ASQ from a study. The DPQ had a correlation of .23 with ASQ-Internal, .12 with ASQ-Stable, and

.17 with ASQ-Global. Correlations between the DPQ and composite for negative events (CN) or other composites were not reported.

It appears that explanatory style and defensive pessimism may share some variance, but it is quite possible that both can help account for variance in predicting academic achievement.

EXPECTATIONS

Expectations in Relation to Attribution Theory, Learned Helplessness Theory, Explanatory Style

Another aspect of the current study was to look at the role that expectations play when those with pessimistic explanatory styles have higher academic achievement in particular in relation to the use of defensive pessimism. As described earlier, the two lines of research that led to the study of explanatory style were attribution theory and learned helplessness. Expectations play a role in these theories and explanatory style. Weiner's attributional theory is most relevant to the current study. A basic tenet of Weiner's attributional achievement model is that attributions for success and failure influence affect, behavior, and future expectations (Martinko & Thomson, 1998). So, Weiner's theory suggests that how one explains outcomes is related to what one expects in future performance. Understanding more about the relationship between defensive pessimism and explanatory style may help deepen understanding about the process whereby those who are successful and continue to have low expectations.

Seligman and colleague's (e.g., Overmier & Seligman, 1967; Seligman & Maier, 1967) research on learned helplessness is also relevant to expectations. When the dogs were put in an inescapable situation and learned to expect that they could not avoid

shock, they quit trying even in a situation where they could escape. As mentioned earlier in this chapter, the initial model of learned helplessness as applied to animals, did not fit as well for humans. A reformulated model of learned helplessness (Abramson, et al., 1978) was developed. This model incorporated the dimensions in explanatory style that are now used: external/internal, stable/unstable, and global/specific. These last two dimensions are most related to expectations. Part of the explanation for the stable/unstable dimension includes an expectation for how long whatever causes the outcome will last. Part of the explanation for the global/specific dimension includes an expectation for to what extent the cause will affect areas in one's life. A person with a pessimistic explanatory style would make global and stable explanations for a negative event or failure, which would mean, in part, that this person expects whatever caused the outcome to last and affect multiple life areas.

Looking at expectation in relation to explanatory style may add a new piece to the research literature. Few investigations of explanatory style have assessed expectations (Gillham, Shatté, Reivich, & Seligman, 2001) and it appears that surprisingly little is known about the relationship between explanations and expectations (Brown & Marshall, 2001).

Efficacy and Outcome Expectations in Relation to Defensive Pessimism

The specific expectations of interest are efficacy and outcome expectations. Showers and Ruben (1990) conducted a study to compare defensive pessimism and depression in relation to negative expectations and positive coping mechanisms. Defensive pessimists and moderately depressed participants reported similarly negative expectations in reaction to stressful social situations prior to the situation (Showers &

Ruben, 1990). Both groups were similar in that they underestimated outcomes. After the social situations were over, defensive pessimists' thoughts about the situation and feelings of anxiety dropped to the level of the optimists in the study. The moderately depressed participants ruminated about details and reported residual anxiety after the situation (Showers & Ruben, 1990). There were no differences in efficacy expectations prior to the situation. The authors also concluded that the moderately depressed group used more avoidant coping skills than the defensive pessimists (Showers & Ruben, 1990).

THE CURRENT ATTEMPT TO EXPLAIN THE MIXED RESULTS IN EXPLANATORY STYLE AND ACADEMIC ACHIEVEMENT

People that use defensive pessimism as a strategy tend to be high achievers despite low expectations. People with pessimistic explanatory style for academic events also have low expectations. For example, a person explaining a negative event with a pessimistic explanatory style expects the influence of the cause to last and to affect other areas of his or her life. It may be that people with pessimistic explanatory styles that achieve highly are using defensive pessimism thereby having found a way to use their low expectations to help them achieve. The current study examined expectations as part of its design. Few investigations of explanatory style have assessed expectations (Gillham et al., 2001) and it appears that surprisingly little is known about the relationship between explanations and expectations (Brown & Marshall, 2001).

Of studies that showed that pessimistic explanatory style is related to better academic achievement, an example of how defensive pessimism may be relevant can be drawn. The results in Houston's (1994) study may suggest that students in her sample

were using defensive pessimism. Those who made failure achievement attributions to global and stable causes tended to do well, which is evidence of a pessimistic explanatory style. The participants in Houston's study also were more pessimistic in anticipating performance. The presence of low expectations and higher achievement fits well with the notion of defensive pessimism.

Based on these considerations, the following conceptual hypotheses were devised.

Hypothesis I: Students with a pessimistic explanatory style for academic achievement will have lower expectations for academic achievement than those with a more optimistic explanatory style.

The rationale supporting this hypothesis is that explanations made by a student for successes and failures will influence expectations, which in turn affect reactions to success and failure (Schulman, 1995). A study by Metalsky, Halberstadt, and Abramson (1987) is one of the few studies looking at explanatory style and expectations. Among student who received a low grade, those who attributed this type of event to stable and global factors also expected poor future performance

Hypothesis II: Among students with a more pessimistic explanatory style for academic achievement, those who are higher on defensive pessimism will have better academic performance than those who score lower on defensive pessimism. These groups scoring lower on defensive pessimism can be what the literature calls aschematics or strategic optimists.

The rationale behind this is that students with pessimistic explanatory style that use defensive pessimism have found a way to use low expectations to help them achieve. Those who have low expectations, but do not use defensive pessimism allow their low

expectations to become a self-fulfilling prophecy. It is difficult to imagine someone being pessimistic in his or her explanations, but also using a strategic optimistic strategy in the same domain.

Hypothesis III: Among students with a more pessimistic explanatory style for academic achievement, those who are higher on defensive pessimism will have comparable academic performance to those with more optimistic explanatory styles for academic achievement.

The rationale behind this is based on several research studies showing no difference between those using defensive pessimism as a strategy and strategic optimism as a strategy. Strategic optimism seems to be a better fit with a more optimistic explanatory style. Norem and Cantor (1986b) refer to their previous study (1986a) in which subjects using strategic optimism, who went into situations with high expectations based on prior performance, tended to deny control in failure situations, but accepted control for performance with successes. These fit the internal dimension of optimistic explanatory style. The results of the study mentioned showed that defensive pessimists did not differ in denying control in failure or success situations. Defensive pessimists by definition are also high achievers in a specific domain. Within this specific domain, defensive pessimists have found a way to use their low expectations to achieve comparably with other high achievers.

Hypotheses IV and V: Students scoring higher on defensive pessimism will have equally low outcome expectations to students scoring lower on the exam, but will have significantly higher efficacy expectations. This is based on the idea that defensive

pessimists use low expectations to help them achieve, but because they continue to succeed there must be some positive impact on efficacy expectations.

CHAPTER III

METHODOLOGY

INTRODUCTION

Explanatory style has been studied in relation to various phenomena including academic achievement. Explanatory style is a person's tendency to offer similar sorts of explanations for different outcomes in his or her life (Peterson et al., 1995). This style is described in terms of three dimensions: internal/external, global/specific, and stable/unstable and is generally examined in terms of positive and negative events. Styles can be categorized as either pessimistic or optimistic. Optimistic explanatory style is usually associated with higher academic achievement, but there are some inconsistencies in this research. At times a pessimistic explanatory style has been found to be associated with higher academic achievement. Explaining these perplexing, anomalous findings was one purpose of this study.

Satterfield and colleagues (1997) suggested some possible explanations why in the population they studied they found this to be the case. Defensive pessimism was one of these suggestions. A second purpose of this dissertation was to understand what defensive pessimism's role might be when pessimistic explanatory style is correlated with higher academic achievement. Defensive pessimism is a cognitive strategy in which low expectations are set for performance despite a history of good performance in a specific domain. A person using this strategy plays out all scenarios that may happen and

work hard to prepare the upcoming situation. This strategy leads to utilization of anxiety as motivation and subsequently good performance (Norem, 2001).

The significance of this study is both practical and theoretical. It is important to learn about the relationships between defensive pessimism and explanatory style for several reasons. People with pessimistic explanatory styles generally perform less well in comparison to people with optimistic explanatory styles. At times, people with pessimistic explanatory styles have been found to outperform optimists. If a better understanding of how people with pessimistic explanatory styles succeed is developed, this may help other people with these styles improve performance. Both people who use defensive pessimism and who make pessimistic explanations are likely to use low expectations. Defensive pessimists are able to use low expectations and succeed. Perhaps, there is something to be learned from defensive pessimists to use with those who have pessimistic explanatory styles to help them achieve despite low expectations.

A better understanding of the relationship between explanatory style, defensive pessimism, and academic achievement may lead to the improvement of interventions and prevention programs designed to improve academic achievement such as reattributional training or attribution retraining programs. When Bridges (2001) was researching explanatory style and academic achievement, he noted the implications of research in this area could lead to university learning centers identifying and treating at-risk students. Theoretically, this work may help researchers gain insight into the relationship of the theoretical constructs of explanatory style and defensive pessimism. This research may also help researchers better understand these cognitive constructs in light of a common

denominator that pessimistic explanatory style and defensive pessimism share: low expectations.

DESCRIPTIVE STATISTICS FOR SUBJECTS

The participants included this study were 188 students from varying levels and multiple higher education institutions in the southern Indiana and Louisville, Kentucky area. Ages ranged from 18.5 to 58.833 with a mean age of 30.243 years old. Please see Table 1 for information regarding the composition of the sample for sex, ethnicity, and class level.

INSTRUMENTATION

Academic Attributional Style Questionnaire (AASQ)

The two primary measures that have been used to study explanatory style and academic achievement are the Attributional Style Questionnaire (ASQ; Peterson et al., 1982) and the Academic Attributional Style Questionnaire (AASQ; Peterson & Barrett, 1987).

The ASQ presents subjects with hypothetical good and bad events and then the participant is presented with four questions. The first question asks for one major cause of why the event happened. The second, third, and fourth questions related to the various dimensions of explanatory style. The participant rates the degree to which the cause is internal/external, stable/unstable, and global/specific on a 7-point scale. Composite scores may be obtained for explanations for bad events, explanations for good events, and the difference between these two scores. Composite scores may also be calculated for each dimension and further divided into composite dimension by positive or negative event.

Table 1

Descriptive Statistics for Participants (N = 188)

Characteristic	<i>n</i>	%
Sex		
Female	127	67.6
Male	58	30.9
Missing	3	1.6
Ethnicity		
Caucasian	152	80.9
African-American	22	11.7
Asian-American	7	3.7
Hispanic/Latino(a)	3	1.6
Other	3	1.6
Arab-American	1	.5
Class Level		
Undergraduate	115	61.2
Graduate	70	37.2

Peterson and colleagues (1995) mention several scores that can be produced from an ASQ administration. Composites of the dimensions of interest in explanatory style can be made: composite internal/external (CI), composite stability/temporary (CS), and composite global/specific (CG). Some researchers have combined the average from CS and CG to form a composite-generality, which some have focused only on a specific domain of the ASQ: interpersonal or achievement (e.g., Houston, 1994). The most commonly reported scores are from the composite for explaining negative events (CN), the composite for explaining positive events (CP), and CP minus CN (CPCN).

The AASQ (Peterson & Barrett, 1987) is a modified form of the ASQ, which is focused purely on 12 negative academic events. Thus, only CN and dimensional scores

are available from this measure. There is not as much psychometric information available for the AASQ. Since the AASQ is a modified version of the ASQ, some of the psychometric information will be from reports of the ASQ, which is the more popular instrument. The AASQ was used in this study because of the increasing recognition of the notion of specific vulnerability calls for explanatory style to be measured in a specific domain (Abramson, Metalsky, & Alloy, 1989). In other words, it makes sense to measure explanatory style in relation to specific domains such as academic or social.

This researcher has made some modifications to the AASQ (see Appendix A). The first 12 items are not modified and an additional question has been added to ask the student how likely they believe the hypothetical events are to happen to them. Also additional items have been added based on positive academic events. Ten of the twelve positive items are taken from a modified ASQ used by Henry and Campbell (1995). The current researcher added the other two items. The positive events will be used for exploratory analyses.

Scoring the AASQ

The modified AASQ presents subjects with hypothetical good and bad events and then the participant is presented with five questions. Typically, the AASQ uses four questions, but another question was added for this study. This first question asks how likely the event is to happen to the participant. The second question asks for one major cause of why the event happened. The third, fourth, and fifth questions are related to the various dimensions of explanatory style. The participant rates the degree to which the cause is internal/external, stable/unstable, and global/specific on a 7-point scale. Composite scores may be obtained for explanations for bad events, explanations for good

events, and the difference between these two scores. Composite scores may also be calculated for each dimension and further divided into composite dimension by positive or negative event.

To obtain the composite for explaining negative events (CN), each item containing a bad event is summed and divided by the total number of events. The best score for CN is the lowest score (i.e., most optimistic). The same procedure is used to determine the composite for explaining positive events (CP), but by scoring only items related to positive events. The best score for CP is the highest score (i.e., the most optimistic). The composite for positive minus composite negative (CPCN) is calculated by subtracting CN from CP.

To score the internal negative (CI-) dimension, the answers to the third question under each bad event are summed and divided by total number of bad events. For the internal positive (CI+), the third question is summed for each positive event and divided by total number of positive events. These same scoring procedures apply for stable negative (CS-), stable positive (CS+), global negative (CG-), and global positive (CG+) with each stable dimension applying to the fourth question for the appropriate scenario and each global dimension applying to the fifth question.

Reliability and Validity of AASQ and ASQ

Internal Consistency

Peterson and Barrett (1987) were the first to use the AASQ. They found the AASQ to be reliable with a Cronbach alpha of .84 for composite of negative events (CN) and also found some criterion related validity in that those who made pessimistic explanations for negative academic events performed more poorly. Other researchers have used the AASQ

and some have reported Cronbach alphas, but there is little other reliability information reported. Villanova (1996) used the AASQ in a study with introductory psychology students. He reported an alpha coefficient of .73 for AASQ scores for composite of negative events (CN). Ritchie administered the AASQ to business students in a community college. For composite negative (CN), he found an alpha of .83. Using the AASQ with undergraduate students, Musgrave-Marquart and colleagues (1997) found coefficient alpha to be .79 based on a version of the AASQ with 10 hypothetical situations.

As mentioned above, the AASQ is a modified version of the ASQ. The ASQ has been used more frequently, so some reliability and validity information is presented from this measure to supplement what is available regarding the AASQ. As with the AASQ, multiple researchers have reported Cronbach alpha as a measure of internal consistency for the ASQ. In a recent study using the ASQ, LaForge and Cantrell (2003) found coefficient alpha for composite negative (CN) to be .61. Henry and colleagues (1993) used the ASQ with computer science students and calculated coefficient alphas for composite scores. Alphas were as follows: composite negative (CN): .69, composite positive (CP): .81, and CPCN: .62. The authors state these reliabilities were consistent with prior studies (Henry et al., 1993). Satterfield and colleagues (1997) used the ASQ with law students and reported Cronbach alphas of .73 for positive events (CP) and .74 for negative events (CN).

Using data from their meta-analysis on explanatory style and depression, Sweeney and colleagues (1986) reported internal consistency for negative events on the ASQ based on a meta-analysis of eight studies to be .73 for composite (CN). The authors further

report internal consistency for positive outcomes at .69 for the composite (CP). Reivich (1995) concludes based on the data from Sweeney and colleagues (1986), the ASQ can be said to have unsatisfactory reliability, but when composite scores are formed, higher and satisfactory levels of internal consistency are found. Reivich (1995) concluded that the ASQ has been reliable in assessing explanatory style.

Test-Retest Reliability

Reivich (1995) cites a study that examined test-retest reliability (i.e., Golin, Sweeney, & Schaeffer, 1981). The ASQ was administered and re-administered to 180 students. For negative events, the test-retest reliabilities were .67 for the composite (CN). For positive events, the test-retest reliabilities .67 for the composite (CP).

Construct Validity

Reivich (1995) cites a study that conducted a test of construct validity. Schulman, Castellon, and Seligman (1989) administered the ASQ to 169 undergraduates and then had raters score the event and cause given by the students while being blind to the explanations. This approach is called the CAVE (Content Analysis of Verbatim Explanations) technique. Correlations for the composites were .71 for CPCN, .48 for CN, and .52 for CP.

Due to the relatively low reliability numbers that have been reported for dimension scores in the literature, composites were formed and used for analyses in this study. This is the standard in the field. For the main hypotheses, the composite negative (CN) was used. The review of literature showed that coefficient alphas for composite negative (CN) on the AASQ ranged from .73 to .84. This is a satisfactory level of internal consistency. Written permission to use the ASQ was obtained from Seligman. In the instructions

provided to use for scoring the measure, Seligman recommended that the composite measures (CPCN, CN, and CP) be used as they are the most valid and reliable in prediction of outcomes. CN was used for hypotheses as the AASQ has primarily been used to focus on negative academic events. For the AASQ with the current sample, a Cronbach alpha of .887 was found for CN. Positive events were used for exploratory purposes only. Dimensional analyses were not calculated in the current study. Please see Appendix B for documents providing permission to use this measure.

Revised Defensive Pessimism Questionnaire (DPQ)

Initial research was done using the Optimism-Pessimism Prescreening Questionnaire (OPPQ; Norem & Cantor, 1986a). This instrument was somewhat limited in that it overlooked that defensive pessimists also think through positive outcomes as well. This process was included in a revised instrument that has since undergone another revision and now the commonly used instrument is the Revised Defensive Pessimism Questionnaire (DPQ; Norem, 1994). Norem (2001) reports that factor analysis shows that all items load satisfactorily on one major unrotated factor. Norem reports that oblique rotation results in two correlated factors, which she has labeled “Reflectivity” and “Pessimism.” In her research Norem, computes separate scores for Reflectivity and Pessimism for exploratory purposes.

Norem has used results of the DPQ to classify people into three categories: defensive pessimists, strategic optimists, and aschematic. Those scoring in the upper tertile or quartile are defensive pessimists, those in the lower tertile or quartile are strategic optimists, and the middles are considered aschematic (Norem, 2001). The inventory contains a question used to distinguish realistic pessimists from defensive ones, which

focuses on past performance. The DPQ is intended to be a domain specific measure (Norem, 2001), so the current study will tailor the measure for use with academic situations (Please see Appendix A for measures). Please also see Appendix B for the document granting permission to use the measure.

Scoring the DPQ

The Revised Defensive Pessimism Questionnaire (DPQ) consists of a series of 17 statements (See Appendix A). The respondent rates each statement on a likert scale ranging from 1 to 7 with 1 being “Not at all true of me” and 7 being “Very true of me.” A single score is formed by adding scores from Reflectivity items and Pessimism items. Items 2 and 16 are reverse scored. Statements 5 and 9 are filler questions and statements 11 and 13 are experimental items. Filler questions and experimental items are not used in calculating the overall score for the DPQ. Statement 3 inquires about past performance and is used to help distinguish realistic pessimists from defensive pessimists. In most samples of college students less than 20% rate themselves below 5 on this item (Norem, 2001). Students scoring low on this item tend to have lower grade point averages than those who score higher (Norem, 2001). In her research Norem, computes separate scores for Reflectivity and Pessimism for exploratory purposes.

Reliability and Validity of DPQ

Norem (2001) reports that the DPQ correlates at .65 with the Optimism-Pessimism Prescreening Questionnaire (OPPQ). The DPQ’s Cronbach alpha is .78. The two factors have an average alpha of .74. She reports that a recent three-year longitudinal study found a test-retest reliability of .55. For the DPQ with the current sample, a Cronbach alpha of .708 was found.

Brief Symptom Inventory (BSI)

Due to the potential confounding effects of mood factors such as anxiety and depression, the Brief Symptom Inventory (BSI) was used to gather data on mood. The Brief Symptom Inventory (BSI) is designed to “reflect the psychological symptom patterns” of various populations including “community nonpatient respondents” (Derogatis, 1993, p. 3). There are nine primary symptom dimensions including Somatization (SOM), Obsessive-Compulsive (O-C), Interpersonal Sensitivity (I-S), Depression (DEP), Anxiety (ANX), Hostility (HOS), Phobic Anxiety (PHOB), Paranoid Ideation (PAR), and Psychoticism (PSY) (Derogatis, 1993). Much of explanatory style research has also looked at depression and anxiety is one of the defining features of defensive pessimism. Two meta-analyses (Joiner & Wagner, 1995; Sweeney et al., 1986) conclude that pessimistic explanatory style is correlated with depression. Defensive pessimism is probably best understood as an anxiety management strategy that pays off in preparation and subsequent successful performance (Norem, 2001). The BSI also allows the examination of other mental health related factors as mentioned in the primary symptom dimensions above.

Scoring the BSI

The Brief Symptom Inventory (BSI) consists of a series of 53 items. The prompt for each statement is “HOW MUCH WERE YOU DISTRESSED BY:” followed by a brief statement such as “Nervousness or shakiness inside.” Respondents are instructed to focus on their experiences for the last seven days including the day they are filling out the inventory. Respondents rate each statement on a scale of 0 to 4 where 0 = “Not at all,” 1 = “A little bit,” 2 = “Moderately,” 3 = “Quite a bit,” and 4 = “Extremely.”

Scores may be calculated for nine primary symptom dimensions including Somatization (SOM), Obsessive-Compulsive (O-C), Interpersonal Sensitivity (I-S), Depression (DEP), Anxiety (ANX), Hostility (HOS), Phobic Anxiety (PHOB), Paranoid Ideation (PAR), and Psychoticism (PSY) (Derogatis, 1993). Three global indices can be calculated to provide a more general, overall assessment of the respondent (Derogatis, 1993). These include the Global Severity Index (GSI), Positive Symptom Total (PST), and Positive Symptom Distress Index (PSDI) (Derogatis, 1993).

Several steps are included in scoring the BSI. Raw scores are calculated by summing the values for items in each of the nine symptom dimensions and four additional items used as part of global indices. Each dimension total raw score is divided by the total number of questions that were responded to for that dimension to account for any items that a respondent might skip. The converted raw scores are then converted to standardized T-scores using profile forms for the appropriate norm group. For the current study, Nonpatient Adult profile forms for each gender will be used. The Global Severity Index (GSI) is calculated by summing all items and dividing by total number of items responded to. The Positive Symptom Total (PST) is scored by counting the number of items with a response other than zero. The Positive Symptom Distress Index (PSDI) is calculated by taking the sum of all items divided by the PST.

Reliability and Validity of BSI

Internal Consistency

Internal consistency coefficients using Cronbach's coefficient alpha were calculated based on a sample of 719 psychiatric outpatients (Derogatis, 1993). Alpha coefficients for the nine symptom dimensions ranged from a low of .71 for Psychoticism (PSY) to a high

of .85 for Depression (DEP) (Derogatis, 1993). Anxiety (ANX), another variable of interest in this study, had a coefficient alpha of .81. For the BSI with the current sample, a Cronbach alpha of .973 was found for all 53 items.

Test-Retest Reliability

Test-retest reliability was calculated in a sample of 60 nonpatients using a two-week interval (Derogatis, 1993). Test-retest coefficients ranged from .68 to .91 for symptom dimensions while the global indices ranged from .80 to .90 (Derogatis, 1993). The test-retest coefficients for Depression (DEP) and Anxiety (ANX) were .84 and .79, respectively (Derogatis, 1993).

Convergent and Discriminant Validity

The BSI is essentially a brief version of the SCL-90-R (Derogatis, 1993). All 53 items of the BSI are included in the SCL-90-R. The SCL-90-R had been shown to have high convergence with MMPI scales. Derogatis (1993) states that the BSI has high convergence with the MMPI as evidenced by the correlations between BSI symptom dimension and MMPI clinical scales, Wiggins scales, and Tryon scales.

Internal Structure

Derogatis (1993) reports factor analysis has been conducted on the BSI utilizing only items related to the nine symptom dimensions with a sample of 1,002 psychiatric outpatients. Derogatis reports that “Essentially seven of the nine hypothesized symptom constructs were reproduced with little or disjuncture of items” (1993, p. 22). Of the last two dimensions, one was not represented well by a linear combination and the other worked when split into two well-defined clinical dimensions (Derogatis, 1993).

Personal Data Sheet

The researcher constructed this form in order to obtain achievement measures, ability measures, and other demographics. The personal data sheet included self-report information on current GPA, expected grade on exam, and expected grade in course. Further it will include class status, high school class rank, and ACT/SAT score. It also included age, gender, ethnicity, major, and anticipated career. Finally a few questions about expectations based on the work of Showers and Ruben (1990) regarding the upcoming exam were included. These questions are tailored to the exam and include questions on efficacy expectations and outcome expectations.

PROCEDURES

The study was conducted through the administration of surveys. The co-investigator visited classrooms from one week to three weeks before an exam and gave each participant a packet containing an informed consent form, which included permission to get exam grade and course grade from their professor, the personal data sheet, the AASQ (modified with expectations questions and added positive academic events as described above), the DPQ, and the BSI. Each participant's materials had a code number. For example, Jimmy Jones = 148. The course instructor was given a list of names and code numbers. At the end of the semester, the instructor used the list to fill out a sheet with code numbers only to give the course grade and exam grade to the principal investigator. At no time did the instructor have access to the research materials and at no time did the researcher have names and grade information at the same time.

Approval for this study was granted by the University of Louisville's Institutional Review Board. Please see Appendix C for the supporting documents.

STATISTICAL ANALYSES

The following hypotheses will be analyzed by a combination of statistical procedures. T-tests, the General Linear Model, and correlation coefficients were the primary statistical approaches used. The statistical method for each hypothesis is indicated below.

STATISTICAL HYPOTHESES

Hypothesis # 1a

H₀: There will be no relationship between explanatory styles for academic achievement (CN scale of AASQ) and total negative expectations (Total Negative Expectations from AASQ).

H_a: There will be a significant relationship between explanatory styles for academic achievement (CN scale of AASQ) and total negative expectations (Total Negative Expectations from AASQ).

Statistical Method:

Correlation coefficient. The independent variable is explanatory style and the dependent variable is total negative expectations.

Hypothesis # 1b

H₀: There will be no relationship between explanatory styles for academic achievement (CN scale of AASQ) and expected exam grade.

H_a: There will be a significant relationship pessimistic explanatory styles for academic achievement (CN scale of AASQ) and expected exam grade.

Statistical Method:

Correlation coefficient. The independent variable is explanatory style and the dependent variable is the expected exam grade.

Hypothesis # 1c

H₀: There will be no relationship between explanatory styles for academic achievement (CN scale of AASQ) and expected course grade.

H_a: There will be a significant relationship between explanatory styles for academic achievement (CN scale of AASQ) and expected course grade.

Statistical Method:

Correlation coefficient. The independent variable is explanatory style and the dependent variable is expected course grade.

Hypothesis # 2a

H₀: There will be no difference in exam grades for those with more pessimistic explanatory styles (one standard deviation above mean on CN scale of AASQ) regardless of score on defensive pessimism (DPQ).

H_a: Among students with more pessimistic explanatory styles for academic achievement (one standard deviation above mean on CN scale of AASQ), those who score higher on defensive pessimism (DPQ) will have better exam grades.

Statistical Method:

Two statistical approaches were used. The General Linear Model (GLM) was used to evaluate the hypothesis using continuous data. For the GLM analysis, CN and defensive pessimism were the independent variables and exam grade was the dependent variable. A t-test was also used. To identify those with more pessimistic explanatory styles, cases were selected that fell one standard deviation above the mean on CN. Within this selection, two groups were formed based on defensive pessimism scores. The upper tertile scorers are defensive pessimists and lower tertile scorers are non-defensive pessimists. Defensive pessimists were compared with non-defensive pessimists on the dependent variable exam grade.

Hypothesis # 2b

H₀: There will be no difference in course grades for those with more pessimistic explanatory styles (one standard deviation above mean on CN scale of AASQ) regardless of score on defensive pessimism (DPQ).

H_a: Among students with more pessimistic explanatory styles for academic achievement (one standard deviation above mean on CN scale of AASQ), those who score higher on defensive pessimism (DPQ) will have better course grades.

Statistical Method:

Two statistical approaches were used. The General Linear Model (GLM) was used to evaluate the hypothesis using continuous data. For the GLM analysis, CN and defensive pessimism were the independent variables and course grade was the dependent variable. A t-test was also used. To identify those with more pessimistic explanatory styles, cases were selected that fell one standard deviation above the mean on CN. Within this selection, two groups were formed based on defensive pessimism scores. The upper tertile scorers are defensive pessimists and lower tertile scorers are non-defensive pessimists. Defensive pessimists were compared with non-defensive pessimists on the dependent variable course grade.

Hypothesis # 2c

H₀: There will be no difference in GPAs for those with more pessimistic explanatory styles (one standard deviation above mean on CN scale of AASQ) regardless of score on defensive pessimism (DPQ).

H_a: Among students with more pessimistic explanatory styles for academic achievement (one standard deviation above mean on CN scale of AASQ), those who score higher on defensive pessimism (DPQ) will have better GPAs.

Statistical Method:

Two statistical approaches were used. The General Linear Model (GLM) was used to evaluate the hypothesis using continuous data. For the GLM analysis, CN and defensive pessimism were the independent variables and GPA was the dependent variable. A t-test was also used. To identify those with more pessimistic explanatory styles, cases were selected that fell one standard deviation above the mean on CN. Within this selection, two groups were formed based on defensive pessimism scores. The upper tertile scorers are defensive pessimists and lower tertile scorers are non-defensive pessimists. Defensive pessimists were compared with non-defensive pessimists on the dependent variable GPA.

Hypothesis # 3a

H₀: There will be no difference on exam grades for students with more pessimistic explanatory styles for academic achievement (one standard deviation above mean on CN scale of AASQ), who score higher on defensive pessimism (DPQ) when compared to those with more optimistic explanatory styles for academic events (one standard deviation below mean on CN scale of AASQ).

H_a: Students with more optimistic explanatory styles for academic events (one standard deviation below mean on CN scale of AASQ) will have better exam grades than students with more pessimistic explanatory styles for academic achievement (one standard deviation above mean on CN scale of AASQ) that score higher on defensive pessimism (DPQ)

Statistical Method:

T-test. A group was created by identifying those who had both more pessimistic explanatory styles (one standard deviation above mean on CN scale of AASQ) and were defensive pessimists (upper tertile scorers on DPQ). Another group was created by identifying those who had more optimistic explanatory styles (one standard deviation below mean on CN scale of AASQ). These two groups were compared on the dependent variable exam grade.

Hypothesis # 3b

H₀: There will be no difference on course grades for students with more pessimistic explanatory styles for academic achievement (one standard deviation above mean on CN scale of AASQ), who score higher on defensive pessimism (DPQ) when compared to those with more optimistic explanatory styles for academic events (one standard deviation below mean on CN scale of AASQ).

H_a: Students with more optimistic explanatory styles for academic events (one standard deviation below mean on CN scale of AASQ) will have better course grades than students with more pessimistic explanatory styles for academic achievement (one standard deviation above mean on CN scale of AASQ) that score higher on defensive pessimism (DPQ)

Statistical Method:

T-test. A group was created by identifying those who had both more pessimistic explanatory styles (one standard deviation above mean on CN scale of AASQ) and were defensive pessimists (upper tertile scorers on DPQ). Another group was created by identifying those who had more optimistic explanatory styles (one standard deviation below mean on CN scale of AASQ). These two groups were compared on the dependent variable course grade.

Hypothesis #3c

H₀: There will be no difference on GPAs for students with more pessimistic explanatory styles for academic achievement (one standard deviation above mean on CN scale of AASQ), who score higher on defensive pessimism (DPQ) when compared to those with more optimistic explanatory styles for academic events (one standard deviation below mean on CN scale of AASQ).

H_a: Students with more optimistic explanatory styles for academic events (one standard deviation below mean on CN scale of AASQ) will have better GPAs than students with more pessimistic explanatory styles for academic achievement (one standard deviation above mean on CN scale of AASQ) that score higher on defensive pessimism (DPQ)

Statistical Method:

T-test. A group was created by identifying those who had both more pessimistic explanatory styles (one standard deviation above mean on CN scale of AASQ) and were defensive pessimists (upper tertile scorers on DPQ). Another group was created by identifying those who had more optimistic explanatory styles (one standard deviation below mean on CN scale of AASQ). These two groups were compared on the dependent variable GPA.

Hypothesis # 4

H₀: There will be no difference in outcome expectations (response to “I expect this exam will go very well” from Personal Data Sheet) between students who score higher on defensive pessimism (DPQ) to students scoring lower on the exam.

H_a: There will be a significant difference in outcome expectations (response to “I expect this exam will go very well” from Personal Data Sheet) between students who score higher on defensive pessimism (DPQ) to students scoring lower on the exam.

Statistical Method:

T-test. A group was created by identifying those who were Low Scorers on the exam (lowest quartile). Another group was created by identifying those who were defined as defensive pessimists (upper tertile scorers on DPQ). Those who met both criteria were excluded from the analysis. These two groups were compared on the dependent variable of outcome expectations (response to “I expect this exam will go very well”).

Hypothesis # 5

H₀: There will be no difference in efficacy expectations (composite of 2 questions from Personal Data Sheet) between students who score higher on defensive pessimism (DPQ) to students scoring lower on the exam.

H_a: Students who score higher on defensive pessimism (DPQ) will have significantly higher efficacy expectations (composite of 2 questions from Personal Data Sheet) than students scoring lower on the exam.

Statistical Method:

T-test. A group was created by identifying those who were Low Scorers on the exam (lowest quartile). Another group was created by identifying those who were defined as defensive pessimists (upper tertile scorers on DPQ). Those who met both criteria were excluded from the analysis. These two groups were compared on the dependent variable of self-efficacy expectations (composite of responses to “I feel I can handle myself very well in exam situations” and “I feel very confident in my ability to perform well on this exam”).

CHAPTER IV

RESULTS

The purpose of this study was to understand when and why pessimistic explanatory style is associated with higher academic achievement. A second purpose of this study was to understand what defensive pessimism's role might be when pessimistic explanatory style is correlated with higher academic achievement.

DESCRIPTIVE STATISTICS FOR SUBJECTS

The participants included this study were 188 students from varying levels and multiple higher education institutions in the southern Indiana and Louisville, Kentucky area. Ages ranged from 18.5 to 58.833 with a mean age of 30.243 years old. Please see Table 1 for information regarding the composition of the sample for sex, ethnicity, and class level.

EVALUATION OF HYPOTHESES

Hypothesis # 1a: Relationship between Explanatory Style and Expectations

It was hypothesized that there will be a positive relationship between explanatory style and total negative expectations. The null hypothesis was that there would be no relationship between explanatory style and total negative expectations. Correlation coefficients were calculated with explanatory style and total negative expectations.

As can be seen in Table 2, the null hypothesis was rejected as explanatory style was associated with total negative expectations ($r = .315, p = .000$) for the expectation

question (“How likely is this to happen to you?”) added to AASQ which was scored in the same manner as other AASQ dimensions.

Table 2

Intercorrelations for Total Negative Expectations, Expectations for Course Grade, and Explanatory Style

Variables	1	2	3	4
1. Total Negative Expectations	--	-.331*	-.313*	.315*
2. Expectations for Course Grade	-.331*	--	.769*	-.174*
3. Expectations for Exam Grade	-.313*	.769*	--	-.141
4. Explanatory Style	.315*	-.174*	-.141	--

* $p < .05$

Hypothesis # 1b: Relationship between Explanatory Style and Expectations

It was hypothesized that there will be a negative relationship between explanatory style and expected exam grade. The null hypothesis was that there would be no relationship between explanatory style and expectations. Correlation coefficients were calculated with explanatory style and expected exam grade. As can be seen in Table 2, the null hypothesis could not be rejected as the correlation between explanatory style and expectations for the exam ($r = -.141, p = .068$) was not significant.

Hypothesis # 1c: Relationship between Explanatory Style and Expectations

It was hypothesized that there will be a negative relationship between explanatory style and expected course grade. The null hypothesis was that there would be no relationship between explanatory style and expectations. Correlation coefficients were calculated with explanatory style and expected course grade. As can be seen in Table 2, the null hypothesis was rejected as explanatory style was significantly associated with expectations for course grade ($r = -.174, p = .024$).

Hypothesis # 2a: More Pessimistic Explanatory Style, Defensive Pessimism, and Exam Grades

It was hypothesized that among the group of people who had more pessimistic explanatory styles that those who were higher on defensive pessimism will have better exam grades. The null hypothesis was that among those who had more pessimistic explanatory styles that there would be no difference on performance regardless of level of defensive pessimism. The general linear model was used to evaluate this hypothesis. As can be seen in Table 3, the null hypothesis could not be rejected based on the results of this analysis.

Table 3

General Linear Model Analysis of Defensive Pessimism (DP), Pessimistic Explanatory Style (ES), and Interaction for Exam Grade

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance</i>	<i>r</i>
DP	1	1.264	1.264	.118	.731	.021
ES	1	4.881	4.881	.458	.500	-.051
DP x ES	1	5.189	5.189	.486	.487	.031

* $p < .05$

A t-test was calculated to further evaluate the hypothesis. As can be seen in Table 4, the null hypothesis could not be rejected ($t = 1.449, p = .168, r = .35041$) as those with pessimistic explanatory styles who had higher defensive pessimism levels did not have significantly higher exam scores. The mean differences were in the predicted direction, but were not significant.

Table 4

Academic Measures Differences between Defensive Pessimists and Non-Defensive Pessimists within the Group of Those with More Pessimistic Explanatory Styles

Measures	Defensive		Non-Defensive		<i>df</i>	<i>t</i>	<i>r</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Exam Grade	11.4	1.342	9.0	3.542	15	1.449	.35041
Course Grade	10	4.899	10.50	2.939	16	-.273	.06809
Self-Report GPA	3.50	.5000	3.71	.515213	13	-.751	.20391

* $p < .05$

For information regarding exam scores, course grades, and self-report GPAs for the entire sample, see Table 5.

Table 5

Means and Standard Deviations for Academic Performance and Achievement Measures for the Entire Sample

Variables	<i>N</i>	<i>M</i>	<i>SD</i>
1. Exam Grade	186	9.43	3.174
2. Course Grade	188	10.77	2.499
3. Self-Report GPA	157	3.53473	.521103

Hypothesis # 2b: More Pessimistic Explanatory Style, Defensive Pessimism, and Course Grades

It was hypothesized that among the group of people who had more pessimistic explanatory styles that those who were higher on defensive pessimism will have better course grades. The null hypothesis was that among those who had more pessimistic

explanatory styles that there would be no difference on performance regardless of level of defensive pessimism. The general linear model was used to evaluate this hypothesis. As can be seen in Table 6, the null hypothesis could not be rejected based on the results of this analysis.

Table 6

General Linear Model Analysis of Defensive Pessimism (DP), Explanatory Style (ES), and Interaction for Course Grade

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance</i>	<i>r</i>
DP	1	.645	.645	.099	.753	.001
ES	1	11.029	11.029	1.691	.195	-.102
DP x ES	1	.209	.209	.032	.858	.107

* $p < .05$

A t-test was calculated to further evaluate the hypothesis. As can be seen in Table 4, the null hypothesis could not be rejected ($t = -.273$, $p = .788$, $r = .06809$) as those with pessimistic explanatory styles who had higher defensive pessimism levels did not have significantly higher course grades. The mean differences were not in the predicted direction and were not significant.

Hypothesis # 2c: More Pessimistic Explanatory Style, Defensive Pessimism, and GPA

It was hypothesized that among the group of people who had more pessimistic explanatory styles that those who were higher on defensive pessimism will have better self-reported GPAs. The null hypothesis was that among those who had more pessimistic explanatory styles that there would be no difference on performance regardless of level of defensive pessimism. The general linear model was used to evaluate this hypothesis. As

can be seen in Table 7, the null hypothesis could not be rejected based on the results of this analysis.

Table 7

General Linear Model Analysis of Defensive Pessimism (DP), Explanatory Style (ES), and Interaction for GPA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance</i>	<i>r</i>
DP	1	.000	.000	.000	.985	-.012
ES	1	.399	.399	1.511	.221	-.104
DP x ES	1	.109	.109	.414	.521	.062

* $p < .05$

A t-test was calculated to further evaluate the hypothesis. As can be seen in Table 4, the null hypothesis could not be rejected ($t = -.751, p = .466, r = .20391$) as those with pessimistic explanatory styles who had higher defensive pessimism levels did not have significantly higher self-reported GPAs. The mean differences were not in the predicted direction and were not significant.

Hypothesis # 3a: More Optimistic Explanatory Style, Defensive Pessimism, and Exam Grades

It was hypothesized that there will be no difference in exam grades between those with more optimistic explanatory styles as compared to those who had more pessimistic explanatory styles and were in addition higher on defensive pessimism. A t-test was calculated to evaluate the hypothesis. As can be seen in Table 8, the null hypothesis could not be rejected ($t = .732, p = .472, r = .14778$).

Table 8

Academic Measures Differences between Those with More Optimistic Explanatory Styles and Those with More Pessimistic Explanatory Styles Who Also Scored High on Defensive Pessimism

Measures	More Optimistic		More Pessimistic + Defensive		df	t	r
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Exam Grade	10.57	2.420	11.4	1.342	24	.732	.14778
Course Grade	11.62	1.071	10.00	4.899	25	-1.463	.28083
Self-report GPA	3.79	.220172	3.500	.50000	21	-1.949	.39138

* $p < .05$

Hypothesis # 3b: More Optimistic Explanatory Style, Defensive Pessimism, and Course Grades

It was hypothesized that there will be no difference in course grades between those with more optimistic explanatory styles as compared to those who had more pessimistic explanatory styles and were in addition higher on defensive pessimism. A t-test was calculated to evaluate the hypothesis. As can be seen in Table 8, the null hypothesis could not be rejected ($t = -1.463$, $p = .156$, $r = .28083$).

Hypothesis # 3c: More Optimistic Explanatory Style, Defensive Pessimism, and GPA

It was hypothesized that there will be no difference in self-reported GPAs between those with more optimistic explanatory styles as compared to those who had more pessimistic explanatory styles and were in addition higher on defensive pessimism. A t-test was calculated to evaluate the hypothesis. As can be seen in Table 8, the null hypothesis could not be rejected ($t = -1.949$, $p = .065$, $r = .39138$).

Hypothesis # 4: Outcome Expectations, Defensive Pessimism, and Exam Scores

It was hypothesized that there will be no difference in outcome expectations between students who score low on the exam with those students who score high on defensive pessimism. Any participant that was both a low exam scorer and high on defensive pessimism was excluded. The null hypothesis was that there would be no differences in outcome expectations between those who scored low on the exam and those who scored high on defensive pessimism. A t-test was calculated to evaluate the hypothesis. As can be seen in Table 9, the null hypothesis could not be rejected ($t = -.498, p = .620, r = .05779$).

Table 9

Differences in Outcome and Efficacy Expectations between Defensive Pessimists and Low Exam Scorers

Expectations	Low Exam		High Defensive		df	t	r
	M	SD	M	SD			
Outcome	5.35	1.404	5.53	1.618	74	-.498	.05779
Efficacy	10.32	2.821	10.11	3.543	74	.277	.03218

* $p < .05$

Hypothesis # 5: Efficacy Expectations, Defensive Pessimism, and Exam Scores

It was hypothesized that there will be a significant difference in efficacy expectations between students who score low on the exam with those who score high on defensive pessimism. Any participant that was both a low exam scorer and high on defensive pessimism was excluded. The null hypothesis was that there would be no differences in efficacy expectations between those who scored low on the exam and those

who scored high on defensive pessimism. A t-test was calculated to evaluate the hypothesis. . As can be seen in Table 9, the null hypothesis could not be rejected ($t = .277, p = .782, r = .03218$).

RELIABILITY ESTIMATES FOR MEASURES

Internal consistency statistics were computed for the measures used in the study. Cronbach's coefficient alpha was calculated for the AASQ, the DPQ, and the BSI and can be seen in Table 10.

Table 10

Cronbach's Coefficient Alpha for Study Measures

Measure	Alpha	Number of Items
AASQ (CN)	.887	36
DPQ	.708	12
BSI	.973	53

EXPLORATORY ANALYSES

Other analyses of interest not related to the major hypotheses of the study were also conducted for exploratory purposes.

Exploratory Analysis # 1: Gender, Defensive Pessimism, and Explanatory Style

T-tests were conducted to see if there were any gender differences for defensive pessimism or pessimistic explanatory style. There were no significant differences between men and women on defensive pessimism ($t = -.1118, p = .265, r = .08259$). There were also no significant differences between men and women for explanatory styles ($t = -.147, p = .883, r = .01144$).

Exploratory Analysis # 2: Ethnicity, Defensive Pessimism, and Explanatory Style

An ANOVA was run to evaluate if there were any differences in defensive pessimism or explanatory style for various ethnic groups. There were no significant differences between ethnic groups for defensive pessimism ($F(5, 181) = .568, p = .724, \eta_p^2 = .015$). There were also no significant differences between ethnic groups for explanatory style ($F(5, 164) = 1.705, p = .136, \eta_p^2 = .049$).

Exploratory Analysis # 3: Undergraduates/Graduates, Defensive Pessimism, and Explanatory Style

T-tests were calculated to assess for differences between undergraduate students and graduate students on defensive pessimism or explanatory style. There were no significant differences between graduate and undergraduate students on defensive pessimism ($t = -.103, p = .918, r = .00763$). There were also no significant differences between graduate and undergraduate students for explanatory style ($t = .679, p = .498, r = .05262$).

Exploratory Analysis # 4: Relationship between Anxiety and Defensive Pessimism

Part of the definition of defensive pessimism includes a high level of anxiety. A correlation coefficient was calculated to evaluate if this was true in the current sample with anxiety as measured by the BSI. This relationship held true for the sample as defensive pessimism was positively associated with anxiety ($r = .205, p = .006$).

Exploratory Analysis # 5: Relationship between Depression and Explanatory Style

Past research has shown explanatory style to be associated with depression. A correlation coefficient was calculated to evaluate if this was true in the current sample with depression as measured by the BSI. This general finding did not hold for the current sample and this specific depression measure ($r = .073, p = .356$).

Exploratory Analysis # 6: Relationship between Expectations and Performance

There appears to be little research evaluating the relationship between expected performance and actual performance. This was explored for both exam expectations and performance as well as course grade expectations and performance. Students' predictions for performance on the exam were positively associated with actual performance ($r = .229, p = .002$). Students' predictions for course grade were positively associated with actual course grades ($r = .344, p = .000$).

Exploratory Analysis # 7: Measures of Explanatory Style and Academic Performance

Explanatory style for negative events (CN) was used to evaluate the main hypotheses. A correlation coefficient was calculated for CN with exam grade and course grades. CN did not correlate significantly with exam grade ($r = -.051, p = .511$) or course grade ($r = -.102, p = .186$). For exploratory purposes, explanatory style for positive events (CP) and composite explanatory style (CPCN), which subtracts CN from CP, were used for the following analyses. Correlation coefficients were calculated for both CP and CPCN with exam grade and course grade. Explanatory style for positive events (CP) was positively associated with exam grade ($r = .252, p = .001$) and course grade ($r = .211, p = .005$). Composite explanatory style (CPCN) was also positively associated with both exam grade ($r = .187, p = .020$) and course grade ($r = .217, p = .006$).

Exploratory Analysis # 8: BSI Dimensions, BSI Indices, Academic Performance, Defensive Pessimism, and Explanatory Style

The Brief Symptom Inventory (BSI) was also administered to the student participants. It is designed to reflect psychological symptoms. Various dimension scores are available including Somatization (SOM), Obsessive-Compulsive (O-C), Interpersonal Sensitivity (I-S), Depression (DEP), Anxiety (ANX), Hostility (HOS), Phobic Anxiety

(PHOB), Paranoid Ideation (PAR), and Psychoticism (PSY). The BSI also produces some global indices including Global Severity Index (GSI), Positive Symptom Total (PST), and Positive Symptom Distress Index (PSDI).

For exploratory purposes, correlation coefficients were calculated with the BSI dimensions and indices with various measures of academic performance and also with the two major variables of interest: defensive pessimism and explanatory style.

See Table 11 to see the results of these analyses. Overall, there were no significant relationships between BSI variables and exam grade. Two anxiety-related variables anxiety (ANX) and phobic anxiety (PHOB) as well as psychoticism (PSY) were all negatively associated with course grade. Only one BSI related variable was significantly correlated to explanatory style. The Positive Symptom Distress Index (PSDI) was positively associated with explanatory style. Defensive pessimism was positively associated with almost all the BSI variables with the exceptions of somatization (SOM) and the Positive Symptom Distress Index (PSDI).

Exploratory Analysis # 9: More Pessimistic Explanatory Style versus More Optimistic Explanatory Style on Academic Performance

To follow-up on hypothesis #3, a subsequent analysis was run to see those who had more pessimistic explanatory styles performed differently than those with more optimistic explanatory styles regardless of defensive pessimism variable. As can be seen in Table 12, t-tests were run to compare these groups finding no significant differences for exam grade ($t = 1.323, p = .193, r = .19560$), course grade ($t = 1.505, p = .139, r = .21891$), or self-report GPA ($t = 1.397, p = .171, r = .22677$).

Table 11

Correlations for BSI Dimensions and Indices, Defensive Pessimism, Explanatory Style, Exam Grade, and Course Grade

Variables	Defensive Pessimism	Explanatory Style	Exam Grade	Course Grade
1. SOM	.119	.080	-.010	-.120
2. O-C	.260**	.100	-.014	-.022
3. I-S	.309**	.081	.038	-.097
4. DEP	.169*	.073	.027	-.118
5. ANX	.205**	.053	-.070	-.147*
6. HOS	.246**	.119	-.034	-.061
7. PHOB	.197**	.057	.038	-.180*
8. PAR	.232**	.041	.012	-.112
9. PSY	.188*	.096	-.016	-.156*
10. GSI	.251**	.106	.005	-.057
11. PST	.255**	.056	.030	-.065
12. PSDI	.142	.210**	-.038	-.143

* $p < .05$

** $p < .001$

Table 12

Academic Measures Differences between Those with More Optimistic Explanatory Styles and Those with More Pessimistic Explanatory Styles

Measures	More Optimistic		More Pessimistic		<i>df</i>	<i>t</i>	<i>r</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Exam Grade	10.57	2.420	9.44	3.229	44	1.323	.19560
Course Grade	11.62	1.071	10.54	3.140	45	1.505	.21891
Self Reported GPA	3.79	.220172	3.57	.609440	36	1.397	.22677

* $p < .05$

Exploratory Analysis #10: Grade Distribution for Entire Sample and Divided by Graduate and Undergraduate

Frequencies and general descriptive statistics were run for the whole sample for exam grade and course grade. See Table 13. These same statistics were also calculated for graduate and undergraduate students separately. See Table 14.

For the entire sample, 72.4% of course grades were in the A range. For graduates 80% of course grades were in the A range and for undergraduates 66.9% of course grades were in the A range. For the entire sample, 50.6% of exam grades were in the A range. When expanded to A and B range, 77.6% of the sample is accounted for. For graduates 61.5% of exam grades were in the A range. When including both A and B ranges, 87.2% of the graduate sample is accounted for. For undergraduates 42.5% of exam grades were in the A range and this increases to 70.9% of the sample when including grades in the B range. For more detailed frequency and percent information for graduates and undergraduates see Tables 15 and 16.

Table 13

Means and Standard Deviations for Exam and Course Grades for Entire Sample

Variables	<i>M</i>	<i>SD</i>	<i>Mode</i>
Exam Grade	9.43	3.174	12
Course Grade	10.77	2.499	12

Grade coding: 1=F, 3=D, 6=C, 9=B, 12=A, 13=A+

Table 14

Exam Grades and Course Grades for Undergraduates and Graduates

Measures	Undergraduates			Graduates		
	<i>M</i>	<i>SD</i>	<i>Mode</i>	<i>M</i>	<i>SD</i>	<i>Mode</i>
Exam Grade	8.89	3.323	12	10.19	2.783	12
Course Grade	10.53	2.476	12	11.10	2.555	12

Grade coding: 1=F, 3=D, 6=C, 9=B, 12=A, 13=A+

Table 15

Exam Grade Frequency in Graduate and Undergraduate Sample

Measures	Graduates		Undergraduates	
	<i>frequency</i>	<i>percent</i>	<i>frequency</i>	<i>percent</i>
Grades in A range	43	61.5	48	42.5
Grades in B range	18	25.7	32	28.4
Grades in C range	3	4.3	20	17.7
Grades in D range	5	7.1	7	6.2
Grades in F range	1	1.4	6	5.3
Dropped Course or "I"	0	0	0	0

Grade coding: 1=F, 3=D, 6=C, 9=B, 12=A, 13=A+

Table 16

Course Grade Frequency in Graduate and Undergraduate Sample

Measures	Graduates		Undergraduates	
	<i>frequency</i>	<i>percent</i>	<i>frequency</i>	<i>percent</i>
Grades in A range	56	80	77	66.9
Grades in B range	11	15.7	25	21.8
Grades in C range	0	0	10	8.7
Grades in D range	0	0	1	.9
Grades in F range	0	0	0	0
Dropped Course or "I"	3	4.3	2	1.7

Grade coding: 1=F, 3=D, 6=C, 9=B, 12=A, 13=A+

CHAPTER V

DISCUSSION

SUMMARY

Overview of Study

This study examined the variables of explanatory style, defensive pessimism, and expectations. Explanatory style is a person's tendency to offer similar sorts of explanations for different outcomes in his or her life (Peterson et al., 1995). Styles can be categorized as pessimistic and optimistic. A person is described as having a pessimistic explanatory style if negative events are explained as internal, stable, and global. In other words, "It's me, it's going to last forever, and it's going to affect everything that happens to me." In general optimistic explanatory style is associated with higher academic achievement, but at times a pessimistic explanatory style has been found to be associated with higher academic achievement. Satterfield and colleagues (1997) suggested that the use of the strategy of defensive pessimism may explain these findings. Defensive pessimism is a cognitive strategy in which low expectations are set for performance despite a history of good performance in a specific domain. A person using this strategy plays out all scenarios that may happen and works hard to prepare the upcoming situation. This strategy leads to utilization of anxiety as motivation and subsequently good performance (Norem, 2001).

Graduate and undergraduate students from various universities and colleges were administered the AASQ (Academic Attributional Style Questionnaire), DPQ (Revised

Defensive Pessimism Questionnaire), and BSI (Brief Symptom Inventory) between one week and three weeks from an exam. Course instructors provided both the upcoming exam grade and overall course grade. Next, a summary of hypotheses and a brief discussion of the findings are presented.

Hypotheses 1a, 1b, and 1c

There was evidence for support of hypothesis 1a as explanatory style was positively correlated with total negative expectations. Explanatory style was also significantly negatively associated with expectations for course grade which supported hypothesis 1c. For hypothesis 1b, explanatory style was not significantly associated with expectations for exam grade, however.

Hypotheses 2a, 2b, and 2c

Hypotheses 2a, 2b, and 2c did not detect statistically significant results. It was hypothesized that among those with more pessimistic explanatory styles, those who were also high on defensive pessimism would outperform those who were low on defensive pessimism. There was no difference between the groups on exam grades, course grades, and self-reported GPA. Another related finding indicated that there were also no differences between those with more pessimistic explanatory style in comparison to those with more optimistic explanatory styles on exam grades, course grades, and self-reported GPA.

Hypotheses 3a, 3b, and 3c

Hypotheses 3a, 3b, and 3c were comparing those who had more optimistic explanatory styles to those with more pessimistic explanatory styles who also were high on defensive pessimism on measures of academic achievement. The null hypothesis was

not rejected which is consistent with what the researcher expected. Previous research might suggest that those who were more optimistic would outperform those who were more pessimistic. No such difference was able to be detected in the current study. Another related finding indicated that there were also no differences between those with more pessimistic explanatory style in comparison to those with more optimistic explanatory styles on exam grades, course grades, and self-reported GPA. It is important to note that lack of detected differences does not mean that groups perform at the same levels. A different design and statistical approach may be needed to evaluate this issue.

Hypothesis 4

For hypothesis 4, it was expected that low exam scorers and those high on defensive pessimism would have equally low outcome expectations. There turned out to be no differences in outcome expectations. Part of the approach defensive pessimists take is to lower outcome expectations to motivate them. This result shows no differences were detected between defensive pessimists' outcome expectations for academic performance to those who are both low scorers and non-defensive pessimists. The failure to discover differences between groups is not the same as determining that the groups perform at the same levels. A different design and statistical approach may be needed to make this statement.

Hypothesis 5

For hypothesis 5, it was hypothesized that low exam scorers would have lower efficacy expectations in comparison to defensive pessimists. There was not evidence to support this. It was expected that since defensive pessimists are successful with their

strategy, that there would be some impact on confidence in comparison to those who score low on exams. There were no differences detected between the two groups.

Exploratory Analyses

Several exploratory analyses were also conducted. There were no gender differences, no differences for various ethnic groups, and no differences between graduates and undergraduates for levels of defensive pessimism and levels of explanatory style. There were no differences between those with more optimistic explanatory styles and more pessimistic explanatory styles on academic performance. Consistent with the definition of defensive pessimism, there was a positive relationship between anxiety and defensive pessimism. While it would likely be expected for depression to be significantly correlated to explanatory style, it was not.

Students' expectations for performance were positively related to actual performance on exams and course grades. Explanatory style was not associated with exam grade and course grades as expected and found in other research. Other measures of optimism were related to exam grade and course grade.

Multiple psychological symptoms had positive relationships to defensive pessimism, whereas few were associated with explanatory style. The first finding is significant is there no research current linking the concept of defensive pessimism and psychological symptomology. The second is surprising as pessimistic explanatory style has been associated with depression in previous studies including two meta-analyses (Joiner & Wagner, 1995; Sweeney et al., 1986).

EXPLANATION OF FINDINGS AND LINKS TO CURRENT LITERATURE

Hypothesis One

For hypothesis one, it was predicted that explanatory style would be related to various measures of expectations. As expected, a positive relationship between total negative expectations (“How likely is this to happen to you?”) and explanatory style was found. The size of this relationship was similar to some of the larger correlations found in other studies that examined the relationship of pessimistic explanatory to similar variables. This finding appears to show evidence that holding an *expectation* that some negative academic event is likely to happen and *explanations* of negative events are related in some way.

There was also a relationship between explanatory style and expectations for course grade (“The grade I expect at the end of the course is...”). This relationship was slightly below the median of correlations found in other studies with similar variables. This finding appears to show evidence that holding *expectations* held about course performance and *explanations* of negative events are related in some way.

There was not a significant relationship between explanatory style and expectations for exam grade (“The grade I expect on the next exam is...”). The size of the relationship was in the lower part of the range of correlations found by other studies with similar variables. Why was there a relationship between explanatory style and expectations for likeliness that a specific negative event will happen and with expectations for performance on course grade, but not for expectations for academic performance on exam grade? Perhaps, there is a difference in expectations between the imagined hypothetical situations on the AASQ in comparison to the reality of the known

exam coming in the near future. There may also be a temporal consideration. The exam task was approaching sooner relative to the course grade. The exam task was also more specific in comparison to the sum of tasks that are needed to complete for a course grade. Total negative expectations also was a composite of 12 responses, whereas, the course grade expectation and exam grade expectation scores were both based on a Likert scale response to a single question. This finding leaves some confusion and current literature review appears to provide no light as surprisingly little is known about the relationship between explanations and expectations (Brown & Marshall, 2001).

Hypothesis Two

For hypothesis two, it was predicted that among those who had more pessimistic explanatory styles, those who were high on defensive pessimism would outperform those who were low on defensive pessimism. There were no differences between the groups on exam grades, course grades, and self-report GPA. What might explain these results? There are several possible factors that may account for the inability to detect differences. The researcher collected letter grades instead of percentage scores or total points. This approach limited the range of scores and decreased sensitivity to detect differences. Grades were also from different courses at different institutions. This may have limited the ability to compare performances. GPAs were based on self-report which likely decreased the accuracy of this data. For some analyses, once groups were created based on operational definitions, the group size used in comparisons were small.

It is also possible that defensive pessimism does not account for differences within the group of people with more pessimistic explanatory styles. One significant finding in this sample that supports this explanation is that there were no differences at all

between those with more pessimistic explanatory styles and more optimistic explanatory styles regardless of level of defensive pessimism. In the literature review, there were no studies found that incorporated both defensive pessimism and explanatory style to contrast with the current results.

Hypothesis Three

For hypotheses three, it was expected that those who had more pessimistic explanatory styles and were also high on defensive pessimism would perform equally well to those who had more optimistic explanatory styles. As expected, there were no differences detected between the groups on exam grades, course grades, and self-reported GPA. The failure to discover differences between groups is not the same as determining that the groups perform at the same levels. A different design and statistical approach may be needed to evaluate if the groups performed the same.

One possible explanation is that there are no differences in performances between those who are more pessimistic and those who are more optimistic and that defensive pessimism has no impact on this. One significant finding in this sample that supports this explanation is that there were no differences at all between those with more pessimistic explanatory styles and more optimistic explanatory styles without considering the variable of defensive pessimism. This finding goes against the majority of studies (Henry et al., 1993; Kamen & Seligman, 1985; Musgrave-Marquart et al., 1997; Nolen-Hoeksema et al., 1986; Peterson & Barrett, 1987; Peterson et al., 1988; Petiprin & Johnson, 1991; Ritchie, 1999; Schulman et al., 1990; Sinkavich, 1994; Villanova et al., 1988) that found at least some support that pessimistic explanatory style is associated with worse academic performance, although studies (Belgrave et al., 1992; Bridges,

2001; Fazio & Palm, 1998; Houston, 1994; LaForge & Cantrell, 2003; Ralph & Mineka, 1998; Robertson, 1993; Satterfield et al., 1997; Tiggerman & Crowley, 1993) without evidence for this relationship or for evidence for the relationship in the opposite direction appear to be increasing in numbers in the literature.

A second potential explanation could be related to achievement measure data issues. The researcher collected letter grades instead of percentage scores or total points. This approach limited the range of scores and decreased sensitivity to detect differences. Grades were also from different courses at different institutions. This may have limited the ability to compare performances. GPAs were based on self-report which likely decreased the accuracy of this data. Ultimately, little can be said about the two groups as the null hypothesis was not rejected.

Hypothesis Four

For hypothesis four, it was expected that those who were high on defensive pessimism would have equally low outcome expectations (“I expect this exam will go very well”) to low scorers on the exams. As predicted, there were not significant differences on outcome expectations for the two groups. It is important to note that lack of detected differences does not mean that groups perform at the same levels. A different study and statistical approach may be needed to evaluate this issue.

Hypothesis Five

For hypothesis five, it was predicted that low exam scorers would have lower efficacy expectations to (“I feel I can handle myself very well in exam situations” and “I feel very confident in my ability to perform well on this exam”) in comparison to defensive pessimists. There were no differences between the two groups contrary to

researcher expectations. What might explain these results? This interpretation of the current results are consistent with Showers and Ruben's (1990) finding that moderately depressed participants and defensive pessimists had similar efficacy expectations *prior* to the situation. The current study found no difference in efficacy expectations between defensive pessimists and low exam scorers *prior* to the situation of the exam as well. The assumption was that past success would have impacted defensive pessimist's beliefs in their abilities to handle the situation. Perhaps, once the defensive pessimist's strategy is activated as a task approaches, there is no detectable change in efficacy until after the task has been completed. This was not assessed in the current study.

Another suggested explanation is that any sense of strengthening efficacy or positive expectations impedes the use of defensive pessimism. There is evidence in the literature that performance suffers when defensive pessimists are unable to use their preferred strategy in a situation (Norem, 1987; Norem & Cantor, 1986b; Norem & Chang, 2002; Sanna, 1998; Spencer & Norem, 1996).

Another possible explanation is that the limited range of grades did not allow differences to be detected. Perhaps, a more extensive measure of outcome and efficacy expectations than the one used in the current study, which was composite of two Likert-scale questions, could detect differences in expectations.

Exploratory Analyses

Some exploratory analyses also warrant explanations. There were no differences between those with more optimistic explanatory styles and more pessimistic explanatory styles on academic performance. This is surprising as generally research has found that

more optimistic people perform better. This question is addressed in hypothesis three above.

There were no differences for various ethnic groups for levels of defensive pessimism and levels of explanatory style. At least two studies (i.e., Belgrave et al., 1992; Robertson, 1993) have found some culturally relevant findings when examining explanatory style and academic achievement. See the current literature review for a discussion of these findings. Perhaps, in a larger study with a more diverse sample, some differences regarding defensive pessimism or explanatory style may exist. Cultural norms for utilizing a collective versus individualist philosophy could impact explanations. Groups that have experienced discrimination and institutional biases may have developed styles that account for the impact of these forces in their lives. Different spiritual beliefs and general worldviews may also impact the explanatory process.

Consistent with the definition of defensive pessimism, there was a positive relationship between anxiety and defensive pessimism. This supports the theoretical definition of defensive pessimism. The BSI anxiety dimension looks at general signs of nervousness and tension, panic, and apprehensiveness (Derogatis, 1993, p. 8). Norem (2001a) has reported that defensive pessimists utilize their anxiety for motivation which then is directed toward preparation. Other studies have also shown that people higher on defensive pessimism have higher anxiety levels than those low on defensive pessimism (Norem & Cantor, 1986b, Sanna, 1996; Spencer & Norem, 1996). The current finding adds some support to the previous discoveries involving anxiety and defensive pessimism.

Contrary to expectations, depression was not related to explanatory style. A possible explanation could be that the participants were a non-clinical sample and may not have had enough depressive symptoms for this to be a factor. Sweeney and colleagues (1986) indicated that larger effect sizes were found for the relationship between explanatory style and depression when psychiatric depressives were used in comparison to college students.

Students' expectations for performance were positively related to actual performance on exams and in courses. Explanatory style was not associated with exam grade and course grades as expected and found in past research. Another related finding in this sample was that there were no differences at all between those with more pessimistic explanatory styles and more optimistic explanatory styles on exam grades, course grades, and self-reported GPA.

Explanatory style for positive events (CP) was related to exam grade and course grade. The size of the relationship with exam grade was similar to some of the larger correlations found between CP and similar variables in other studies. The size of the relationship between CP and course grade was above average when compared to findings of other studies. The composite of explanatory style minus explanatory style for negative events (CPCN) both were related to exam grade and course grade. The size of the relationship with exam grade was average when compared to findings of other studies. The size of the relationship between CPCN and course grade was comparable to some of the larger correlations found between CPCN and similar variables in other studies. It is unclear why explanations for positive events (CP) and the composite of explanations for positive events minus explanations for negative events (CPCN) would show these

relationships when explanations for negative events (CN) did not. CN has generally had stronger associations to academic achievement than CP and CPCN.

Multiple psychological symptoms had positive relationships to defensive pessimism, whereas few were associated with explanatory style. The first finding is significant. Other than having initially high anxiety levels when enacting a defensive pessimistic strategy, there was no research found in the current literature review linking the concept of defensive pessimism and psychological symptomology. The second is surprising as pessimistic explanatory style has been associated with depression in two meta-analyses (Joiner & Wagner, 1995; Sweeney et al., 1986).

CONTRIBUTIONS AND IMPLICATIONS OF FINDINGS

Unique Contributions in Variables and Sample

One of the unique aspects of the current study that adds to the current research literature is the sample characteristics. No studies in the literature review were found to have varying levels of students from multiple institutions of higher education. This study included students from five universities and colleges as well as included graduate and undergraduate students.

Another contribution this study makes to the current literature is that no other studies were found in the literature review that included defensive pessimism and explanatory style in the same study of academic achievement. There has also been very little research conducted regarding the relationship between expectations and explanations. This study adds to this area, too.

Implications of Findings

Expectations and Explanatory Style

The findings related to explanatory style and expectations imply there may be some type of relationship between these two variables. This needs to be investigated further as the current study did not have clear results regarding the nature of this relationship.

Defensive Pessimism, Explanatory Style, and Academic Performance

The findings within the group of those with more pessimistic explanatory styles who were higher on defensive pessimism versus those who were lower on defensive pessimism found no differences. This is the first study the researcher is aware of that looked at these variables in conjunction. The best early conclusion is that defensive pessimism does not play a role in the academic performance within the group of people with more pessimistic explanatory styles. There needs to more study involving these two variables for further clarification. Another finding was that no differences were detected between those who had more optimistic explanatory styles and those who had more pessimistic explanatory styles and used defensive pessimism. A different study design and statistical approach may be needed to see if these groups can perform similarly well.

Outcome Expectations, Efficacy Expectations, and Defensive Pessimism

No differences on outcome expectations were found between those who were high on defensive pessimism and those who scored low on the exam. It is possible that differences that exist were not detected. A more sophisticated study may be needed to see if these groups have similarly low outcome expectations. If those who perform poorly can be shown to have similar expectations for outcome to people who are high on defensive

pessimism, then this would lend support to the current theoretical definition of defensive pessimism. It could possibly show that the outcome of those who were high on defensive pessimism was not determined by their poor expectations for performance.

It was also found that there were no differences between low exam scorers and those high on defensive pessimism for efficacy expectations. If this finding were to be duplicated in other studies, it could raise an important question. If a person successfully uses defensive pessimism as a strategy, is there any impact on their academic confidence from their successful experiences? Perhaps there is an increase in efficacy in between tasks or following successful completion of the task. This was not assessed in the current study. It could also be that defensive pessimists rigidly cling to their strategy in order to maintain its effectiveness and convince themselves of their low expectations which motivate them. There is research evidence that performance suffers when defensive pessimists are unable to use their preferred strategy in a situation (Norem, 1987; Norem & Cantor, 1986b; Norem & Chang, 2002; Sanna, 1998; Spencer & Norem, 1996).

Other Defensive Pessimism Findings

There was more support for the theoretical definition of defensive pessimism. There was a relationship between anxiety as measured by the BSI and defensive pessimism. In addition to anxiety, multiple psychological symptoms on the BSI had positive relationships to defensive pessimism. There was no research found in the current literature review linking the concept of defensive pessimism and other psychological symptomology. The implications of these findings may be that people who use defensive pessimism may be at risk for mental health problems or vice versa. If future research

supports this, it may be wise to work with people using defensive pessimism to develop a healthier strategy to help them continue their success.

LIMITATIONS

There were limitations from the current study worth noting. Some of these have been discussed in the course of attempts to explain the current findings and it will be revisited here.

Design and Internal Validity

The study did not involve random assignment of subjects. Independent variables were not directly manipulated by the researcher, so there will always be some doubt about the affect of independent variables on the dependent variables. It is also possible that variables that were not measured caused the effects that were detected.

External Validity

Using college students for academic situations limits any ability to generalize to other populations or other situations. The sample was also primarily Caucasian and African-American. There were not large enough numbers of other ethnicities to warrant generalizing results to those groups.

Analyses and Power

Another limitation was the narrow scope of the some the main hypotheses. Looking at smaller subgroups made for a small window to look for relationships and differences. This also limited the statistical power by shrinking the sample size used for some analyses. Another component that was lacking from the current study was more follow-up data on efficacy expectations which could have given information about how efficacy expectations may have fluctuated following the exam or the end of the course. It

is possible that defensive pessimism and explanatory style have a curvilinear relationship. This was not evaluated in this study and it was assumed that the relationships were linear.

Measurement Concerns

Using letter grades and coding them was also a limiting factor. It may have hidden some true differences and likely did not reflect the full variability contained in scores that could have been shown by percentages or total points. There also appeared to be a limited range of grades in the sample. Grades were also from different courses at different institutions. This may have limited the ability to compare performances. Utilizing self-report for GPA, ACT scores, and SAT scores likely limited the accuracy and amount of data for those variables.

FINAL COMMENTS AND FUTURE DIRECTIONS

Given the current findings and those of previous research there is still more to be investigated. It is important for researchers to continue seeking a fuller understanding of defensive pessimism, explanatory style, expectations, academic achievement, and the relationships among these variables. The study of these relationships is a newer area of research and it needs to be explored to see if there is value to be gained from continued investigation. It is too early to tell at this point.

Future projects need to consider many factors in conducting research in these areas. It is recommended that researchers consider carefully the best methods to collect academic achievement data and determine what form the data could be collected to make analyses most effective and meaningful. Making sure to keep all achievement scores in continuous form and getting achievement data from official records will also improve accuracy. Future researchers may also want to expand to include other life areas and

domains in addition to academics within the same study. Social/interpersonal, spiritual, and recreational are examples of areas that could be examined in relation to explanatory style, expectations, defensive pessimism, and academic performance.

The current sample can serve as a model for utilizing varying levels of students from different institutions. Future samples would be served well to include as diverse a group as possible to increase the ability generalize. Longer-term studies with multiple collections of data will also improve the knowledge base in these areas.

Based on the current study's results and the review of the literature, it is suggested that college instructors, college counselors, student advisors, and other staff that regularly interact with students consider the impact of thinking styles on student success. College personnel interacting with students need to be aware of cognitive variables relevant to student success including: expectations, strategies, and explanations. The issue appears more complex than positive thinking is always best and should always be encouraged. The research literature continues to suggest that, in general, optimism is associated with better outcomes, but this is not the case for all students. In addition to working to increase awareness of these cognitive processes, college staff may want to do an informal assessment of how expectations, approaches to tasks, and explanations are working for the student. Low expectations may be one factor of importance. Two measures of low expectations were associated with pessimistic explanations in the current study, whereas one measure of low expectations was not associated. Low expectations are also an integral part of the defensive pessimism. If college staff notice low expectations, a deeper consideration of these expectations would likely be beneficial. If the student appears to be using a defensive pessimistic strategy, is it effective? Research on defensive pessimism

has shown that interfering with a student's preferred strategy impairs performance (Norem, 1987; Norem & Cantor, 1986b; Norem & Chang, 2002; Sanna, 1998; Spencer & Norem, 1996). If the student is generally pessimistic in explanations of academic events, is this style of explanation causing any problems? As previous research has associated pessimistic explanatory style with depression (e.g., Joiner & Wagner, 1995; Sweeney et al., 1986) and the current study found defensive pessimism to be associated with multiple psychological symptoms, it is recommended that college staff be especially vigilant to notice any signs of mental health problems in students with pessimistic strategies or explanations, and refer for services as appropriate. The current study attempted to see if those with more pessimistic explanatory styles who used defensive pessimism could perform as well as those with more optimistic styles and outperform those with more pessimistic explanatory styles who did not use defensive pessimism, but did not find a clear answer. More research still needs to clarify if encouraging defensive pessimism in those with pessimistic explanatory styles can improve student performance.

It is also recommended that college staff consider the relevance of these factors to their own thinking. If the staff themselves utilize defensive pessimism, they may inadvertently encourage this strategy in students that it is not appropriate or effective for. If a staff person is optimistic in explanations and approaches to tasks, he or she may encourage this in students that are better served by pessimistic styles and strategies.

With continued diligence and thoughtful investigations, researchers may be able to use information gained to help identify students at risk for academic failure or mental health difficulties. Once at risk student can be identified based on these variables, it may be possible to develop interventions to change explanatory styles or decide under what

conditions defensive pessimism as strategy is a healthy and effective choice for students. It is important that these results are delivered in a practical package to college staff that interact frequently with students so they may make use of the knowledge gleaned from this research.

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APPENDIX A

Personal Data Sheet

Code #: _____

Sex (circle one): Male Female

Age: _____ years _____ months

Ethnicity (check box or fill in):

- White/Caucasian/European-American
- Native American/American Indian/Alaskan Eskimo
- Hispanic/Latino(a)
- Asian-American
- Black/African American
- Arab American
- Other (Please fill in): _____

Name of college/university: _____ Major: _____

What is the subject of this course (i.e., English, Psychology, etc.)? _____

How many courses in this subject area have you taken at the college level? _____

What is your average grade in those courses (circle one): A B C D F

Anticipated career: _____

Year in college (circle one): FR SOPH JR SR GRADUATE STUDENT

Please fill in the following data to the best of your memory:

ACT total score: _____ SAT total score: _____

High School Class Rank (#/total): _____ / _____ Current GPA: _____
Class rank No. in class

Regarding the next exam in this class:

The grade I expect on the next exam is (circle one): A B C D F

Indicate your agreement/disagreement with the scale below for the following statements:

1-----2-----3-----4-----5-----6-----7

Strongly Disagree **Strongly Agree**

- (O) I expect this exam will go very well _____
- (PD) I expect this exam will be very difficult for me _____
- (PD) I think I will have very little control over the outcome of this exam _____
- (SE) I feel I can handle myself very well in exam situations _____
- (SE) I feel very confident in my ability to perform well on this exam _____

Regarding your overall performance in this class:

The grade I expect at the end of the course is (circle one): A B C D F

Revised Defensive Pessimism Questionnaire (DPQ)

When you answer the following questions, please think about how you prepare for, and think about ACADEMIC situations. Each of the statements below describes how people sometimes think or feel about these kinds of situations. In the blanks beside each statement, please indicate how true it is of you, in academic situations.

1-----2-----3-----4-----5-----6-----7

Not at all
true of me

Very true
of me

- ___ 1. I go into academic situations expecting the worst, even though I know I will probably do OK.
- ___ 2. I generally go into academic situations with positive expectations about how I will do.
- ___ 3. I've generally done pretty well in academic situations in the past.
- ___ 4. I carefully consider all possible outcomes before academic situations.
- ___ 5. When I do well in academic situations, I often feel really happy.
- ___ 6. I often worry, in academic situations, that I won't be able to carry through my intentions.
- ___ 7. I often think about how I will feel if I do very poorly in academic situations.
- ___ 8. I often think about how I will feel if I do very well in academic situations.
- ___ 9. When I do well in academic situations, it is usually because I didn't get too worried about it beforehand.
- ___ 10. I often try to figure out how likely it is that I will do very poorly in academic situations.
- ___ 11. I'm careful not to become overconfident in academic situations.
- ___ 12. I spend a lot of time planning when an academic situation is coming up.
- ___ 13. When working with others in academic situations, I often worry that they will control things or interfere with my plans.
- ___ 14. I often try to figure out how likely it is that I will do very well in academic situations.
- ___ 15. In academic situations, sometimes I worry more about looking like a fool than doing really well.
- ___ 16. Prior to academic situations, I avoid thinking about possible bad outcomes
- ___ 17. Considering what can go wrong in academic situations helps me to prepare.

AASQ-E

Please try to imagine yourself in the situations that follow. How likely is such a situation to happen to you? If such a situation were to happen to you, what would you feel would have caused it? While events have many causes, we want you to pick only one—the major cause if this event happened to you.

After deciding how likely the event is to happen to you, please write this cause in the blank provided after each event. Then we want you to answer three questions about the causes you provided. First, is the cause of this event something about you or something about other people or circumstances? Second, is the cause of this event something that will persist across time or something that will never again be present? Third, is the cause of this event something that affects all situations in your life or something that only affects just this type of event?

To summarize, we want you to:

1. Read each situation
2. Indicate how likely it is to happen to you by circling one number
3. Vividly imagine it happening to you.
4. Decide what you feel would be the one major cause of the situation if it happened to you.
5. Write the cause in the blank provided.
6. Answer three questions about the cause. Circle only one number per question.
7. Go on to the next situation

1. YOU CANNOT GET DONE ALL THE READING DONE THAT YOUR INSTRUCTOR ASSIGNS.

A. How likely is this to happen to you? (Please circle one number)

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

2. YOU FAIL A FINAL EXAMINATION.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

3. YOU SHOW UP FOR A CLASS AND FIND TO YOUR SURPRISE THAT THERE IS A QUIZ.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances?
(circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

4. YOU ARE ON ACADEMIC PROBATION

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances?
(circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

7. YOU ARE DROPPED FROM THE UNIVERSITY BECAUSE YOUR GRADES ARE TOO LOW.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

8. YOU CANNOT GET STARTED WRITING A PAPER.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situations 1 2 3 4 5 6 7 Influences all situations in my life

9. YOU CANNOT FIND A BOOK IN THE LIBRARY.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other 1 2 3 4 5 6 7 Totally due to
people or circumstances me

D. In the future, will this cause again be present? (circle one number)

Will never 1 2 3 4 5 6 7 Will always
again be present be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just 1 2 3 4 5 6 7 Influences all
this particular situation situations in
situation my life

10. THE REQUIRED TEXTBOOK FOR A COURSE IS UNAVAILABLE IN THE SCHOOL BOOKSTORE.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other 1 2 3 4 5 6 7 Totally due to
people or circumstances me

D. In the future, will this cause again be present? (circle one number)

Will never 1 2 3 4 5 6 7 Will always
again be present be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just 1 2 3 4 5 6 7 Influences all
this particular situation situations in
situation my life

11. YOU GET A D IN A COURSE REQUIRED FOR YOUR MAJOR.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

12. YOU CANNOT UNDERSTAND ATHE POINTS A LECTURER MAKES.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

13. YOU GIVE A PRESENTATION IN CLASS AND RECEIVE A FAVORABLE GRADE.

A. How likely is this to happen to you?

Very unlikely	1	2	3	4	5	6	7	Very likely
---------------	---	---	---	---	---	---	---	-------------

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances?
(circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
---	---	---	---	---	---	---	---	----------------------

D. In the future, will this cause again be present? (circle one number)

Will never again be present	1	2	3	4	5	6	7	Will always be present
--------------------------------	---	---	---	---	---	---	---	---------------------------

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
---	---	---	---	---	---	---	---	--

14. YOU MAKE A HIGHER GRADE THAT EXPECTED ON AN EXAMINATION.

A. How likely is this to happen to you?

Very unlikely	1	2	3	4	5	6	7	Very likely
---------------	---	---	---	---	---	---	---	-------------

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances?
(circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
---	---	---	---	---	---	---	---	----------------------

D. In the future, will this cause again be present? (circle one number)

Will never again be present	1	2	3	4	5	6	7	Will always be present
--------------------------------	---	---	---	---	---	---	---	---------------------------

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
---	---	---	---	---	---	---	---	--

15. AN INSTRUCTOR PRAISES YOUR WORK IN CLASS.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

16. YOU RECEIVE AN ACADEMIC SCHOLARSHIP.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

17. YOU ARE ONE OF THE FEW STUDENTS WHO SUCCESSFULLY COMPLETED A PROJECT FOR EXTRA CREDIT.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

18. YOU ARE CAUGHT UP ON YOUR CLASS ASSIGNMENTS.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

19. YOU ARE ASSIGNED A SET OF 20 HOMEWORK PROBLEMS AND YOU SUCCESSFULLY COMPLETE THEM ALL.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

20. A FELLOW STUDENT COMES TO YOU WITH A PROBLEM, AND YOU ARE ABLE TO HELP.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

23. YOU GET A PAPER BACK FROM A PROFESSOR WITH GLOWING, POSITIVE COMMENTS WRITTEN ON IT.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

24. YOU GET AN EXCELLENT EVALUATION FROM YOUR SUPERVISOR WHILE YOU ARE ON INTERNSHIP.

A. How likely is this to happen to you?

Very unlikely 1 2 3 4 5 6 7 Very likely

B. Write down the one major cause: _____

C. Is this cause due to something about you or something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

D. In the future, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

E. Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

APPENDIX B

Permissions for Use of Measures

From : "Julie K. Norem" <jnorem@wellesley.edu>
To : scott_r_berry@hotmail.com
Subject : Re: R-DPQ Permission
Date : Tue, 03 Dec 2002 10:53:07 -0500

To Whom it May Concern,
Scott R. Berry has my permission to use the Revised Defensive Pessimism
Quesitonnaire (R-DPQ) for research purposes.


Julie K. Norem

Julie K. Norem, Ph.D.
Professor
Department of Psychology
Wellesley College
Wellesley, MA 02481
PH: 781-283-3002
FAX: 781-283-3730
EMAIL: jnorem@wellesley.edu

Mail Message

Novell.

Close Previous Next Forward Reply to Sender Reply All Move Delete Read Later Properties

From: Christopher Peterson <chrispét@umich.edu>
To: Scott R Berry
Date: Tuesday - April 22, 2003 7:38 AM
Subject: Re: permission for AASQ
 Mime.822 (1706 bytes) [View](#) [Save As](#)

Feel free to use the measure - Chris Peterson

On Mon, 21 Apr 2003, Scott R Berry wrote:

> Dr. Peterson,
> Thanks for the prompt response about the various manuscripts I
> inquired about. I found a copy of the AASQ in the back a dissertation by
> Ritchie (1999). Will you send me an e-mail granting me permission to use
> the AASQ for my dissertation?
>
> Thank you for your time.
>
> Scott Berry
> Counseling Psychology Doctoral Student
> University of Louisville
>

UNIVERSITY of PENNSYLVANIA

School of Arts and Sciences

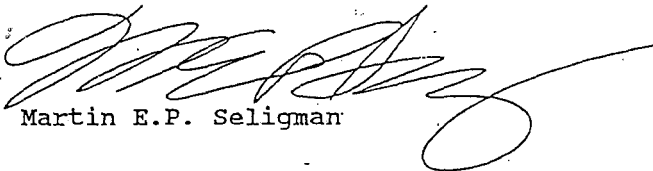
Department of Psychology
3815 Walnut Street
Philadelphia, PA 19104-6196
Martin E.P. Seligman
Professor of Psychology

Telephone: 215-898-7173
Office Fax: 215-573-2188
Home Fax: 610-896-6273
email: seligman@cattell.psych.upenn.edu

PERMISSION TO USE THE ATTRIBUTIONAL STYLE QUESTIONNAIRE

The Attributional Style Questionnaire (ASQ) is copyrighted material and may only be used with the written permission of the author, Dr. Martin E.P. Seligman. This letter grants you permission to use the ASQ, so please keep it on file. The questionnaire may be used only for academic research or by a clinical psychologist for the diagnosis or treatment of patients. It may not be used for profit or for any corporate-related activities.

Sincerely,



Martin E.P. Seligman

Mail Message

Novell.

Close Previous Next Forward Reply to Sender Reply All Move Delete Read Later Properties

From: "Constance Campbell" <ccampbell@GaSoU.edu>

To: Scott R Berry

Date: Tuesday - April 29, 2003 5:59 PM

Subject: Modified



Mime.822 (2136 bytes) [View](#) [Save As](#)

You have permission to use the ASQ academic version, which was modified by myself (Constance Campbell) and John Henry.

Constance Campbell

APPENDIX C

Institutional Review Board Documents



HUMAN SUBJECTS PROTECTION
PROGRAM OFFICE

University of Louisville
MedCenter One, Suite 200
501 E. Broadway
Louisville, Kentucky 40202-1798

Office: 502-852-5188
Fax: 502-852-2164

Tuesday, January 24, 2006

Kathleen Kirby, EdD
Educational & Counseling Psychology

RE: 014.06: Defensive Pessimism, Explanatory Style, Expectations and Academic Achievement

Dear Ms. Kirby:

This study has been reviewed by the chair of the Institutional Review Board (IRB) and approved through the Expedited Review Procedure, according to 45 CFR 46.110(b), since (7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

The following items have been approved:

- Research Protocol, dated 1/8/2006
- Informed Consent, dated 12/13/2005

Your study now has final IRB approval through 1/22/2007. You should complete and return the Progress Report/Continuation Request Form EIGHT weeks prior to this date in order to ensure that no lapse in approval occurs. The committee will be advised of this action at their next full board meeting.

Please note that the IRB follows the principles of the Belmont Report, is in compliance with Good Clinical Practice Guidelines as defined by the U.S. Food and Drug Administration and the Department of Health and Human Services under the Code of Federal Regulations (21 CFR Parts 50 and 56; 45 CFR 46) and International Conference on Harmonization (ICH) Guidelines (Section E6).

Best wishes for a successful study. Please send all inquires and electronic revised/requested items to our office email address at hsppofc@louisville.edu.

Sincerely,

Patricia K. Leitsch, Ph.D., Chair,
Behavioral/Social/Educational Institutional Review Board

PKL/elp

HUMAN SUBJECTS PROTECTION
PROGRAM OFFICE

University of Louisville
MedCenter One, Suite 200
501 E. Broadway
Louisville, Kentucky 40202-1798

Office: 502-852-5188
Fax: 502-852-2164

UNIVERSITY of LOUISVILLE

dare to be great

January 9, 2007

Kathleen Kirby, Ed.D.
(Scott R. Berry)
Educational & Counseling Psychology
University of Louisville
Louisville, KY 40292

RE: IRB#014.06 - Defensive Pessimism, Explanatory Style, Expectations and Academic Achievement

Dear Doctor Kirby:

The continuation request for the above study was reviewed by the Chair of the Institutional Review Board (IRB) through the expedited review procedure, according to 45 CFR 46.110(F)(8-9) and 21 CFR 56.110, since (8) Continuing review of research previously approved by the convened IRB as follows: where (i) the remaining research activities are limited to data analysis. **The study now has continued committee approval from 1/23/2007 through 1/22/2008.**

The following items were reviewed and approved:

- ****Progress Report, dated 11/25/06**
- Protocol Synopsis, not dated

The committee will be advised of this action at their next full board meeting.

****As a reminder, Principal Investigator should inform Scott Berry that he should have signed the consent as person explaining consent and Dr. Kirby should have signed as investigator and within 2 weeks of enrolling subjects.**

Please submit a Progress Report/Continuation Request Form **eight weeks prior to 1/22/2008**, in order to ensure that no lapse in approval occurs.

Best wishes for the continued success of your study. Please send all inquires and electronic revised/requested items to our office email address at hsppofc@louisville.edu.

Sincerely,

Patricia K. Leitsch

Patricia K. Leitsch, Ph.D., Chair
Social/Behavioral/Educational Institutional Review Board

PKL/nik

CURRICULUM VITAE

Scott R. Berry

EDUCATIONAL BACKGROUND

- Expected, 2007 Ph.D. candidate, Counseling Psychology
(APA accredited program)
University of Louisville, Louisville, KY
- 2000 M.A., Clinical Psychology
Spalding University, Louisville, KY
- 1997 B.A., Psychology
(minors in Philosophy and Interpersonal Relations)
Ball State University, Muncie, IN

HONORS

- 2002 Passed Elective portion of Comprehensive Exams with
Honors
- 2000-2002 University Fellowship
University of Louisville
- 1999 “Best of the Best Award”
Seven Counties Services, Inc.
- 1999 “Quality Excellence Team Award”
Seven Counties Services, Inc.
- Undergraduate -Presidential scholarship
-Rinker scholarship for study abroad
-Studied at University of Amsterdam for a semester
-Graduate of Honors College

PROFESSIONAL EXPERIENCE

Counseling, Psychotherapy, and Assessment

Employment

7/05-present

Staff Therapist

*Dual Diagnosis Treatment Center
LifeSpring Mental Health Services
Jeffersonville, IN*

Internship

7/03-7/04

Pre-doctoral Psychology Intern

*Butler University Counseling Center/BehaviorCorp
Consortium (APA Accredited internship)
Indianapolis, IN*

Practica

9/02-12/02

Field Experience Student: Therapist

*LifeSpring Mental Health Services
Adult Outpatient Dual Diagnosis Program
Jeffersonville, IN*

10/01-4/02

Field Experience Student: Therapist and Campus Outreach

University of Louisville Counseling Center

8/00-5/01

Advanced Practicum Student: School-based Therapist

Family Builders Program-Archdiocese of Louisville

8/99-6/00

Practicum Student: School-based Therapist

*Stuart Middle School Youth Services Center
Louisville, KY*

2/99-8/99

Practicum Student: Psychological Assessment-Child and Adolescent

*Jefferson County Division for Family Services
Louisville, KY*

9/98-1/99

Practicum Student: Psychological Assessment-Adult

*Central State Hospital-Grauman Unit
Louisville, KY*

Other Employment

8/97-8/00

Adjunctive Therapist

*Acute Child Psychiatric Services
Seven Counties Services, Inc.
Louisville, KY*

Summers 1995-1997 Day Camp Counselor
Southwestern YMCA
Louisville, KY

Teaching

Fall '04-Spring '05
Summer '01-Spring '02

Adjunct Instructor
Ivy Tech State College
Sellersburg, IN

Courses Previously Taught at Ivy Tech State College

- *Psychology 101: Introduction to Psychology*
- *Psychology 205: Abnormal Psychology*

Guest Lectures

Berry, S. R. (Summer, 2002). *Multicultural Counseling*. A guest lecture conducted in graduate course, ECPY 600: Introduction to Counseling and Psychotherapy, taught by Steven Morris, Ph.D.

Berry, S. R. (Summer, 2002). *Family Therapy*. A guest lecture conducted in graduate course, ECPY 619: Theories of Counseling and Psychotherapy, taught by Steven Morris, Ph.D.

Graduate of Future Professors Programs

- Participated in FPP program at University of Louisville

Scholarship

Presentations

Co-presented. (October, 2003). *Finding Help for Students: A Staff Guide to Intervention, Consultation, and Referral*. A presentation at the Indiana Student Affairs Association Conference in Indianapolis, Indiana.

Berry, S. R. (April, 2002). *Multicultural Issues and the Millon Clinical Multiaxial Inventory-III*. A presentation at the Spring Research Conference in Cincinnati, Ohio.

Research Experience

- Graduate Assistantship in 2002-2003 with Daya Sandhu, Ed.D. Assisted writing a book proposal which was accepted and co-authoring manuscripts to be potentially published as book chapters. Updated a book, proofread, and provided feedback on manuscripts/book chapters.
- Undergraduate Honors Thesis: *Gender Bias in Wrongful Death Awards*

Assistantships

- 7/04-6/05 Graduate Assistant in Education Advising Center
University of Louisville
- 7/02-6/03 Graduate Assistant in Educational and Counseling Psychology
University of Louisville
- 3/03-5/03 Graduate Assistant for Youth Forum for Peace: Interpersonal Skills
for Peacebuilding
University of Louisville
- Spring 1999 Graduate Assistant for Tom Titus, Ph.D.
Spalding University
- 8/97-12/98 Graduate Assistant in Media Center
Spalding University

LICENSES

- Licensed Mental Health Counselor in Indiana-#39001752A

Disclaimer: All of the information contained herein is valid as of the latest revision, 04/09/2007.