THE MODERATING EFFECT OF COPING STYLE AND SELF-ESTEEM ON THE RELATIONSHIP BETWEEN TRAIT WORRY AND RELATED OUTCOMES

By

Jonathan Rupert Fink

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Abstract

THE MODERATING EFFECTS OF COPING STYLE AND SELF-ESTEEM ON THE RELATIONSHIP BETWEEN TRAIT WORRY AND RELATED OUTCOMES

Jonathan R. Fink, M.A.

Western Carolina University, May 2006

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This study aimed to examine the moderating effects of coping-style and self-esteem on the relationship between trait worry and positive and negative related outcomes, which consisted of catastrophizing (i.e., blowing life events out of proportion), self-efficacy (i.e., the belief that upcoming life events can be overcome masterfully), and social anxiety.

The participants of the present study consisted of 120 (60 males and 60 females) undergraduate students. The arithmetic mean age for the participating undergraduates was \( M = 18.99, SD = 1.39 \). The majority of participants were first year students (65.8%). Each participant completed a demographic form and six questionnaires designed to measure trait worry, coping style, self-esteem, self-efficacy, catastrophizing, and social anxiety.

Moderated Multiple Regression (MMR) aimed to explore the relationship between trait-worry, coping style, self-esteem, self-efficacy, catastrophizing, and social anxiety.
Six hypotheses were generated to determine if problem-focused coping and/or self-esteem influenced the relationship between trait worry and catastrophizing, self-efficacy, and social anxiety. Overall, no support was found to support any of the 6 hypotheses generated; however, a number of positive, inverse, and negative bivariate correlational relationships were found.

The results indicated that trait worry was significantly related to catastrophizing, but problem-focused coping was not significantly related to catastrophizing. Second, problem-focused coping was significantly related to self-efficacy, but trait worry was not significantly related to self-efficacy. Third, worry was significantly related to social anxiety, as well as problem-focused coping. Fourth, self-esteem was not significantly related to catastrophizing. Fifth, self-esteem was significantly related to self-efficacy, but trait worry was not significantly related to self-efficacy. Finally, trait worry was significantly related to social anxiety, but self-esteem was not significantly related to social anxiety. These findings, undoubtedly, parallel a number of other research findings within the domain of trait worry.
Chapter I

Introduction

Why do people, at times, feel uneasy or concerned about something? If people worry and have positive coping-styles in addition to high self-esteem, does it create high self-efficacy? In other words, does it create the expectation that certain situations can be mastered in order to produce positive outcomes? For example, if a group of students worry about how well they will do on a calculus test, contend with their worrying by studying for the test several days in advance, and then feel good about their studious efforts afterwards, does it create feelings of positive expectancy? If so, this expectancy, of course, suggests that they will pass the test. On the flip side, if people worry and have negative coping-styles in addition to low self-esteem, does it create catastrophizing and calamity? That is, does it consequently relate to distress and negative outcomes? For example, if the same group of students worry about how well they will do on a calculus test, contend with their worrying by not studying, and feel that being studious will not help them, does it create feelings of negative expectancy suggesting failure? Indeed, the way people worry may play a very significant role in their lives. Scientific research on worry and how moderators (e.g., problem-focused coping-style and self-esteem) may produce positive or negative outcomes is scarce; however, this research is intriguing and needs systemic investigation.
Worry and Stress

In today's society, people are faced with various sources of external and internal stressors. "External stressors' are demands from outside [the] self" (Hana, 2000, p. 159). In other words, an occurrence that takes place beyond peoples' power (e.g., differentiating circumstances or situations, stressful psychological environments, and emotionally or mentally disruptive interactions with other people are examples of external stressors). "Internal stressors" are those physical or psychological conditions that people formulate on their own accord. When people worry, it serves as a source of internal stress. According to Borkovec, Robinson, Pruzinsky, and DuPree (1983):

Worry is a chain of thoughts and images, negatively affect-laden and relatively uncontrollable; it represents an attempt to engage in mental problem-solving on an issue whose outcome is uncertain but contains the possibility of one or more negative outcomes; consequently, worry relates closely to the fear process (p. 10; see also Davey & Tallis, 1994, p. 7).

Ultimately, the truth is that if people worry they generate some type of stress from within themselves (Hana).

If internal stress is experienced when worrying, then why do it? First, Freeston, Rheaume, Letarte, Dugas, and Ladouceur (1994) suggest that, in all probability, when people worry, it allows for them to have some type of influence over positive or negative life events. In most cases, worrying serves to thwart negative life events, and even when those negative events must be dealt with, it serves to reduce the magnitude of possible consequences. Reducing consequences are exemplars of "decreased guilt, avoiding
disappointment, or not worrying about worse things” (Freeston et al., p. 800). Second, people think that if they worry it is the direct result of a positive consequence because it leads to more adaptive ways of exercising greater influence over negative life events. People also think that worry may help them develop methods or solutions to effectively solve problems. The authors point out that:

[The] beliefs that worry can in some way decrease the possibility and consequences of negative outcomes will of course be reinforced negatively by the non-occurrence of the feared outcome. On the other hand, the belief that worry has merit and is effective for solving problems will be intermittently reinforced by occasional perceived successes (p. 800).

In short, achieving positive outcomes sanctions the worry process. However, Freeston et al. conclude that “the perceived success may in fact be due to a decrease in uncertainty and its associated negative emotional state rather than optimal solutions” (p. 800). Overall, worrying and problem solving do appear to be closely related, and if worrying does symbolize an effort to discover methods and solutions to problems, it may ultimately be ineffective in producing desired, positive outcomes (Davey, Hampton, Farrell, & Davidson, 1992).

Worry and Cognitive Processing

In general, worriers, in contrast to non-worriers, appear to have major difficulty staying focused on a repetitious task (e.g., concentrating on their breathing), and
experience more uninviting negative thoughts elicited by frequent distractions (Borkovec et al., 1983). Borkovec et al. (1983) found that if both worriers and non-worriers spend approximately 15 minutes worrying about something, they experience an increased number of uninviting negative thoughts; additionally, they tend to show mental indecisiveness. Interestingly, however, approximately 30 minutes of worry leads to a reduction in uninviting negative thoughts. Based on these two findings, Borkovec et al. (1983) concluded that approximately 15 minutes of worry (or less) is an exemplar of agitation and anxiety caused by the presence or imminence of danger (i.e., fear), an effect labeled as "incubation." Approximately 30 minutes of worry, however, does not result in fearful thinking, an effect labeled as "habituation."

While worry is a form of internal stress, it is also a form of semantic thinking. Borkovec (1994) illustrates this point, "[perhaps] the most important, fundamental characteristic of worry is that it involves a type of internal verbal-linguistic activity, [that is] thinking" (p. 7). Indeed, the predominance of people worrying in terms of semantics as opposed to imagery, for example, makes worry a unique phenomenon. Borkovec and Inz (1990) found that participants diagnosed with Generalized Anxiety Disorder (GAD), a disorder characterized by excessive anxiety and worry, reported both equal instances of semantic thinking and visual thinking (i.e., thinking in terms of images or pictures), whereas control group participants, during self-relaxation periods, reported more visual thinking. Both GAD and control group participants, when asked to worry about an immediately pressing concern, reported higher levels of semantic thinking and lower levels of visual thinking. After receiving therapeutic intervention, GAD patients achieved
stability in both types of thinking. In other words, their thought processes, in terms of words and images, returned to levels that were considered to be more normal for the average person. Interestingly, Borkovec and Inz believed that an overall ascendancy toward semantic thinking might very well be an attempt to avoid disturbing visual thinking because of its graphic, visual/spatial depiction over worrisome concerns or events.

According to Metzger, Miller, Cohen, Sofka, and Borkovec (1990), worry amplifies the quantity of negative thinking patterns, and influences mental processing in an antagonistic, unfavorable manner. People who worry exemplified prolonged reaction times as doubtfulness or uncertainty increased on a systemic classification task versus those people who did not worry. When non-worriers were asked to worry for 15-minute intervals prior to performing the systemic classification task, they displayed the same effects as worriers. To put another way, their performances equaled those of worriers. Furthermore, Metzger et al. suggest that worry operates in much the same way regardless of whether or not some people chronically worry. The only fundamental difference between worriers and non-worriers is the amount of time expended worrying. Metzger et al.'s results may also suggest that worries feel greatly agitated and anxious about not achieving desired, positive end(s) to a mean; additionally, this tendency to be hesitant, irresolute, or indecisive may result in inefficient functioning for the worrier.

Physiological research has uncovered valuable data in understanding the overall function and nature of worry. Borkovec and Hu (1990) studied participants' cardiovascular reaction to phobic sets of imagery across various emotional states (e.g.,
relaxed, neutral, and worrisome states) before the presentation of a picture depicting a phobic stimulus, which is an irrational, fearful stimulus. During the thinking process, participants displayed a constant cardiovascular response; however, presentation of the visual imagery evoked fluctuating responses. For example, in the relaxed condition, participants showed the most cardiovascular response followed by participants in the neutral condition. Participants who worried showed the least cardiovascular response, and reported the most agitation and anxiety in response to phobic stimuli. This evidence implies that people who worry may repress thinking that evokes agitation, anxiety, and apprehension.

*Worry, Anxiety, and Depression*

In reference to worry, the overall indication is that anxiety-related information will be most obtainable when people are already showing *feelings of anxiety* associated with uncertain or unpleasant life events (Eysenck, 1984). Consequently, the presence of an uneasy, apprehensive state of mind will increase both the likelihood of worry taking place, and the extent of how long it lasts. Additionally, if anxiety-related material is recovered from the memory component liable for long-term storage, it leads to increased feelings of uneasiness and apprehension. This may potentially cause people with an anxious mood to mentally recover anxiety-related information more easily, but at the same time, intensify their overall feelings of anxiety.

Eysenck (1984) suggests that temperamental characteristics of trait anxiety are closely associated with worry. People who have high trait anxiety may have vast amounts of anxiety-related material that is stored in the memory component responsible for
Eysenck suggests that anxious people and patients show cognitive schematic structures in their memory related to evaluating impending danger or harm, "that is they show a type of 'danger schemata'" (p. 545). Borkovec et al. (1983) suggest that if people with high trait anxiety view the world as dangerous or threatening as opposed to people with low trait anxiety, then there is a difference in the frequency and variation of worry.

Borkovec et al. (1983) anticipated worry to be significantly related to several types of emotions surrounding agitation and anxiety caused by the nature of danger. This finding was based on the questioning of clinically anxious patients, which led to the inference that anxiety about future uncertainties is associated with an attempt to avoid unpleasant thoughts about personal and social dangers (Beck, Laude, & Bohnert, 1974). Indeed, if there are worriers and GAD clients experiencing anxious states, these states are evoked by their own evaluations of personal and social matters (Borkovec et al., 1983).

Worry, itself, is highly interrelated to social evaluative matters on a survey measuring feelings of agitation and anxiety caused by the presence of danger and less so with non-gregarious (i.e., "non-social") items. Peoples' mental discomfort in terms of making erroneous judgments, being reproved, and being introduced to new people rank among the highest, most forthright anxiety-provoking events. Pruzinsky and Borkovec (1990) also suggest that "[worriers] reported being more publicly self-conscious, more socially anxious, and more disturbed by obsessional symptoms than did [non-worriers]" (p. 511).

Furthermore, Brown and Barlow (1992) noted that the most frequent concomitant diagnosis for standard GAD is social phobia. A social phobia occurs when a person fears
being in a social situation where others will see him or her, and doing something that he or she might find embarrassing or humiliating. Overall, there may be a central basis for the dynamic relationship between worry and social concerns. Borkovec, Shadick, and Hopkins (1991) suggest that because worry is the essence of thoughtful preoccupation (i.e., thinking about worrisome matters in terms of language, words, and images), it might very well be a way for people to communicate their anxious emotional disposition(s) to others. To put another way, people may worry in front of others because it communicates that they are troubled about something.

Carter, Johnson, and Borkovec (1986) carefully observed participants’ electrical brain activity using Electroencephalogram (EEG) alpha and beta measures across various conditions (e.g., negative thinking, unstructured relaxation, worrisome thinking, and structured relaxation conditions). Their research suggested that worry was associated with high neuronal activity in the cerebral cortex apart of the left cerebral hemisphere. Left hemisphere activation was noticeably depleted throughout continued relation periods. Overall, the researchers’ findings are considerably important because according to Tucker (1981), left-hemisphere activity has been associated with anxiety; various thought disorders, illogical patterns of thinking, delusions, and hallucinations accompanied with other emotional, behavioral, or intellectual disturbances.

While most research links worry to anxiety, Borkovec (1994) implies that worry may also be intricately connected with strong feelings of sadness, dejection, and hopelessness (i.e., depression). Andrews and Borkovec (1988) did a study contrasting evoked worry and anxiety characterized by corporeal symptoms. This study also included
items in its design to measure depression. They discovered with certainty that worry consists of reasonable levels of both anxiety and depression. Matthews (1990) suggests that depression is comprised of more elaborative, threatening material in memory, whereas anxiety involves the lack of elaboration or avoidance of the associated threatening material.

Worry, Catastrophizing, and Problem-Solving

People who worry have a tendency to discern future oriented events as threatening (i.e., chronic/habitual worriers; Vasey & Borkovec, 1992). In other words, they perceive future oriented events as dangerous and harmful. Additionally, they believe that these types of events are more likely to happen as opposed to low or non-worriers (Provencher, Freeston, Dugas, & Ladouceur, 2000). In other words, high worriers are more likely to worry in catastrophic terms and blow non-dangerous, non-harmful events out of proportion. Furthermore, when those events do pose danger, high worriers perceive the worst possible outcomes.

According to MacLeod and Byrne (1996), uneasy and apprehensive people (i.e., anxious people who experience elevated levels of worry) are more likely to show negative future oriented thinking. Additionally, they reported high levels of depression, despair, and hopelessness. These findings in MacLeod and Byrne’s study are consistent with their original view that “anxiety is associated with increased negative future thinking but not with decreased positive future thinking, whereas depression is associated with both increased negative and decreased positive future thinking” (p. 288). Overall, if people worry and experience anxiety or depression, and show negative future thinking,
they may also have a tendency to exacerbate the outcomes of upcoming events. Furthermore, they may also worry more than the average worrier, and believe that they have more reason to worry.

The tendency to exacerbate future oriented events as dangerous and/or threatening is better known as “catastrophizing” (Vasey & Borkovec, 1992). People who periodically worry are more likely to believe that the consequences of their circumstances will be catastrophic compared to those who occasionally worry. Furthermore, periodic worriers reported experiencing intrapersonal discomfort as they continued to catastrophize. Eventually, periodic worriers begin to ask the perpetual “what if” question. Indeed, Kendall and Ingram (1987) suggest that a spontaneous “what if” questioning style is not only an important characteristic of anxiety-related cognition, but an important characteristic of chronic, periodic worrying, as well. Kendall and Hollon (1989) found that some of the self-produced, worrisome statements people produced fell into the “what if” questioning category. For example, Kendall and Hollon suggest that overly worrisome, anxious people who tend to think catastrophically about the future may ask, “What am I going to do if . . . ?” A more specific example might be, “What am I going to do if I do not make enough money to pay the rent this month?” Based on this type of questioning, it is clear that catastrophizing may cause people to question what they will do if an event elicits negative consequences. Overall, if this view of the “what if” question is accurate, these people should have a more significant, obtainable quantity of questioning content in their mind than low or non-worrisome, non-anxious people.
Some research suggests that worry is the method people use to solve life problems. For example, Borkovec et al. (1983) suggested that “the worry sequence seems to be initiated by a fear stimulus (environmental and/or [imaginable]) which elicits mental problem-solving activity designed to prevent the occurrence of traumatic future events and/or devise coping strategies for such events” (p. 10). Since research on worry, traditionally, has been based on the direct observation of patients, it appears that chronic, pathological worrying has an antithetical effect on solving problems (Borkovec, 1985). To explain more clearly, compulsive worrying seems to increase the severity problems perceived. Indeed, this type of worrying causes obsessive reflection and usually does not help people derive solutions to their problems (Matthews, 1990). This, ultimately, inflates problems, which makes them more unfavorable or severe than first perceived (Vasey & Borkovec, 1992). Additionally, Tallis, Eysenck, and Matthews (1991) suggest that catastrophizing leads to a great deal of vacillation over solutions to problems. This may happen because people only perceive negative consequences to possible solutions.

People tend to worry differently. According to Davey (1994), “[at] the pathological end of the continuum it is clear that worrying refers to unwanted, intrusive cognitions that are associated with potentially stressful events and accompanied by distressing mood states such as anxiety” (p. 37). At this end of the continuum, worry serves as a pathological feature. According to Goleman (1994), “a close analysis of chronic worry suggests that it has all the attributes of a low-grade emotional hijacking: the worries seem to come from nowhere, are uncontrollable, generate a steady hum of anxiety, are impervious to reason, and lock the worrier into a single, inflexible view of a
worrisome topic” (p. 65). Unfortunately, this type of worrying impedes the ability to find solutions to pressing matters. It also leads to possible compulsions, obsessions, phobias, and panic attacks.

Worry and Coping-Style

Currently, coping, in terms of worry, has not been examined thoroughly. For example, According to Jung (1993) Borkovec et al. (1983) believe that worry is a mental trait of anxiety, thus their study focused on worriers’ pathology and inherent fear of not being able to effectively handle future oriented events. In short, their study did not focus on coping. Regardless, it is clear that coping may affect whether or not their worrying is ultimately constructive or destructive.

What exactly is coping? While numerous definitions have been considered (Lazarus & Launier, 1978; Moos & Billings, 1982; Pearlin & Schooler, 1978), a definition that envelopes many former views is that coping attempts to alleviate mental agitation and disturbance, somatic and psychological problems linked to everyday difficulties, and stressful life events (Snyder & Dinoff, 1999). The effectiveness of coping rests on its sole ability to reduce or de-escalate immediate stress, as well as to contribute to an overall healthy, positive mental well-being. Practically speaking, coping should not only allow people to contend with everyday difficulties, but allow them to act in a manner to overcome difficulties favorably and masterfully, as well.

An ineffective coping-style does not allow people to deal with everyday problems very well. Russell and Davey (1993) compared measures assessing life occurrences to measures assessing trait anxiety and worry. Based on the results, a relationship was found
between trait anxiety, worry, and everyday life circumstances; however, no relationship was found between trait anxiety, worry, and negative life and/or world events that have yet to occur. This suggests that worry orients itself to events that have yet to occur, thus worry it not evident when past negative life events are assessed. Additionally, everyday life circumstances were also related to the tendency to interpret stimuli as threatening in nature. In this case, these people monitor or look for environmental cues that lend credence to their threatening interpretations. It is important that coping is not only constructive and positive, but also effective in allowing the achievement of success. If it is destructive, negative and ineffective, it could lead to failure and other unwanted outcomes.

Problem-focused coping is invaluably effective when people worry. According to Lazarus (1984), the utilization of stratagems which are problem-focused, are similar to strategies used to derive solutions to problems. That is to say, problem-focused coping strategies allow people to acquire solutions to problems that are difficult to solve. These problem-focused strategies, typically, are designed to delineate problems and produce mutually exclusive possibilities (i.e., yielding alternatives and weighing alternatives in terms of bringing about good or bad consequences, picking the alternative, and then acting upon it). However, this type of coping encapsulates a larger array of strategies designed to deal with problems systematically. In other words, deductive, objective strategies that center on the environment typically involves methods that create general solutions whereas problem-oriented coping embraces strategies that are designed to deal with problems from a personal standpoint. Kahn, Wolfe, Quinn, Snock, and Rosenthal
(1964) make this point clear by pointing out two major problem-oriented strategies: those designed to focus on the intrapersonal self and those designed to focus on the constituents or conditions that surround one (e.g., the environment). Those problem-oriented strategies that are directed at the intrapersonal self allow people to change cognitive and motivational factors permitting them to learn and develop new abilities and skills. Those problem-oriented strategies directed at the environment allow people to modify boundaries or limits, adjust their methods, and derive resources to deal with it. Those strategies used by people from a personal standpoint would not be standard problem-solving techniques per se, but rather systematic procedures aimed at helping them exert control over a pressing concern. These systematic plans of action, which are intrapersonally directed, are best known as mental evaluations.

According to Abel (2004), there are meaningful differences between low worriers' coping-styles versus high worriers' coping-styles. Low worriers are more apt to use "problem-focused strategies" than "wishful thinking." These people use a clever schema (i.e., a systematic plan of action) to contend with their difficulties and ultimately achieve their objective. High worriers are more apt to use "wishful thinking" than "problem-solving approaches." These people identify and use their own desires or wishes to contend with their difficulties. Furthermore, Abel suggests that trait anxiety does not significantly affect the reliance of coping at either a high or a low level of worry. Indeed, trait anxiety, in a roundabout way, is related to coping and coping's effect(s) on worry. Tallis et al. (1991) suggest that while worry is a constructive, helpful, task-oriented
process, it could be compromised by trait anxiety resulting in inadequate, insufficient problem-solving self-confidence.

Worry and Self-Efficacy

According to Bandura (1997), self-efficacy is the ability to master critical, problematic circumstances or situations and yield positive results whenever necessary. Essentially, efficacious people are very capable of producing desired, future oriented outcomes. In short, these people are taking strikingly efficient steps in mastering situations and producing positive outcomes. These efficient steps are exemplars of more problem-solving focused thoughts compared to worrisome thoughts that could interfere with problem-solving abilities and skills.

Generally speaking, self-efficacy dictates emotional disposition(s) or state(s), thought processes, how to drive the self, and how to conduct the self in a specified way (Bandura, 1994). Overall, self-efficacy beliefs furnish the base for motivation, the state of healthy, happy and prosperous welfare, personal achievement, and accomplishment. People, who have high self-confidence in their ability, tackle a difficult undertaking as a challenge to overcome, as opposed to steering clear of it—they tend to take on pressing matters with a sense of mastery, as well. People who commit to setting themselves difficult objectives to achieve, and most importantly achieve those objectives, gives them an internal sense of confidence even when future eventualities or objectives may not be achievable. These people are quickly able to regain their sense of self-confidence after experiencing a letdown or not accomplishing a goal. Additionally, these people attribute their lack of accomplishment to insufficient mental and physical effort or to inadequate
cognitive clarity and ability. They draw near menacing circumstances with certainty that self-control can be employed over them, and believe they can obtain the aforementioned abilities if they do not possess them. In no small measure, this type of effectual attitude elicits intrapersonal achievement and mastery, which in turn reduces stress, lowers vulnerability to depression, creating high self-esteem, and less worry.

An elevated level of efficacious behavior is linked to an increased ability to successfully endure environmental stress (Bandura, 1997). As mentioned previously, people possessing greater levels of self-efficacy are more inclined to view emotionally upsetting conditions as barriers to overcome. This type of confidence leads people to tackle stressors directly and ultimately succeed in spite of the discouragement and difficulties obstacles present.

While the present literature suggests that self-efficacy is a predictor of variation in coping-style, it does not thoroughly examine coping-style influences on the impact of self-efficacy, thus a direct or an indirect relation between the two could exist. As stated earlier, Abel (2004) established that low worrying people use problem-focused strategies. If this is true, problem-focused strategies allow people to not only master a future-oriented situation, but also produce a positive outcome with success. Effective coping, in and of itself, allow people not only to deal with difficulties, but also to overcome them masterfully. Mastery type success is the epitome of self-efficacy. In other words, if an effective coping-style allows for mastery type success, people usually possess high self-efficacy. Albert Bandura would most likely agree that being able to successfully focus on a problem and solve it masterfully is the best determinant of self-efficacy.
Worry and Self-Esteem

According to Flett and Blankstein (1994), research has examined direct appraisals of people with the amount of pride they possess about themselves internally (self-esteem), the mental image or perception they have (self-concept), and self-expectancy measures. These direct appraisals, along with other relevant factors, are involved in the self-regulation process (e.g., the awareness of thoughts and actions, and the propensity for being displeased with anything that is not perfect or does not meet extremely high standards. There is a great deal of scholarly and scientific information associating worry and low or negative self-concept together. For example, Rosenberg (1965) thoroughly examined people who worried and experienced apprehension and uneasiness when taking a scholastic test. Rosenberg found that when their participants felt apprehensive or concerned about not only the test, but also about something else going on in their lives, they produced low scores on the Rosenberg Self-Esteem Scale. Meyer, Miller, Metzger, and Borkovec (1990) replicated Rosenberg’s finding(s) and did not ascertain a positive correlation between self-esteem and level of worry. In another study, Heatherton and Polivy (1991) examined the link between the Reactions to Test Scales (RTT) and a distinguishing version of the Self-Esteem Scale. The Self-Esteem Scale furnishes scores disuniting self-esteem associated with peoples’ superficial physical features, accomplishments and achievements, and regard to society. Heatherton and Polivy ascertained that worry, when combined with uneasiness and apprehension when taking a test is negatively associated with all subscales on the Trait Self-Esteem measure.
As mentioned earlier, Hana (2000) suggested that worry is a common internal stressor. Clearly, if people worry, they are bound to experience an emotionally or mentally upsetting state occurring in response to adverse, everyday life situations (i.e., they experience stress). To put simply, worriers worry more and experience more stress. Zuckerman (1989) found that pride in the self, comprehensive appraisal, and evaluation of the self is significantly associated with stress. Depending upon the amount of stress experienced, self-esteem tends to fluctuate. Zuckerman discovered that when stress is related to mental well-being there is a high correlation with low self-esteem, ineffective coping, and an inability to provide for oneself without the help of others (i.e., self-sufficiency, which is related to self-efficacy). Additionally, some people reported hopelessness, sadness, and dejection. To explain more clearly, they reported symptoms of depression when experiencing stress along with ineffective coping, and inability to provide for one's self without the help of others—a lack of independence.

**Conclusion**

Evidence suggests that worry, coping-style, self-esteem, self-efficacy, catastrophizing, and social anxiety may be directly or indirectly related to each other. Indeed, people who manufacture some form of stress worry and whether or not their worrying is pathological may depend upon the effectiveness of their coping-style and overall level of self-esteem. In other words, if their coping-style is constructive, task-oriented and effective, it may allow for the mastery of upcoming future oriented tasks raising self-esteem and feelings of self-efficacy, while reducing social anxiety. However, if their coping-style is non-constructive, lacks task-orientation and is ineffective, it could
negatively affect mastery experiences—(self-efficacy), which unfortunately may lower self-esteem and lead to social anxiety and catastrophizing about future oriented events.

Statement of the Problem

The research shows that if people worry, they manufacture some form of internalized stress (Hana, 2000). The studies supporting the hazards of stress on mental and physical health are extensive (Cohen, Tyrrell, & Smith, 1991; DeLongis, Folkman, & Lazarus, 1988; Folkman & Lazarus, 1986). Despite the inversely-related effects of internal stress and worry, Freeston et al. (1994) suggest that if people believe that worrying is an effective way to solve problems, then it sanctions itself. However, Davey et al. (1992) suggest that while worrying and problem solving appear to be closely related, it is ultimately an ineffective way to go about solving problems.

Cognitive processing plays an important role in worry. Borkovec (1994) suggests that worrying is a form of semantic thinking. That is to say, people think they (even GAD clients) worry in terms of language and words, and not mental imagery (Borkovec & Inz 1990). Additionally, the amount of time people expend worrying tends to affect the number of uninviting negative thoughts (Metzger et al., 1990). In terms of cognition, physiological research illustrates that worrying may suppress the processing of fear stimuli, which prevents extinction despite exposure (Borkovec & Hu, 1990).

Anxiety and depression appear to be related to worry. Eysenck (1984) suggests that the presence of an uneasy, apprehensive mood increases not only the probability of worry occurring, but the length of how long it occurs, as well; therefore, the temperamental characteristic of trait anxiety is related to worry. Borkovec et al. (1983)
also suggest that if worriers, as well as GAD clients, experience anxiety it occurs in interpersonal and social situations. As a result, there may be a central basis for the dynamic relationship between worry/social dynamic. Matthews (1990) found that worry involves reasonable levels of depression including a detailing amount of threatening material within memory.

Catastrophizing and problem solving seem to be related to worry in some way, as well. People who worry and catastrophize tend to discern future-oriented events as dangerous, harmful, and threatening (Vasey & Borkovec, 1992). The higher the level of worry people possess, the more likely they will exemplify negative future-oriented thinking (MacLeod & Byrne, 1996). Ultimately, catastrophizing leads to a great deal of indecisiveness over methods and processes capable of solving problems, thus sometimes a solution is never derived (Matthews, 1990).

Theoretical evidence suggests that coping-style, self-efficacy, and self-esteem play an interactive role in worry. While exploration and research in this area is still in its early stages, it is possible to discern that if a coping-style is problem-focused, it may allow for mastery experience, which raises self-esteem, feelings of higher self-efficacy, lowers catastrophizing about the future-oriented events, and reduces social anxiety. However, if a coping is not problem-focused it could negatively affect mastery experiences—(self-efficacy), lower self-esteem and lead to social anxiety and catastrophizing about future oriented events.

This study aimed to examine the moderating effects of peoples’ coping-style and self-esteem on the relationship between worry and related outcomes. Moderated Multiple
Regression analyses aimed to explore the relationship between trait worry, coping-style, self-esteem, self-efficacy, catastrophizing, and social anxiety.

**Hypotheses**

*Hypothesis 1:* A problem-focused coping-style will moderate the relationship between trait worry and catastrophizing such that a positive relationship between worry and catastrophizing will exist only when problem-focused coping is not often used.

*Hypothesis 2:* A problem-focused coping-style will moderate the relationship between trait worry and self-efficacy such that a negative relationship between worry and self-efficacy will exist only when problem-focused coping is not often used.

*Hypothesis 3:* A problem-focused coping-style will moderate the relationship between trait worry and social anxiety such that a positive relationship between worry and social anxiety will exist only when problem-focused coping is not often used.

*Hypothesis 4:* Self-esteem will moderate the relationship between trait worry and catastrophizing such that a positive relationship between worry and catastrophizing will exist only for a low level of self-esteem.

*Hypothesis 5:* Self-esteem will moderate the relationship between trait worry and self-efficacy such that a negative relationship between worry and self-efficacy will exist only for a low level of self-esteem.

*Hypothesis 6:* Self-esteem will moderate the relationship between trait worry and social anxiety such that a positive relationship between worry and social anxiety will exist only for a low level of self-esteem.
Chapter II
Method

Participants

The participants of the present study consisted of 120 (60 males and 60 females) undergraduate students. The arithmetic mean was computed to determine the average age of the participating undergraduates \((M = 18.99, \ SD = 1.39)\). The majority of undergraduates were first year students (65.8%). Each undergraduate student was given the opportunity to participate in the study on a volunteer basis, and was under no obligation to sign the consent form or complete the questionnaires.

Measures

Demographic Form: Each participant completed a demographic form for recoding sex, age, year in school and/or student status (see Appendix A).

Worry Domains Questionnaire (WDQ): The WDQ (Tallis, Eysenck, & Matthews, 1992) is a 25-item scale designed to give a general indication of worry frequency in a non-clinical population. The participant responds to statements beginning with “I worry…” according to a 5-point Likert-scale from 1 (not at all) to 5 (extremely). An overall score is obtained with higher scores representing higher levels of worry. Modest test-retest reliability \((r = .79)\) has been reported as well as acceptable levels of internal consistency. The WDQ has significant concurrent validity with other worry measures, measures of trait-anxiety, and measures of emotional discharge and avoidance coping.
The internal reliability (Cronbach alpha) for the WDQ in this study was 0.93 (see Appendix B).

*Rosenberg Self-Esteem Scale (RSES):* The RSES (Rosenberg, 1965) is a 10-item one-dimensional, scale used to measure an individual’s high or low self-esteem. It is scored on a 5-point Likert-scale ranging from 1 (strongly disagree) to 4 (strongly agree). Scores are computed according to statement orientation (i.e., high self-esteem or low self-esteem statements, with higher scores indicating higher self-esteem). The RSES has been found to have good internal consistency and test-retest reliability ($r = .82$). Concurrent validity is moderate to good with other measures of self-esteem and related constructs. The internal reliability (Cronbach alpha) for the RSES in this study was 0.88 (see Appendix C).

*Proactive Coping Inventory (PCI):* The PCI (Greenglass, Schwarzer, Jakubiec, Fiksenbaum, & Taubert, 1999) is a multidimensional, 55-item inventory consisting of seven subscales: (1) The Proactive Coping Scale; (2) Reflective Coping Scale; (3) Strategic Planning; (4) Preventive Coping; (5) Instrumental Support Seeking; (6) Emotional Support Seeking; and (7) Avoidance Coping. Subscale one measures proactive coping exclusively. Proactive coping is an individual’s ability to not only contend with difficulties, but act in a manner to overcome them (Schwarzer, 1999). Subscales two through seven measures positive facets of coping, which include an individual’s ability to take initiative, envision success, plan for future eventualities, and accumulate resources that will strengthen coping initiatives. It is scored on a 4-point Likert-scale ranging from 1 (not at all true) to 4 (completely true). The PCI has yielded seven subscales with good
construct validity, homogeneity, and acceptable reliabilities. The internal reliability (Cronbach alpha) for the PCI in this study was 0.85. The internal reliability (Cronbach alpha) for the Proactive Coping Subscale (the only subscale utilized out of the PCI for this study) was 0.83 (see Appendix D).

*Short Need for Cognition Scale (SNCS):* The SNCS (Cacioppo, Petty, & Kao, 1984) is an 18-item, 10-point Likert-scale designed to measure perceived self-efficacy. According to Bandura (1997), perceived self-efficacy is a tool that looks at an individual’s self-confidence concerning his or her capacity and competence to succeed in completing a difficult undertaking. The SNCS ranges from 0 (very strong disagreement) to 9 (very strong agreement). High scores (e.g., 7, 8, or 9) on the SNCS lend credence to an individual’s need to utilize higher levels of cognition when attempting to solve problems, or thinking, in general. “The reliability of the 18-item SNCS scale has been documented in several empirical studies” (Elias & Loomis, 2002, p. 1692). The internal reliability (Cronbach alpha) for the SNCS in this study was 0.83 (see Appendix E).

*Probability of Future Problems Scale (PFP):* The PFP, in this study, will be used to assess an individual’s level of catastrophizing. The PFP was developed using items from Everyday Problems Scale (Burks & Martin, 1985), the Academic Stress Questionnaire (Abouserie, 1994), and the Hassles and Uplifts Scale (DeLongis et al., 1988). The PFP measures perceived probability of future problems occurring in the individuals’ lives. The PFP consists of 48 problems relevant to an undergraduate college population and includes major negative events (e.g., “serious illness or injury of a close family member”) to everyday hassles (e.g., “too much schoolwork”). The items are
answered on a Likert-scale from 1 (no probability that I will experience this problem) to 4 (high probability that I will experience this problem). A total score is calculated with higher scores equaling a perceived higher probability of future negative events. The internal reliability (Cronbach alpha) for the PFP in this study was 0.90 (see Appendix F).

*Interaction Anxiousness Scale (IAS):* The IAS (Leary, 1983) is a 15-item scale designed to measure the degree to which an individual experiences uneasiness and apprehension when engaging in a social encounter. Furthermore, it consists of items referring only to subjective affective reactions to social situations, phrased in terms (e.g., “anxious,” “nervous,” and “tense”) and excludes items referring to specific social behaviors (e.g., avoidance of interactions, a hesitancy to speak to others, etc.). It is scored on a 5-point Likert-scale ranging from 1 (not at all characteristic of me) to 5 (extremely characteristic of me). The reliability and validity for the IAS is psychometrically sound. It shows high internal consistency and test-retest reliability ($r = .80$), and correlates appropriately to other measures of social anxiety and related constructs. The internal reliability (Cronbach alpha) for the IAS in this study was 0.87 (see Appendix G).

*Procedure*

College undergraduate students were recruited from the Western Carolina University Department of Psychology participant pool. Each student signed an informed consent form (see Appendix H) and completed the packet of questionnaires, which were randomly ordered in a packet to control for order effects. The students were instructed to complete the packet of questionnaires in the order in which they received it. Subject numbers were used on all questionnaires to maintain the anonymity of the respondents.
Chapter III

Results

Moderated Multiple Regression was used to test all hypotheses (Aiken & West, 1991). With this type of statistical technique, moderator variables are tested to see if they influence the relationship between predictor and criterion variables. Both the predictor and moderator variables are “centered” (i.e., group mean scores for each variable were subtracted from the participants’ total scores in order to obtain deviation scores with a mean of zero) and the interaction terms are computed between the predictor and moderator variables. Hierarchical multiple regression techniques are then used with the predictor variables entered first into the regression equation, then the $R^2$ change associated with the interaction terms are tested for statistical significance. If the $R^2$ change is significant, a moderating effect is present. In hypotheses 1 – 3, problem-focused coping was tested as a moderator between trait worry and the criterion variables of catastrophizing, self-efficacy, and social anxiety. In hypotheses 4 – 6, self-esteem was tested as a moderator between trait worry and the criterion variables of catastrophizing, self-efficacy, and social anxiety. Descriptive statistics for all variables are presented in Table 1 and intercorrelations between all variables are presented in Table 2.
Table 1

**Descriptive Statistics for all Variables**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Means (M)</th>
<th>Standard Deviations (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worry</td>
<td>54.46</td>
<td>17.86</td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>39.36</td>
<td>6.47</td>
</tr>
<tr>
<td>Proactive Coping</td>
<td>42.35</td>
<td>6.10</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>84.85</td>
<td>19.80</td>
</tr>
<tr>
<td>Catastrophizing</td>
<td>100.15</td>
<td>17.88</td>
</tr>
<tr>
<td>Social Anxiety</td>
<td>40.13</td>
<td>16.77</td>
</tr>
</tbody>
</table>

Table 2

**Intercorrelations Between all Variables**

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = Worry</td>
<td></td>
<td>-0.71**</td>
<td>-0.51**</td>
<td>-0.10</td>
<td>0.68**</td>
<td>0.68**</td>
</tr>
<tr>
<td>2 = Self-Esteem</td>
<td></td>
<td>0.61**</td>
<td>-0.21*</td>
<td>-0.48**</td>
<td>-0.51**</td>
<td></td>
</tr>
<tr>
<td>3 = Proactive Coping</td>
<td></td>
<td>0.38**</td>
<td>-0.24**</td>
<td>0.47**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 = Self-Efficacy</td>
<td></td>
<td></td>
<td>0.03</td>
<td>-0.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 = Catastrophizing</td>
<td></td>
<td></td>
<td></td>
<td>0.47**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 = Social Anxiety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05, **p < .01.
First, it was hypothesized that a positive relationship between trait worry and catastrophizing existed only when problem-focused coping was not often used. The results indicated no significant interaction, thus problem-focused coping did not moderate the relationship between trait worry and catastrophizing. The results did indicate that trait worry was significantly related to catastrophizing ($\beta = 0.75, t (117) = 9.79, p < .001$), but problem-focused coping was not significantly related to catastrophizing ($\beta = 0.14, t (117) = 1.85, p > .05$), $MR = .48, F (2, 117) = 54.42, p < .001$; however, there was a significant (although small) negative bivariate correlation between problem-focused coping and catastrophizing ($r = -.24$).

Second, it was hypothesized that a negative relationship between trait worry and self-efficacy existed only when problem-focused coping was not often used. The results indicated no significant interaction; thus problem-focused coping did not moderate the relationship between trait worry and self-efficacy. The results did indicate that problem-focused coping was significantly related to self-efficacy ($\beta = 0.44, t (117) = 4.49, p < .001$), but trait worry was not significantly related to self-efficacy ($\beta = 0.13, t (117) = 1.30, p > .05$), $MR = .16, F (2, 117) = 10.73 p < .001$.

Third, it was hypothesized that a positive relationship between trait worry and social anxiety existed only when problem-focused coping was not often used. The results indicated no significant interaction; thus problem-focused coping did not moderate the relationship between trait worry and social anxiety. The results did indicate that trait worry was significantly related to social anxiety ($\beta = 0.60, t (117) = 7.82, p < .001$), as
well as problem-focused coping ($\beta = -0.16, t(117) = -2.10, p < .05$), $MR = 0.49, F(2, 117) = 55.36, p < .001$.

Fourth, it was hypothesized that a positive relationship between trait worry and catastrophizing existed only when a low level of self-esteem was present. The results indicated no significant interaction; thus self-esteem did not moderate the relationship between trait worry and catastrophizing. The results did indicate that trait worry, again, was significantly related to catastrophizing ($\beta = 0.69, t(117) = 7.18, p < .001$), but self-esteem was not significantly related to catastrophizing ($\beta = 0.01, t(117) = 0.14, p > .05$), $MR = 0.47, F(2, 117) = 51.22, p < .001$; however, there was a significant negative bivariate correlation between self-esteem and catastrophizing ($r = -.48$).

Fifth, it was hypothesized that a negative relationship between trait worry and self-efficacy existed only when a low level of self-esteem was present. The results indicated no significant interaction; thus self-esteem did not moderate the relationship between trait worry and self-efficacy. The results did indicate that self-esteem was significantly related to self-efficacy ($\beta = 0.29, t(117) = 2.28, p < .05$), but trait worry was not significantly related to self-efficacy ($\beta = 0.11, t(117) = 0.87, p > .05$), $MR = .05, F(2, 117) = 3.19, p < .005$.

Finally, it was hypothesized that a positive relationship between trait worry and social anxiety existed only when a low level of self-esteem was present. The results indicated no significant interaction; thus self-esteem did not moderate the relationship between trait worry and social anxiety. The results did indicate that trait worry was significantly related to social anxiety ($\beta = 0.66, t(117) = 6.80, p < .001$), but self-esteem
was not significantly related to social anxiety ($\beta = -0.04$, $t(117) = -0.41$, $p > .05$), $MR = .47$, $F(2, 117) = 51.38$, $p < .001$; however, there was a significant negative bivariate correlation between self-esteem and social anxiety ($r = -.51$).
Chapter IV
Discussion

The purpose of this study was to examine the moderating effects of problem-focused coping and self-esteem between trait worry and the related outcomes of catastrophizing, self-efficacy, and social anxiety. Hypotheses were generated to determine if problem-focused coping and/or self-esteem influenced the relationship between trait worry and catastrophizing, self-efficacy, and social anxiety. Overall, no support was found to support the hypotheses as discussed below.

Hypotheses

First, it was hypothesized that problem-focused coping would serve to moderate the relationship between trait worry and catastrophizing such that only a positive relationship between trait worry and catastrophizing existed when problem-focused coping was not regularly used. No relationship was expected when problem-focused coping was used often. The results of this study did not support this hypothesis; however, the results indicated that while no significant relationship existed between problem-focused coping and catastrophizing, a significant positive relationship did exist between trait worry and catastrophizing. This means that high worry was related to greater catastrophic thinking (e.g., blowing life events out of proportion, feelings of helplessness, magnifying or obsessively ruminating over a problem, or becoming overly sensitive to different circumstances). For example, these results suggest that when people often worry, they may have a tendency to become so sensitive to the possibility of impending
danger that they “catastrophize.” Vasey and Borkovec (1992) suggest that most worriers “worry” in catastrophic terms ultimately convincing themselves that if something can happen, it will happen, regardless of whether the reality of the situation suggests otherwise. It is feasible to suggest that when people worry, they may expend their energy anticipating everything that could possibly go wrong, and, in turn, overly contemplate about what they should do in order to solve their problems. In any case, solutions to problems may not be derived because a high level of catastrophic thinking suggests that problems, in general, cannot be solved. Unfortunately, this type of worrying can ultimately lead to a number of psychological-related problems, particularly anxiety (MacLeod & Byrne, 1996).

Second, it was hypothesized that problem-focused coping would moderate the relationship between trait worry and self-efficacy such that a negative relationship would exist between trait worry and self-efficacy only when problem-focused coping was not often used. No relationship between trait worry and self-efficacy was expected when problem-focused coping was used often. The results of this study did not support this hypothesis, but problem-focused coping and self-efficacy were found to be directly related. This finding seems legitimate because these two variables appear to work reciprocally. For example, if self-efficacy, as Bandura (1997) suggests, is the belief that problematic circumstances can be mastered in ways that produce positive outcomes, it would be related to the ability to cope with difficulties in a problem-focused, successful manner. People may be willing to engage in problem-focused coping because using a schematic plan of action when dealing with problems ensures efficacious feelings and
thoughts. Abel (2004) supports this suggestion with her own study finding that problem-focused worriers contend with distressing situations by possessing and utilizing clever schemata. Essentially, what is being done to deal with problems is adaptive in nature. In other words, those people who employ problem-focused coping usually modify their behavior to ensure faith in their ability to deal with problems. Additionally, it was found that trait worry was not significantly related to self-efficacy. Interestingly, however, other research suggested that trait worry and self-efficacy are inversely related. For example, Schwarzer’s (1996) study revealed that when people’s feelings of incompetence, self-doubt, and worrisome thoughts were elevated, their ability to deal with life events masterfully was reduced.

Third, it was hypothesized that problem-focused coping would serve to moderate the relationship between trait worry and social anxiety such that a positive relationship between trait worry and social anxiety would exist only when problem-focused coping was not often used. No relationship between trait worry and social anxiety was expected when problem-focused coping was used often. The results of this study did not support this hypothesis. The results did reveal a direct relationship between trait worry and social anxiety. This finding constitutes that worry and anxiety work hand in hand. When people are anxiety-ridden, they are worrisome and vice versa (Eysenck, 1984). Additionally, Borkovec (1985) is instrumental in pointing out that worry, in no small measure, greatly involves anxious anticipation and expectation involving life matters. For example, Pruzinsky and Borkovec (1990) have established that some worriers are extremely anxious and fearful when it comes to anticipating interpersonal and social interaction
with other people. Furthermore, their level of social anxiety is not necessarily decreased when immersed in a gregarious setting. The results also revealed an inverse relationship between problem-focused coping and social anxiety. This finding seems theoretically sound. For example, it is highly likely that people who utilize problem-focused coping are likely to find a coping method that helps them deal with their apprehension and weariness around other people. Furthermore, if people repeatedly experience anxiousness when around others or if they experience some type of failure when attempting to interact with others, the culmination of those uneasy stressful experiences can have negative implications for socially adaptive/problem-focused coping measures.

Fourth, it was hypothesized that self-esteem would serve to moderate the relationship between trait worry and catastrophizing such that a positive relationship between trait worry and catastrophizing would exist only when low self-esteem was present and not high self-esteem. The results of this study did not support this hypothesis; however, the results indicated a direct relationship between trait worry and catastrophizing, as found in testing Hypothesis 1. Again, this finding seems to be genuine and is supported empirically by other studies. As has already been established, catastrophic worry serves to be dysfunctional because it typically disrupts daily functioning and diminishes competency and accurate perception of life events (Matthews, 1990). Additionally, there was a significant and moderately strong negative bivariate correlation ($r = -.48$) between self-esteem and catastrophizing.

Fifth, it was hypothesized that self-esteem would serve to moderate the relationship between trait worry and self-efficacy such that a negative relationship
between trait worry and self-efficacy would exist only when low self-esteem was present and not high self-esteem. The results of this study did not support this hypothesis.

However, the results indicated that self-esteem and self-efficacy were directly related. In combination, high self-esteem and self-efficacy should enhance the well being of people in countless ways. As mentioned in the literature review of the present study, Bandura (1994) stated that confident people approach difficult tasks as challenges to overcome and master rather than perilous problems to be avoided. Typically, they possess more interest and deeper involvement in activities, set themselves high, but achievable goals, and believe they are likely to flourish in the face of possible failure. Because of their high self-esteem, they may be more likely to recover their confidence after numerous failures and setbacks (Flett & Blankstein, 1994). Empirical evidence suggests that self-esteem and self-efficacy work together in order to promote a sense of accomplishment and pride when it comes to problems. The results also suggested that trait worry and self-efficacy were not significantly related, as found previously when testing Hypothesis 2. Eysenck (1984) has already suggested that worry is closely related to anxiety suggesting little, if any relationship to self-efficacy, demoting feelings of control and mastery.

Sixth, it was hypothesized that self-esteem would serve to moderate the relationship between trait worry and social anxiety such that such that a positive relationship between trait worry and social anxiety would exist only when low self-esteem was present and not high self-esteem. The results of this study did not support this hypothesis; however, the results did reveal, as indicated in Hypothesis 3, a positive relationship between trait worry and social anxiety. Additionally, self-esteem was not
related to social anxiety when accounting for trait worry; however, there was a significant negative bivariate correlation ($r = -.51$) between self-esteem and social anxiety as found in other studies (e.g., Zuckerman, 1989).

**Limitations and Future Research**

First, the present study lacked a diverse, heterogeneous age-base. As previously indicated, the average age of participants was 18 years of age (plus the use of college students, primarily first-year students, which is a typical limitation, but occurs in some research). Second, most researchers would probably agree that adolescent worry is not necessarily the same as adult worrying. For example, an 18-year-old female may worry about taking a math test whereas her 35-year-old mother may worry about how she will pay the current month's rent. Future study would benefit by examining worry at different age levels (e.g., 20s, 30s, 40s, etc.), using questionnaires and scales related to those age-levels, and comparing the results cross sectionally. Third, future research would benefit from examining gender roles and its relationship to worry, the moderating effects involved, and prospective outcomes. It might also be feasible to examine ethnic and racial differences, too. Finally, further research is needed in examining how other potential *moderators* influence worry. While this study examined how "problem-focused coping" and "self-esteem" influenced the relationships between worry and various outcomes, other moderators may prove more influential.
References
References


Appendices
Appendix A
Demographic Form

Participant Number: ______________________

SEX: Circle Correct Sex:

MALE or FEMALE

AGE ON LAST BIRTHDAY: ________ YEARS

STUDENT STATUS: Circle Correct Status:

FRESHMAN  SOPHOMORE  JUNIOR  SENIOR
Appendix B
Worry Domains Questionnaire (WDQ)

Participant Number: ______________________

Instructions: In the blanks provided, please indicate legibly, (1–5) the appropriate number in the blank space provided to show how much you WORRY about the following according to the scale listed below.

SCALE:

1 = Not At All
2 = A Little
3 = Moderately
4 = Quite A Bit
5 = Extremely

___ 01. I worry that my money will run out.

___ 02. I worry that I cannot be assertive or express my opinions.

___ 03. I worry that my future job prospects are not good.

___ 04. I worry that my family will be angry with me or disapprove of something that I do.

___ 05. I worry that I’ll never achieve my ambitions.

___ 06. I worry that I will not keep my workload up to date.

___ 07. I worry that financial problems will restrict my holidays and travel.

___ 08. I worry that I have no concentration.

___ 09. I worry that I am not able to afford things.

___ 10. I worry that I feel insecure.

___ 11. I worry that I can’t afford to pay my bills.

___ 12. I worry that my living conditions are inadequate.
13. I worry that my life may have no purpose.

14. I worry that I don’t work hard enough.

15. I worry that others will not approve of me.

16. I worry that I find it difficult to maintain a stable relationship.

17. I worry that I leave work unfinished.

18. I worry that I lack confidence.

19. I worry that I am unattractive.

20. I worry that I might make myself look stupid.

21. I worry that I will lose close friends.

22. I worry that I haven’t achieved much.

23. I worry that I am not loved.

24. I worry that I will be late for an appointment.

25. I worry that I make mistakes at work.
Appendix C
Rosenberg Self-Esteem Scale (RSES)

Participant Number: ______________________

Instructions: For each of the statements below, please indicate legibly a number (1 – 5) in the blank space provided the degree to which you agree or disagree with the statement using the scale below.

SCALE:

1 = Strongly Disagree
2 = Moderately Disagree
3 = Neither Agree or Disagree
4 = Moderately Agree
5 = Strongly Agree

__ 01. I feel that I’m a person of worth, at least on an equal plane with others.

__ 02. I feel that I have a number of good qualities.

__ 03. All in all, I am inclined to feel that I am a failure.

__ 04. I am able to do things as well as most people.

__ 05. I feel that I have much to be proud of.

__ 06. I take a positive attitude about myself.

__ 07. On the whole, I am satisfied with myself.

__ 08. I wish that I could have more respect for myself.

__ 09. I currently feel useless at times.

__ 10. At times I think that I am no good at all.
Appendix D
Proactive Coping Inventory (PCI)

Participant Number: ____________________

Instructions: For each of the statements below, please indicate legibly a number (1 – 5) in the blank space provided the degree to which each item applies to you according to the scale below.

SCALE:

1 = Not At All True
2 = Barely True
3 = Somewhat True
4 = Completely True

__ 01. I am a “take charge” person.

__ 02. I try to let things work out on their own.

__ 03. After attaining a goal, I look for another, more challenging one.

__ 04. I like challenges and beating the odds.

__ 05. I visualize my dreams and try to achieve them.

__ 06. Despite numerous setbacks, I usually succeed in getting what I want.

__ 07. I try to pinpoint what I need to succeed.

__ 08. I always try to find a way to work around obstacles; nothing really stops me.

__ 09. I often see myself failing, so I don’t get my hopes up too high.

__ 10. When I apply for a position, I imagine myself filling it.

__ 11. I turn obstacles into positive experiences.

__ 12. If someone tells me I can’t do something, you can be sure I will do it.

__ 13. When I experience a problem, I take the initiative in resolving it.
14. When I have a problem, I usually see myself in a no-win situation.

15. I imagine myself solving difficult problems.

16. Rather than acting impulsively, I usually think of various ways to solve a problem.

17. In my mind I go through many different scenarios in order to prepare myself for different outcomes.

18. I tackle a problem by thinking about realistic alternatives.

19. When I have a problem with my co-workers, friends, or family, I imagine beforehand how I will deal with them successfully.


21. I take action only after thinking carefully about a problem.

22. I imagine myself solving a difficult problem before I actually have to face it.

23. I address a problem from various angles until I find the appropriate action.

24. When there are serious misunderstandings with co-workers, family members or friends, I practice beforehand how I will deal with them.

25. I think about every possible outcome to a problem before tackling it.

26. I often find ways to break down difficult problems into manageable components.

27. I make a plan and follow it.

28. I break down a problem into smaller parts and do one part at a time.

29. I make lists and try to focus on the most important things first.

30. I plan for future eventualities.

31. Rather than spending every cent I make, I like to save for a rainy day.

32. I prepare for adverse events.

33. Before disaster strikes I am well-prepared for its consequences.
34. I plan my strategies to change a situation before I act.

35. I develop my job skills to protect myself against unemployment.

36. I make sure my family is well taken care of to protect them from adversity in the future.

37. I think ahead to avoid dangerous situations.

38. I plan strategies for what I hope will be the best possible outcome.

39. I try to manage my money well in order to avoid being destitute in old age.

40. When solving my own problems other people’s advice can be helpful.

41. I try to talk and explain my stress in order to get feedback from my friends.

42. Information I get from others has often helped me deal with my problems.

43. I can usually identify people who can help me develop my own solutions to problems.

44. I ask others what they would do in my situation.

45. Talking to others can be really useful because it provides another perspective on the problem.

46. Before getting messed up with a problem I’ll call a friend to talk about it.

47. When I am in trouble I can usually work out something with the help of others.

48. If I am depressed, I know who I can call to help me feel better.

49. Others help me feel cared for.

50. I know who can be counted on when the chips are down.

51. When I’m depressed, I get out and talk to others.

52. I confide my feelings in others to build up and maintain close relationships.

53. When I have a problem I like to sleep on it.
54. If I find a problem too difficult sometimes I put it aside until I’m ready to deal with it.

55. When I have a problem I usually let it simmer on the back burner for a while.
Appendix E
Short Need for Cognition Scale (SNCS)

Participant Number: _______________________

Instructions: For each of the statements below, please indicate *legibly* a number (0 – 9), in the blank space provided, how much you agree or disagree with each statement.

SCALE:

<table>
<thead>
<tr>
<th>Very Strong Disagreement</th>
<th>Very Strong Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 1 2 3 4 5 6 7 8 9</td>
<td></td>
</tr>
</tbody>
</table>

____ 01. I would prefer complex to simple problems.

____ 02. I like to have the responsibility of handling a situation that requires a lot of thinking.

____ 03. Thinking is not my idea of fun.

____ 04. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.

____ 05. I try to anticipate and avoid situations where there is a likely chance will have to think in depth about something.

____ 06. I find satisfaction in deliberating hard and long for hours.

____ 07. I only think as hard as I have to.

____ 08. I prefer to think about small, daily projects to long-term ones.

____ 09. I like tasks that require little thought once I’ve learned them.

____ 10. The idea of relying on thoughts to make my way to the top appeals to me.

____ 11. I really enjoy a task that involves coming up with new solutions to problems.

____ 12. Learning new ways to think doesn’t excite me very much.

____ 13. I prefer my life to be filled with puzzles that I must solve.
14. The notion of thinking abstractly is appealing to me.

15. I would prefer a task that is intellectual, difficult and important to one that is somewhat important but does not require much thought.

16. I feel relief rather than satisfaction after completing a task that requires a lot of mental effort.

17. It's enough for me that something gets the job done; I don't care how or why it works.

18. I usually end up deliberating about issues even when they do not affect me personally.
Appendix F
Probability of Future Problems Scale (PFP)

Participant Number: ______________________

Instructions: For each of the statements below, please indicate legibly a number (1 – 5), in the blank space provided, whether you think you will experience the “problem” within the next 3 months.

SCALE:

1 = No Probability That I Will Experience This Problem
2 = Low Probability That I Will Experience This Problem
3 = Moderate Probability That I Will Experience This Problem
4 = High Probability That I Will Experience This Problem

__ 01. Too much schoolwork.
__ 02. Doing worse in school than you expected.
__ 03. Problems with a professor.
__ 04. Problems making decisions about course selection, major, or career plans.
__ 05. Needing work but unable to find a job.
__ 06. Trouble getting along with employer.
__ 07. Boring or unpleasant work required by your job.
__ 08. Working too long or hard at your job.
__ 09. Financial problems concerning school (in danger of not having enough money to continue).
__ 10. Not enough money for extras (e.g., entertainment and recreation)
__ 11. Trouble getting along with co-workers.
__ 12. Other financial problems.
13. Parents having financial difficulties.


15. Serious illness or injury of a close family member.

16. Other less serious health problems of a close family member.

17. Emotional problems of a close family member.

18. Trouble getting along with your parents.

19. Trouble getting along with other close family members.

20. Difficulties or estrangement between family members (other than self).

21. Problems to adjusting being away from home.

22. Not getting to go home when you want.

23. Family having housing problems (house or neighborhood less than adequate).

24. Dissatisfaction with your own housing (e.g., not enough space, bad location, poorly kept up, etc.).

25. Difficulty getting along with roommate(s).


27. Martial difficulties, without separation.

28. Difficulty finding the romantic relationship you want.

29. Problems getting along with your boyfriend/girlfriend.

30. Trouble getting along with in-laws or boyfriend/girlfriend’s family.

31. Concern over possibly pregnancy of self or partner.

32. Difficulties in carrying on a long-distance, romantic relationship.

33. Problems in meeting people with different lifestyles, views, or backgrounds.
34. Responsibilities in a living group or campus organization being overly demanding.

35. Disagreement or misunderstanding with a friend.

36. Serious illness or injury of a close friend.

37. Problems with making new friends.

38. Lack of free time to relax and enjoy myself.

39. Problems with the legal system.

40. Problems in meeting deadlines or goals.

41. Lack of time to study.

42. Forgetting an assignment.

43. Personal health problems.

44. Feeling lonely.

45. Lack of sleep or disruption in sleep routines.

46. Problems with managing my time.

47. Problems with handling peer pressure.

48. Pressure from others to do better in school.
Appendix G
Interaction Anxiousness Scale (IAS)

Participant Number: _____________________

Instructions: For each of the statements below, please indicate legibly, a number (1 - 5), in the blank space provided, how characteristic each statement is of you according to the scale below.

SCALE:

1 = Not At All Characteristic Of Me
2 = Slightly Characteristic Of Me
3 = Moderately Characteristic Of Me
4 = Very Characteristic Of Me
5 = Extremely Characteristic Of Me

01. I often feel nervous in casual get-togethers.
02. I usually feel uncomfortable when I am in a group of people I do not know.
03. I am usually at ease when speaking to a member of the opposite sex.
04. I get nervous when I must talk to a teacher or boss.
05. Parties often make me feel anxious and uncomfortable.
06. I am probably less shy in social situations than most people.
07. I sometimes feel tense when talking to people of my own sex if I do not know them very well.
08. I would be nervous if I was being interviewed for a job.
09. I wish I had more confidence in social situations.
10. I seldom feel anxious in social situations.
11. In general, I am a shy person.
12. I often feel nervous when talking to an attractive member of the opposite sex.
13. I often feel nervous when calling someone I do not know very well on the phone.

14. I get nervous when I speak to someone in a position of authority.

15. I usually feel relaxed around other people, even when they are different from me.
Appendix H
Consent Form

The purpose of this study is to examine the moderating effects of coping-style and self-esteem on the relationship between trait worry and related outcomes such as self-efficacy (beliefs in your personal effectiveness to accomplish and master tasks you undertake), catastrophizing (blowing life events out of proportion), and social anxiety. My thesis chairperson, Dr. Millicent H. Abel, and I, Mr. Jonathan R. Fink, appreciate your willingness to participate in this study. Your participation will contribute to the understanding of the relationship between these factors.

You will be asked to complete six questionnaires. Each questionnaire includes specific directions, so please read carefully the directions on each questionnaire. The completion of these questionnaires will take approximately 45 to 60 minutes. You will receive 1 research participation credit in your selected psychology class.

Please answer all questions completely and honestly. Your answers will be kept completely confidential. Your name will not be placed on any form so anonymity will be preserved. You have no need to worry that anyone, including Dr. Abel or myself, could ever link your name to your responses on any form. The subject number in the upper left-hand corner of each questionnaire will only identify your responses.

Your participation in this study is strictly voluntary and you may withdraw at any time without negative consequences. If you have any questions regarding this study, you may contact Dr. Millicent H. Abel, Department of Psychology, Western Carolina University, at 1-828-227-3369. You may also contact Mr. Jonathan R. Fink, School Psychology Graduate Student, at 1-828-227-4500.

Print Name: I, __________________________________, have thoroughly read this consent form and agree to participate in this study, which examines the moderating effects of coping-style and self-esteem on the relationship between trait worry and related outcomes, e.g., self-efficacy, catastrophizing, and social anxiety. I understand that my participation is strictly voluntary and I can withdraw at any time without negative consequences. I also understand that there are alternative ways of earning research participation credit. I understand that my responses will remain completely confidential. Finally, I am at least 18 years of age.

Student’s Signature ___________________________ Today’s Date ___________________________