A CONTINUATION IN THE DEFINING OF THE
CONSTRUCT OF OPTIMISM

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

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One hundred twenty-two undergraduate students at the University of North Texas were administered several different optimism scales and also measures of similar constructs such as hope. Results indicated that most measures of optimism show only low to moderate intercorrelations with other measures of the same construct. Additionally, factor analysis confirmed that the measures of optimism actually appear to be assessing multiple factors and not necessarily optimism alone. Implications of the present study include the necessity of individual researchers to be familiar with the specific measure of optimism used in a given study as scores on differing measures of optimism may actually be providing very different information.
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CHAPTER 1

INTRODUCTION

Optimism is a construct whose study is said to have derived from interest in the power of positive thinking which is a technique entailing purposeful distortion of one’s expectations or cognitions for a future event (Scheier & Carver, 1987). This, in turn, then can lead to or manifest in positive or beneficial behavioral changes. However, while viewed as a cognitive technique, optimism is recognized as also entailing an interaction of a number of psychological, behavioral, social, and physiological mechanisms. This has led researchers to view optimism as a complex construct in that it appears to encompass the whole person—body, mind, and spirit (Peterson & Bossio, 1991).

As a construct, optimism has been widely studied since the early 1980s. Although scattered study utilizing the construct of optimism is evident in earlier literature, any perusal of the literature makes it evident that the 1980s were a time of exponential interest in the construct. In fact, the research from this era still provides much of the theoretical framework for today’s study of optimism. To date, over 150 published articles are now available which have used optimism as the main topic of experimental study.

Early studies perhaps rushed to provide evidence for the advantages of maintaining an optimistic outlook (such as decreased chance of illness and greater likelihood of academic success). More recently, the focus has shifted towards providing rationale (theoretically and experimentally) to emphasize the distinctiveness of optimism from seemingly similar constructs such as hope, self-efficacy, self-esteem, and perceived control. This has led the field of optimism study in new directions and has in turn further
reinforced the recognition of optimism's usefulness in the study of the relationship between future expectancies, health, psychological well-being, and goal attainment.

However, with the growing diversity in the optimism literature the catalogue of study has matured to the point where researchers sometimes offer point-counterpoint articles based upon their individual theoretical conceptions of the construct of optimism. Although this newfound diversity may have secured the field of optimism as a viable area of study in the psychological literature, prominent authors are taking varying positions on basic theoretical positions such as the defining of the construct itself.

Optimism has been defined differentially according to the given researcher. Weinstein (1980) described optimism as a cognitive bias which leads an individual to underestimate their own chances of experiencing a specific negative outcome (i.e., developing cancer) and overestimate their chances of a specific positive outcome (i.e., winning the lottery). Scheier and Carver (1985, 1987) have taken a different approach and described optimism as a generalized outcome expectancy (which is pervasive across situations) that positive outcomes will occur and negative outcomes will not occur in one's future. Seligman (1990) described optimism as an attributional style which leads a person to explain positive outcomes as resulting from permanent, universal, and internal causes while explaining negative outcomes as resulting from temporary, specific, and external causes. Peterson and Bossio (1991) further define optimism as an interactive collection of beliefs which influence one's expectation of positive and negative outcomes towards the future.

The lack of a singly accepted definition is perhaps one criticism of the study of optimism. Interestingly, Scheier and Carver (1987) have noted that this diversity may actually benefit the study of optimism by offering increased generality, utility, and understanding of the construct of optimism by providing various conceptual viewpoints from which to enact study.
While questions about the theoretical divergence are evident concerning the defining of optimism, a long history of research has promoted the benefits of maintaining an optimistic outlook. In fact, a summary of the optimism literature can provide an understanding of the psychological, behavioral, social, and physiological mechanisms theoretically understood to underlie and provide the basis for the construct of optimism. In addition, a review of this prior literature can aid in giving one an appreciable understanding of the theoretical and experimental subtleties and intricacies of the construct of optimism necessary to form a basis from which to propose future research. As such, a review of the optimism literature is warranted.

Background Study on Optimism

Aspects of optimism. Peterson and Bossio (1991) contend that there are three aspects inherent in the construct of optimism. First, optimism takes place within the real world. It is not a distortion of reality like that involved with the tenants of positive thinking. The authors offer an example of a person of small stature (4'10'' tall) desiring to become a professional basketball player. If this person appears to exude an optimistic attitude concerning his chances of attaining this goal, it is likely that this attitude is not optimism (according to their definition) at all but instead a distortion of reality. The likelihood is that he will not attain his goal and a gross deviation of his stated chances from the actual likelihood of the outcome would be a deluded presumption, not optimism. Thus, these authors contend that optimism resides in reality and as such is reality based.

Secondly, optimism is not an inflexible, rigid trait. It is the rare person who is optimistic in every situation. Few people can be characterized as pure optimists and Peterson and Bossio further contend that research utilizing this conceptualization may actually be employing a simplified notion of optimism. They contend that most people are somewhere "in the middle of the continuum" (p. 10) of optimism, and that their position may change as a result of situational fluxes. Therefore someone may be an optimist for
work productivity while being a pessimist for personal relationships. Their arguments espouse two important notions: (a) that optimism can vary according to given situations, thus optimism can be situation-specific as well as a general disposition, and (b) optimism is a construct which can be conceptualized on a continuum (Peterson & Bossio, 1991).

Thirdly, specifically regarding health psychology, Peterson and Bossio (1991) state that optimism is not a panacea. In and of itself, according to these authors, optimism alone does not cure disease. Optimism, however, does lead to action. Optimism is healthy because it promotes behaviors which are conducive to health such as eating a balanced diet or engaging in regular exercise.

While Peterson and Bossio’s description of the aspects of optimism may seem incompatible with those of Seligman, Weinstein, or Scheier and Carver, their comments provide a definable structure which differentiates the construct of optimism from the concept of positive thinking from which it derived.

Unrealistic optimism. Demonstrating the disagreement in the optimism literature, Weinstein (1980) stated that optimism not only involves a merely hopeful “outlook on life, but an error in judgment” (p. 806). He contends that if individuals report that they are more likely than their peers to experience a positive life event, or report that they are less likely than their peers to experience a negative life event, then they are not only displaying optimism but “unrealistic optimism.” One criticism of his work is that he does not differentiate between optimism and unrealistic optimism. Weinstein’s (1980; 1982; 1983; 1984) and others’ (Kulik & Mahler, 1987) experiments have clearly shown that an optimistic bias is present in some person’s judgments of certain event probabilities. However, as Weinstein (1980) himself noted “it is usually impossible to demonstrate that an individual’s optimistic expectations about the future are unrealistic” (p. 806). Thus, how does one know when someone is operating in a reality context (suggestive of optimism based upon Peterson and Bossio’s arguments) or in a grossly misjudged context
Another possible criticism of the concept of unrealistic optimism is that Weinstein conceptualizes statistically significant deviations as unrealistic in nature and does not focus upon slight over/underestimation’s. Statistically non-significant deviations are not viewed as an optimistic bias in Weinstein’s research. Thus, Weinstein not only equates statistical significance with unreality but also considers all optimism to be unrealistic optimism (which would mean that all optimism is a distortion of reality). This is in direct contrast to numerous other researchers who contend that optimism is reality based (Peterson & Bossio, 1991; Scheier & Carver, 1987; Seligman, 1990). It is possible that Weinstein’s emphasis upon statistical significance has perhaps limited our understanding of the differential nature of optimism and unrealistic optimism.

The distinction between optimism and unrealistic optimism has not been investigated. Unfortunately, studies of unrealistic optimism have adopted the strategy of comparative risk judgment as a methodology to discern unrealistic optimism. In this method persons rate their likelihood of event probability in comparison to a standard of peer likelihood. Thus, unrealistic optimism exists if one’s reported chances for an event are statistically significantly different from the mean likelihood of their peers. This may be useful as an indication of differential beliefs or attitudes, but it is not useful in providing a criterion-based measurement of optimism because it does not utilize comparison of beliefs or attitudes to behavioral outcomes. A correlation of beliefs or attitudes to these outcomes is necessary to determine presence or absence of optimism. Although this may be an argument against other measures of optimism, methodologies utilizing beliefs and attitudes
as well as outcome criteria, will likely benefit our understanding of the distinction between optimism and unrealistic optimism if one really exists.

**Optimism and pessimism.** Roget's thesaurus (1978) lists pessimism as an antonym for optimism and a number of researchers, even those utilizing an attributional definition of optimism, conceptualize pessimism as the polar counterpart of optimism (Peterson & Bossio, 1991; Scheier & Carver, 1987; Seligman, 1990). Also when viewing optimism strictly in terms of expectancies, optimism and pessimism are both constructs which lie on a continuum concerning probability expectancies of future events. Pessimism is considered as present when the expectation is low for good events and high for bad events; simply the opposite of that for optimism (Scheier & Carver, 1985; 1987). However, some researchers have argued that optimism and pessimism are not constructs on one continuum but rather differentiable, independent constructs.

Those who consider optimism and pessimism as independent unipolar constructs often cite two reasons why these constructs are best viewed in this manner: (a) one, confirmatory analysis of optimism scales reveals "the superiority of a two-factor model of optimism-pessimism, in that these constructs represent ... distinct dimensions" (Marshall, Wortman, Kusulas, Hervig, & Vickers, Jr., 1992, p. 1071) and (b) second, optimism and pessimism "are differentially related to fundamental dimensions of personality and mood" (p. 1072) with optimism principally associated with positive affect and extraversion and pessimism primarily related to negative affect and neuroticism.

Evidence is available to support the bipolar nature of optimism and pessimism. Marshall, Wortman, Kusulas, et al. (1992) reported a negative relationship between optimism and pessimism (ranging from $r = -0.39$ to $r = -0.49$). This relationship has been substantiated by other researchers in that Chang, D'Zurilla and Maydeu-Olivares (1994) reported a correlation of $r = -0.43$ between optimism and pessimism and Dember, et al. (1989) reported a correlation of $r = -0.52$ between optimism and pessimism. Following
investigation of face validity and construct validity issues, according to Walker and Lewine (1988) if two constructs are independent, then little or no relationship between them should be exhibited. If they show a positive correlation, then these constructs may be measuring similar aspects. But, if a negative relationship exists, it is possible that these two constructs are essentially polar conceptualizations of a unitary dimension represented on a continuum. Thus, it may not only make theoretical sense to conceptualize pessimism as a bipolar construct with optimism, psychological study has provided evidence that bipolarity is perhaps a more favorable way to investigate this phenomenon than in a unipolar manner (Scheier & Carver, 1985, 1987; Scheier, Weintraub, & Carver, 1986). There is a continuing inquiry, however, as to the relationship of optimism and pessimism because of differences in interpretability of research such as that previously described. The present study was concerned with the nature and relationship of optimism and pessimism.

**Dispositional vs. situational.** Scheier and Carver (1987) offer two important reasons why they believe a dispositional approach is beneficial in the study of optimism. First, they state that daily living entails complex behaviors and that these behaviors can be multiply determined. So although some assessment devices may be intended to measure only specific outcome expectancies, these measures are to some degree confounded by “related but distinguishable variables such as morale, meaningfulness, satisfaction, and most notably, attributions of causes for the expectancies” (p. 171). Thus, they believe that a focus upon generalized outcome expectancies may be more profitable than a focus which is situation-specific in nature because generalized expectancies are purportedly less susceptible than specific-outcome expectancies to these confounding variables. Secondly, dispositional indices may be useful in situations in which the person has no prior experience with a specific event but a measure of optimism is necessary.

Curiously, even research primarily concerned with the situation-specific measurement of optimism has perhaps inadvertently provided support for a dispositional
approach to the measurement of optimism. Weinstein (1980) investigated the relationship between event characteristics and situation-specific measures use of comparative judgments. The event characteristics utilized in this particular study were: perceived controllability of the event, personal experience with the event, perceived probability of the event, degree of desirability of the event, and stereotype prevalence (degree to which a stereotype exists of a particular type of person which does not experience a negative event). Differential association between comparative judgments and event characteristics, according to the valence of the event, was reported. Positive events exhibited a significant relationship to degree of desirability and perceived probability of the event while negative events exhibited a significant relationship to personal experience, stereotype salience, and perceived controllability. Thus, if an instrument designed to measure optimism were to utilize situation-specific events the instrument may be inherently contaminated by the aforementioned event characteristics. Interpretation of this research supports the utilization of dispositional approaches to the study of optimism rather than those more situationally inclined.

However, one criticism of a dispositional approach is that it may be difficult, perhaps impossible, to discern optimism without a criterion reference. To counter this argument, dispositional proponents note that their measures of optimism are applicable even when studying the relationship between optimistic expectations and probability of events not previously encountered by an individual. Thus, a criterion reference would not be available, notwithstanding the necessity of an index of optimism. Despite these arguments, it is likely that both situation-specific and dispositional approaches may be useful in gaining a better understanding of the construct of optimism because of their differing contributions to this field of knowledge. Even strong dispositional proponents such as Scheier and Carver (1987) have acknowledged the utility of both situation-specific and dispositional approaches by noting "this diversity of methods offers the benefit of
increased generality" (p. 173). Their statements suggest that a combination of dispositional and situational measures may provide the best indicator of the presence of optimism. Unfortunately, there is no study to confirm this hypothesis.

**Theoretical distinction of optimism.** Scheier and Carver (1987) have proposed that optimism is a theoretically distinct approach to self-regulation quite different from two conceptually similar approaches—Self Efficacy and Attributional Style. While each of these orientations are similarly concerned with prediction of outcome expectancies, these authors provide arguments that support the relative theoretical independence of their conceptualization of optimism.

Self-Efficacy Theory (Bandura, 1977, 1982, 1986) contends that specific outcome expectancies are beliefs that rest solely upon the individual’s perceived ability to achieve that given outcome. Scheier and Carver (1987), from their perspective of the construct of optimism, instead contend that outcome expectancies rest solely upon an individual’s subjective estimate of outcome probability without regard to a specific locus of causality such as that proposed by Self-Efficacy Theory. In their approach to optimism an outcome could be a result of the actions of a given person, someone else, or even some other causal agent outside of the person’s direct control (or perhaps even unknown at that time). Bandura’s approach is problematic in that his theory he does not account for outcome expectancies which derive from sources outside of the person. In effect, one criticism of Self-Efficacy Theory is that it appears to mandate that “personal causation is the only causal process that is important to consider with respect to one’s successes or failure expectancies” (Scheier & Carver, 1987, p. 200). An additional criticism of Self-Efficacy Theory is that it emphasizes personal assessments of one’s performance in specified settings. On the other hand, Scheier and Carver’s theoretical basis of optimism proposes that outcome expectancies can be held for specific outcomes as well as be retained as a general attitude of the person (Scheier & Carver, 1987). Certainly, based upon these
arguments optimism appears to be a theoretically distinct approach to outcome expectancy than that of Self-Efficacy Theory.

Attributional Theory (Abrahamson, Seligman, & Teasdale, 1978; Peterson & Bossio, 1991; Peterson & Seligman, 1984; Seligman, 1990) has taken a step further than Self-Efficacy Theory by providing not only their own conceptualization of outcome expectancy and how it develops, but also in developing their own, rather unique, theoretical approach to the construct of optimism itself. Scheier and Carver (1987) note that there are clear differences in theoretical emphasis between their own conceptualization of optimism as a generalized outcome expectancy, expressed in a probabilistic format, and those of attributional theory. Attributional proponents contend that one's attributions for causality lead to expectancies which, in turn, subsequently lead to a resulting behavior. Scheier and Carver (1987), however, contend that this has led to a de-emphasis on the direct measure of expectancies in favor of a focus upon attributions. They believe attributional theory tends to focus on the attributions themselves with little, if any, emphasis upon outcome expectancies themselves. In doing so, attributional theory has assumed that outcome expectancies are simply a later point on the same pathway leading to behavior as the path from the attributions themselves to behavior. Scheier and Carver report that attributions may not be the only determinant of behavior and an emphasis and focus on one's attributional style to discern optimism only removes the researcher one step further from the outcome variable of interest (Scheier & Carver, 1987).

Construct distinction of optimism. Optimism appears to be a distinct construct of interest in the published literature. Scheier and Carver (1986) reported that optimism is only moderately correlated with hostility ($r = .39$ as measured by the Cook-Medley Hostility Scale) and hardiness ($r = -.35$) (Scheier & Carver, 1985). Optimism also appears relatively distinct from the concept of self-esteem as Hale, Fiedler, and Cochran (1992) reported that optimism and self-esteem are only moderately correlated ($r = .58$). Dember
and Brooks (1989) stated that optimism and perceived well being, though related, are only moderately correlated. This finding was substantiated by subsequent research by Staats (1989) which reported a correlation of $r = .42$ between optimism and perceived well-being. Dember and Brooks (1989) further provided evidence that optimism and happiness are related, though relatively distinct, constructs as they reported only a moderate correlation between the two ($r = .55$).

Further evidence exists supporting the relative distinctiveness of the construct of optimism. Dember, Martin, Hummer, et al. (1989) reported only a moderate relationship between optimism and social desirability ($r = .42$). Optimism and locus of control appear to be only mildly associated with correlation's ranging from $r = .04$ to $r = .30$ according to Stipek, Lamb, and Zigler (1981). Perceived control and optimism are only mildly associated ($r = .27$) while optimism and trait procrastination are negatively correlated constructs ($r = -.23$) (Lay & Burns, 1991). In addition, Dember, Martin, Hummer, et. al. (1989) reported that optimism and pessimism are only minimally associated to philosophical and religious commitment ($r = -.13$ to $r = .20$). Thus, the relative distinctiveness of the construct of optimism appears warranted.

**Defensive pessimism.** Norem and Cantor (1986) recognized that certain individuals who held negative attitudes concerning future outcomes performed well at these future outcome tasks. These researchers theorized that the individual’s negative attitude was defensive in nature and that this attitude was actually being used as a strategy to curb anxiety in an attempt to reduce interference with task performance. The researchers termed this strategy “defensive pessimism.”

Norem and Cantor (1986) reported that their research has exhibited that persons described as defensive pessimists actually showed decrements in performance following a “pep-talk” designed to increase optimism. Apparently this encouragement distracted defensive pessimists from using their negative attitudes to reduce performance anxiety.
They added that utilization of defensive pessimism over the long-term was perhaps detrimental to performance because eventually the continual negative attitudes became manifest in performance decrements. However, as a short-term strategy to reduce anxiety and perhaps influence performance success, this may be useful for some persons.

Peterson and Bossio (1991) suggested that one possible drawback for long-term voicing of one's defensive pessimism is that others may tire of hearing one's negative self-talk. This continual pessimism, possibly in the face of success, may appear to others as "fishing for a compliment" (p. 108). Thus, as a short-term strategy defensive pessimism may be useful, but as a long-term strategy it may be associated with decrements in performance as well as peer alienation. Based on this information, defensive pessimism may possibly be a polar counterpart to unrealistic optimism in that both may be distortions of reality. This may not allow either construct to be classified as optimism or pessimism despite their relative merits. Thus, it could be that defensive pessimism may be more appropriately viewed as "unrealistic pessimism."

Collective optimism/pessimism. Peterson and Bossio (1991) contend that optimism and pessimism can be characterized not only by an individual's expectations but also in sociological terms. They state that the collective shared beliefs of individuals constitute a group belief or what they term "collective optimism/pessimism." They offer little evidence supporting that this collective belief is inherently different in nature to that of a simple addition of individual beliefs.

Optimism and hope. Optimism and hope are theoretically distinct constructs. According to Snyder (1994), hope is best defined in terms of three aspects: (a) goal-orientation, (b) "willpower" or "determination and commitment that we can call on to help move us in the direction of the goal to which we are attending at any given moment" (p. 6), and (c) "waypower" or "a mental capacity we can call on to find one or more effective ways to reach our goals" (p. 8). Snyder describes the theoretical distinction between the
constructs of optimism and hope by noting that (a) hope is goal oriented while optimism may or may not exist with specific goals in mind and may occur for events unassociated with goals altogether, (b) hope entails, by definition, an attack strategy towards a goal while optimism does not engender planned strategies towards goal-orientation as a necessary component of it’s definition, and (c) hope is personal in nature and refers to one’s personal methods to accomplish a goal while optimism can be personal or refer to the probability that an individual besides oneself may be involved in event outcome.

Thus, although both optimism and hope are similar in the respect that both are conceptually tied to future outcomes, they are distinct theoretical constructs. Hope is defined in terms of a belief of one’s personal ability to achieve a goal (outcome) while optimism is defined as the attitude or belief that the outcome will occur or not. However, Peterson and Bossio (1991), in their discussion on the integral aspects of optimism, contend that an optimistic attitude or belief leads one to approach their world in an active fashion. This emphasis upon action appears similar to that of the goal-directed, active behavior theoretically implicated in the definition of the construct of hope. Hope is defined as an ability to personally plan goal-directed behavior; the definition of optimism does not connote any inference to this “ability” to plan action for goal attainment. In fact, as would be expected, optimism and hope are only mildly (though significantly) correlated ($r = .27$) (Staats, 1989).

Even though tests distinguish between optimism and hope, some experiments have failed to make this distinction. Beck, Weissman, Lester, and Trexler (1974), in work with the construct of hopelessness, related hope to outcome expectancies (also inherent in the definition of optimism). Their work culminated with “The Hopelessness Scale” designed to purportedly measure pessimism. In a factor analysis of this instrument (completed by its developers—Beck, Weissman, Lester, et al., 1974), three factors were identified:
(a) affect—which involved enthusiasm, happiness, faith, and hope, (b) motivation—which involved attitudes of "giving up, deciding not to want anything, and not trying to get something that is wanted" (p. 864) and (c) cognition—which involved perceptions of a positive and negative future. Of these three factors the third is perhaps most closely approximate to the definition of optimism.

Belief system and optimism. Peterson and Bossio (1991) claim that the moderate associations between optimism and a number of other constructs are to be expected. Optimism does not, nor does any other attitude, exist in a vacuum. It is more accurately viewed as an attitude contained within a relational system of beliefs. Optimism, itself may or may not be defined as a belief, but presumably optimism would occur concomitantly with other beliefs or attitudes that a person holds. Peterson and Bossio assert that these beliefs and attitudes are interwoven; thus are related in some degree to each other. Each may draw strength and support from other beliefs or attitudes just as they may support other system components. Although optimism is likely not related to every belief or attitude in one's cognitive system, this conceptualization does emphasize the interrelatedness nature of optimism.

Spirituality and optimism. It is often thought that religious beliefs engender and nurture notions of a good future (Seligman, 1990). Seligman reported research being done in Europe has shown a relationship between optimism and religious beliefs, specifically those of Jewish heritage. He noted that during a study of variables associated with optimism in a Russian population living in Berlin, a strong link between Jewish beliefs and secular beliefs was discovered. In short, a sense of spirituality was related to increased levels of optimism. At this time however, there is little information comparing specific religious outlooks and level of optimism, because as Seligman states a number of confounding variables are often wrought during such an investigation (including nation of origin and local customs). Certainly further research into the relationship of spirituality
and optimism is to be encouraged as it may provide some explanation of the historical origins of optimism.

**Temporal Nature of Optimism**

Optimism appears to have a temporal basis. Lipkus, Martz, Panter, and Drigotas (1993) reported that the influence of optimism was strongest upon one’s judgments about future likelihood of event occurrence when the event was to occur within the next year. Optimism’s influence upon judgment of events to occur more than one year in the future was greatly attenuated from that of the previous comparison. Curiously, this “temporal dependency” was only apparent concerning negative events; positive events did not exhibit this “dependency” on time. Burger and Palmer (1992), in a study of California earthquake survivors, reported that pessimism for the future was not apparent immediately following a natural disaster but was present three months later. This suggests that pessimism does not immediately follow dramatic negative events but develops or becomes noticeable only at a later time. It also suggests that pessimism, but not optimism, retains a temporal nature. However, further study has supported the temporal nature of optimism by noting that the older a person is, the more likely their optimism will be based upon personal experience rather than on attitudes that developed from relations with their parents (Carnelly & Janoff-Bulman, 1992). These researchers in their studies help to illuminate the temporal, and perhaps even developmental, nature of optimism.

**Extraclassificatory Attributes of Optimists/Pessimists**

Optimists possess a number of characteristics, that are not defining criteria for being an optimist, but rather extraclassificatory attributes of optimism. These attributes include: (a) optimists tend to rely more on problem-focused coping strategies while pessimists tend to utilize emotion-focused coping mechanisms (Strutton & Lumpkin, 1992), (b) optimists tend to utilize active coping strategies (Fontaine, Manstead, & Wagner, 1993),
(c) optimist’s tend to exhibit significantly less catastrophizing and possess fewer irrational beliefs than do pessimists (Caryk & Walker, 1986), and (d) optimist’s tend to exhibit fewer self-descriptions of distress at 3, 6, and 12-months post surgery (Carver, et al., 1993).

For dialectical theories of optimism, studies utilizing pessimism may also provide useful data in describing the extraclassificatory attributes of optimists. These characteristics include: (a) pessimists tend to be more hostile (Plomin, et al., 1992; Williams, Riels, & Roper, 1990), (b) pessimists are more likely to be “Type A’s” (Lee, Ashford, & Jamieson, 1993), (c) pessimists tend to be lonelier (Davis, Hanson, Edson, & Ziegler, 1992; Foxall, Barron, von Dollen, & Jones, 1992), (d) pessimists tend to be “evening people” (Levy, 1985), and (e) pessimists tend to report more perceived daily hassles (Blankstein, Flett, Gordon, & Koledin, 1991).

McGinnis (1990) provided his summarization of the extraclassificatory attributes of optimists. These characteristics include: (a) seldom being surprised by trouble, (b) often looking for partial solutions, (c) maintaining a belief that one has control over their future, (d) allowing for regular “times of renewal” of one’s optimism and enthusiasm, (e) interrupting pervasive negative thoughts as needed, (f) retaining a high level of appreciation of life, (g) using one’s imagination to rehearse successful outcomes, (h) maintaining a cheerful demeanor even when happiness does not seem possible, (i) believing in a nearly inexhaustible capacity for achievement, (j) fostering of love into one’s life, (k) attempting to understand other’s actions without hostility, (l) sharing of good news, and (m) accepting of what cannot be changed in one’s life. These characteristics may be used to provide a theoretical description of the optimistic person.

Origins of Optimism

Cognitive-developmental. Peterson and Bossio (1991) contend that the seeds of optimism are present in childhood and that the development of optimism is perhaps inherently related to the cognitive development of the child and involves several facets of
change including intelligence, perception, memory, problem solving, and language development. Though each of these facets may develop at differing rates, it is apparent that young children simply do not think in identical manners as adults (thus a child's optimism presumably is different in nature than that of an adults). As a conceptual basis from which to understand this change, Peterson and Bossio utilize Piagetan theory which describes cognitive development in terms of four stages of development including: (a) sensorimotor, (b) preoperational, (c) concrete-operational, and (d) formal operations.

Peterson and Bossio contend that optimism cannot be developed until the end of the sensorimotor stage at which time an individual develops a perception of object permanence. They note that if one cannot retain the notion of a future outcome, one cannot hold an expectation for the outcome. During the preoperational stage, a child’s optimism is still highly egocentric and unrealistic in nature and almost certainly influenced by the child’s lack of ability to distinguish between chance and skill (or correlation and causation); egocentric optimism is one characteristic of this stage of cognitive development. Development of “adult-like” optimism occurs during the concrete operations stage because it is during this stage that a person comes to understand the connections between specific actions and contingent outcomes and also is able to envision connections between outcomes and prior actions. Thus optimism appears to be not only tied to a time orientation, but also to the ability to discern cause and effect accurately in one’s behavior. During the formal operations stage, one becomes able to regularly process abstract information. Because of this, one is able to take a perspective of broad issues such as love, friendship, justice, or self (which that person was previously unable to do). This new and broader perspective now provides a “vantage point” from which one in this stage of development can examine these larger issues and thus develop a more mature type of optimism.

Peterson and Bossio imply that an adequately developed sense of self allows the development of optimism while a unstable “sense of self” may be a root influence in the
development of pessimism. These authors state that it is during adolescence, perhaps because of its relationship to the development of a sense of self, that optimism becomes or fails to become a "cognitive habit".

**Social variables.** Peterson and Bossio (1991) also state that social variables may be important in the development of optimism or pessimism. They stated that there are at least four separate social influences upon development of optimism in childhood: (a) first, successes in one's life lead to optimism. Hinze (1993) and Miller and Seligman (1976) in their research tend to support this contention, (b) second, the type of feedback one gives to a child influences the development of the child's optimism. Children reportedly "internalize" the attributions others place on their actions. If negative events are attributed to their stable characteristics, they are likely to develop a pessimistic sense of self. On the other hand, if positive outcomes are described as under a child's control, they are likely to develop an optimistic outlook. Of course, inherent in these notions of attribution though is the necessity of feedback itself. The authors provide no mention of how the lack of behavioral feedback influences a child's development of optimism. (c) third, modeling of optimism influences children's development of their own optimism. If optimism is modeled for children, they are more likely to become optimistic themselves. (d) fourth, early trauma or loss may predispose one to pessimism. If a child experiences loss, especially when it occurs before the child is capable of understanding why this event occurred, the child may come to expect future negative outcomes (with subsequent loss or trauma only serving to reinforce these expectations) (p. 71-72).

Dean, Klavens, and Peterson (1989) reported a significant relationship between one's optimism and that of one's mother. They did not find a significant relationship between one's optimism and one's father's optimism. Dean, Klavens, and Peterson thus suggested that a modeling influence from the main caregiver may have been evident. Plomin, et al. (1992) also provided evidence suggesting that shared-rearing environment is
an important variable in the study of the sibling optimism. Their research provides support for Peterson and Bossio's contention that the study of social variables is important when investigating the origins of optimism.

**Psychological-control.** Control has been described as a construct which refers to exercising “restraint or direction over” (Flexner, 1990, p. 193) and as a belief that one is “able to determine what we do or what others do to us” (Gatchel, Baum, & Krantz, 1989, p. 74). Based on these descriptions, control is perhaps best conceptualized as “a belief that one has the ability to influence the outcomes of events.” As one might suspect, these beliefs of personal control are associated with increased levels of optimism (Dejoy, 1989; Hinze, 1993; 1995; Van der Velde, Hooykaas, & Van der Pligt, 1992).

An extensive foundation of historical findings has provided the theoretical basis for research that has tended to support a relationship between control and optimism. Control and optimism are both associated with improved task performance (Fosco & Geer; 1971; Glass & Singer, 1972; Hearst, 1965) and persistence toward goal attainment (Hannum, Rosellini, & Seligman, 1974; Overmier & Seligman, 1967; Padilla, 1973). Control, just as optimism, has been associated with numerous physiological indices of health such as optimal neurotransmitter activity (Weiss, Stone, & Harrell, 1970), immunocompetence (Maier, Laudenslager, & Ryan, 1985), and reduced stress (Bjorkstrand, 1973; Geer, Davison, & Gatchel, 1970; Stotland & Blumenthal, 1964). In fact, research has suggested that both control and optimism may actually themselves be self-reinforcing to some degree as a sense of control has been associated with lesser physiological arousal following exposure to stress (Haggard, 1946; Mowrer & Viek, 1948; Pervin, 1963) while optimism appears psychologically beneficial because it is associated with decreased anxiety (Perloff, 1983; Stern, Miller, Ewy, & Grant, 1980).
Recent research has helped to further illuminate the relationship between the constructs of control and optimism. While DeJoy (1989) reported that perceived control was a strong predictor of optimism, Van der Velde, Hooykaas, and Van der Pligt (1992) more specifically found, in their study of HIV risk, that optimism concerning one's contracting the virus varied according to perceived controllability of exposure. Further refining this viewpoint, Hinze (1993) provided evidence that one's optimism for a specific outcome is highest when an individual has been personally able to control the outcome of a given task in the past. In contrast, previous exposure to an uncontrollable task promotes decreased optimism for future success at this task. These studies have helped to define the relationship between the constructs of control and optimism.

**Genetic variables.** Evidence for a genetic basis for optimism is present in the literature. Plomin, et. al. (1992), in a twin adoption analysis study, reported a moderate association between heredity and optimism. They estimated that heritability accounts for approximately 23% of one's optimism. Schulman, Keith, and Seligman (1993) also reported a moderate hereditary component to optimism. Their results indicated an intraclass correlation of 0.48 for monozygotic twins optimism while no correlation existed for dizygotic twins. As a result, they suggested that a moderate genetic influence on optimism is present.

**Structural variables.** A relationship between optimism and structural components of the central nervous system has been investigated and experimentally supported. Drake (1984) has provided evidence for lateralization of optimism within the brain. Persons who oriented to the left, thus utilizing the right field of vision, reported higher optimism than those oriented to the right. This research suggested that optimism might be associated with the left hemisphere. Later research by Drake and Ulrich (1992) supported this hypothesis about lateralization of optimism. In their study of line bisection (as a behavioral index of
optimism), they reported a significant association between left hemisphere dominance and optimism. This research suggests that optimism may be a left hemispheric dimension.

**Physiological variables.** Unfortunately, little study into the physiological origins of optimism has been completed to date. It has been suggested though, that naturally occurring opiates may be involved in development of optimism. Tiger (1995) noted that the opiate’s “function is not to significantly shift the body’s capacity to perceive pain but to produce small changes with large consequences in the organism’s cognitive assessment” (p. 168). This would allow a person to “cope” with pain or loss while continuing to behave in goal directed ways. Seligman (1990), on the other hand, has suggested that because of optimism and pessimism’s relationship to depression, this dimensional construct may be related to norepinephrine release or possibly other neurotransmitters involved in depression. Again the paucity of research in this area begs for further study investigating the physiological origins of optimism.

**Evolutionary approaches.** Tiger (1995) has speculated that optimism has an evolutionary basis. He noted that the human species has survived the evolutionary selection process, in part, because of it’s optimism. He added that optimism displays it’s influence in evolutionary terms by allowing individuals to be optimistic about future food supplies despite the advent of seasonal and meteorological fluctuations. It was this optimism about future ability to meet one’s needs that helped to perpetuate oneself through times of change by an expectation of a good future. Across the evolutionary time-scale this optimism has supported the perpetuation of the human species and is perhaps inherent within all of us to some degree today. This is an interesting concept little discussed in the optimism literature.

**Benefits of Optimism**

Peterson and Bossio (1991) propose that numerable benefits arise from the presence of optimism including: professional and personal success, longevity, and physical
health. They do recognize though that optimism may not be solely responsible for these benefits as the "real world" is obviously complex and a simplified belief that optimism itself accounts for all beneficial outcomes is likely a distortion of reality itself. However, a significant number of experiments have found and substantiated a relationship between optimism and various beneficial outcomes including: increased task performance, positive affect, better short and long-term health, and a certain quality of self-reinforcement. A review of these findings are useful in understanding the benefits of optimism.

**Task performance.** Optimists tend to actively pursue positive outcomes (Peterson & Bossio, 1991). Strack, Carver and Blaney (1987) found a significant relationship between alcoholic’s optimism about successful completion of a treatment program and their actual success in this endeavor. Carver and Scheier (1982; 1983) have reported that the belief of good outcomes is related to a person’s continued and/or renewed efforts at goal attainment. Prola and Stern (1984) and Henry, Martinko, and Pierce (1993) found that optimism was significantly related to better educational achievement and performance in coursework. However, one issue that may confound our understanding of the relationship between optimism and educational achievement is that the variable of ability was not partialled-out or accounted for in these studies. Even considering this concern though, it appears that optimists not only persist in their efforts for goal attainment, but also are more successful in attaining these goals.

Despite the relationship between optimism and successful goal attainment in “real life” endeavors, there has been sparse study investigating optimism’s relationship with performance on experimental behavioral tasks. Hinze (1993) utilized an adaptation of the behavioral task of card-sorting (previously defined by Miller and Seligman, 1976) as a measure of skill performance and prediction of coin tosses as a measure of performance on a task of chance in his study of the relationship of control beliefs and optimism. However, he failed to provide a description of optimism’s relationship to performance outcomes on
these measures and instead focused upon the participants “expectations” for successful performance. Unfortunately, aside from the aforementioned research there is no study in the optimism literature which has described and provided a standardized experimental measure of performance on tasks of skill or chance. Future research needs to address this shortcoming and investigate the relationship between optimism and performance on standardized experimental behavioral tasks.

Affect. A number of experiments have supported a relationship between optimism and affect. Tennen, Affleck, Urrows, Higgins, and Mendola (1992) reported a significant correlation of $r = .59$ between optimism and overall mood (as measured by an abbreviated version of the Profile of Mood States) (Lorr & McNair, 1982). Optimism has exhibited a significant relationship with positive affect ($r = .40$) and an inverse relationship with negative affect ($r = -.33$) (Staats, 1989). Optimism and anxiety are inversely related ($r = -.34$) while pessimism has shown a moderate association with anxiety ($r = .60$) (Dember, Martin, Hummer, et al., 1992). Dember and Brooks (1989) noted that optimism and happiness were also moderately correlated ($r = .55$ to $r = .61$). Prola (1984) reported a moderate correlation’s between optimism and depression ($r = -.44$). It is evident that optimism and affect are mildly to moderately associated while retaining a degree of distinctiveness.

Physiological reactivity. Research has supported the relationship between optimism and physiological reactivity to stress. Thayer (1987) noted that personal problems were perceived as less serious (perhaps an index of optimism) during times of higher arousal. Van Treuren and Hull (1986) reported that optimists exhibit less cardiovascular response to stress. Later research by Williams, Riels, and Roper (1990) supported this earlier literature by exhibiting that optimism was inversely related to diastolic blood pressure reactivity to a mental arithmetic task in that pessimists showed greater physiological reactivity to this stressor. Pessimists also reported higher degrees of fatigue following the task when
compared to optimists. Scheier, et al. (1986) found that optimists were significantly less likely than pessimists to physiologically respond with development of Q-waves (indicative of a myocardial infarction) following cardiac bypass surgery. It appears that optimism may serve as a buffer to physiological reactivity to stress.

Health status. A growing research base supports the relationship of optimism and health status. Scheier, et al. (1986) reported that optimistic persons experienced a significantly faster rate of recovery following cardiac surgery. Reker and Wong (1983) found that optimistic elderly persons exhibited fewer physical symptoms at a two-year follow-up exam than their non-optimistic counterparts. Levy, Morrow, Bagley, and Lippman (1988) found that cancer patients, described as optimistic, had longer survival rates than their non-optimistic counterparts. Levy (1986) and Kamen-Siegel, Rodin, Seligman, and Dwyer (1991) each reported that an optimistic explanatory style is associated with immunological competence. In addition, Peterson (1988) found a relationship between optimism and decreased likelihood for developing infectious illnesses such as colds, flus, and sore throats. It is evident that optimism is related to a number of different physiological mechanisms which appear responsible for better health status.

The practical health benefits of optimism suggest that optimism "may help ensure ... emotional well-being" (Tennen & Affleck, 1987, p. 384). Litt, Tennen, Affleck, and Klock (1992) noted that optimism was associated with decreased distress of patients following an unsuccessful attempt at in vitro fertilization. They suggested that this is perhaps conducive to a successful future fertilization attempt. Hamid (1990) offered that optimists engage in greater health-promoting behavior with more specific attempts at prevention of illness than do pessimists. It appears that there is a relationship between optimism and good health.
The relationship between optimism and long-term future health status has also been investigated. Peterson, Seligman, and Valliant (1988) found that optimists had significantly fewer health problems over the course of several decades; they suggested that optimism earlier in life is related to good health in later life. Peterson and Bossio (1991) stated that optimism may have its most robust influence upon health in later life as its effects may take some time to manifest. Thus, optimism's influence may be most apparent in those aged 45 and over (apparently after disease processes associated with age have had an opportunity to moderately develop). Thus, the influence of optimism is not only apparent in measures of physiological reactivity and present health status but also extends to long-term future health status.

Seligman (1990) contends that optimism promotes good health in four specific manners. First, he reports that optimistic persons are less likely to experience learned helplessness. Because learned helplessness is associated with pessimism and decrements in immune function, optimists are less likely to experience a decrement in immune function. Secondly, optimists are more likely to seek treatment soon upon illness development or even engage in actions which prevent illness. This occurs because an optimist possesses an expectation of a good future and his goal-oriented health behavior is influenced by this cognition. In contrast, a pessimist would not see a good future; thus engagement in actions to goal attainment would be futile because the criterion of goal attainment is not visible. Thirdly, optimists encounter fewer negative life events than do pessimists. Negative life events can lead to stress which may lead to illness. If the negative events are not encountered, their negative effects upon one's health also do not occur. Although optimists experience some negative outcomes, Seligman contends that it is the pessimists that encounter a higher number of negative life events. The fourth manner in which optimism promotes good health is the influence of a possible moderator variable—social support. Social support, he contends, acts as a buffer to stress. The effects of stress are exhibited in
decrements in health competence. Optimists, with their tendency towards action in times of trouble, and their social support availability, do not experience this stress; thus they are healthier. Each psychosocial manner reported by Seligman helps to explain why optimism may promote good health. A fifth manner, provided by Scheier and Carver (1987), also extends these contentions by noting that optimism promotes good health through its relationship to health promoting behaviors. They note that in times of illness or injury optimist’s are more likely to engage in problem-focused rather than emotion-focused coping strategies.

Seligman (1990) also described a possible physiological pathway involving the immune system by which optimism may influence health status; however in his description he focused upon the notion of pessimism. He offered that negative events are linked with subsequent pessimism and that continued pessimism leads to depression. He noted that depression has been linked with catecholeamine depletion and this depletion signals the body to increase endorphin release. This increase of circulating endorphins is detectable by the immune system which decreases its activity in response. He stated temporally prolonged decrements in immunocompetence is linked with poor health. Seligman also noted that this chain of events is understandable and that the physical mechanisms are present and measurable; thus the influence of optimism onto health status is subject to experimental study. He further contended that based on the viability of this linkage (negative events -> pessimism -> depression -> catecholeamine depletion -> endorphin release -> decreased immune function -> poor health) (p. 182) that therapy, treatment, or prevention can take place at any link. Unfortunately, he provided no direct empirical evidence to support his hypotheses nor does he provide a comprehensive explanation of the physiological connections between optimism and health status.

**Self-reinforcement.** Optimism can yield self-reinforcement. Simply the presence of optimism may bring beneficial effects other than that of promoting action alone. One
psychological benefit of optimism is believed to be anxiety reduction, which may be
beneficial to oneself in that one can carry out daily activities without having to constantly be
vigilant to possible perils in one's environment (Perloff, 1983). In fact, other researchers
have also concluded that denial of serious danger may have noticeable health benefits
(Hacket & Cassem, 1974). Although further differentiation between optimism and other
constructs, such as denial, need to be subjected to rigorous study, articles such as these
suggest that optimism may not only lead to goal-oriented action to succeed but also may
have a self-reinforcing component as well. In fact, Norcross (1992) noted that one benefit
of psychotherapy may simply be the instillation of optimism itself within the client.

Learning Optimism

Seligman (1990) contends that optimism can be learned as he described optimism as
a "skill" which can be utilized with other skills to achieve benefits such as warding off
depression. Viewing optimism as a skill provides a basis from which to develop and
practice strategies which enhance this skill in a person; or perhaps utilize optimism in
transforming a person from a pessimist to an optimist.

A number of strategies have been offered for learning optimism. McGinnis (1990)
noted that viewing oneself as a problem-solver who is able to focus upon positives even in
bad situations is useful for learning optimism. Seligman (1990) and McGinnis (1990) have
reported that developing one's religious beliefs and incorporating spiritualness into one's
lifestyle is perhaps essential to developing an optimistic perspective. Peterson and Bossio
(1991) and McGinnis (1990) endorsed the importance of monitoring one's thoughts for
negative attitudes, evaluating their truthfulness by comparing them with reality, and
replacing them with more favorable connotations is beneficial in developing one's
optimism. Socializing with optimistic persons may be a manner in which to foster
optimism in yourself (McGinnis, 1990; Peterson & Bossio, 1990). In addition, Peterson
and Bossio (1990) noted the importance of practicing being optimistic and recognizing that
lifestyle changes (such as changing friends) may be necessary based upon one's newfound optimism. Finally, one should approach the process of learning optimism in a flexible manner as there may be setbacks or gains at any point in time (Peterson & Bossio, 1990).

Unfortunately, the amount of research dedicated to the study of inducing optimism in a clinical setting is essentially nil. Only specific study will aid in clarifying which methods are useful and efficient in promoting or "learning" optimism. In addition, one may ask if optimism is useful in every situation.

Flexible Optimism

Seligman (1990) asserts that conceptualizing optimism as a skill affords one the choice of when to apply it in everyday situations. He contends that an optimistic approach may be most useful when: (a) one is in an achievement situation (i.e.: selling a product), (b) one is concerned about how one feels, (c) situational circumstances may be temporally protracted and will likely compromise one's health, and (d) one is interested in inspiration of others (i.e., convincing others to vote for you (p. 208-209). However, despite the numerous benefits of optimism, there may be times when a more pessimistic perspective is appropriate according to Seligman. A more pessimistic approach may be useful when: (a) counseling persons whose future is realistically dim (at least initially in one's discourse to avoid implying that "everything will work out" at a critical early point in therapy), (b) one's goal is risky and the future uncertain, and (c) one doesn't want to appear unsympathetic to others (at any point in any interpersonal behavior) (p. 208-209). Knowing when not to employ optimism is perhaps just as important as knowing when to employ it. Seligman describes this dynamic nature of optimism as "flexible optimism."

Seligman (1990) offers that differential application of optimism/pessimism may also be appropriate according to one's occupation. He states that occupations in which optimism is useful include: sales, fund-raising, public relations, creative jobs, high-burnout jobs, and highly competitive jobs (p. 257). These positions demand people to be
able to accept frequent failures yet retain the optimism to continue attempts at goal success. Occupations in which pessimism may be useful include: statistics, technical writing, contract negotiation, accounting, business administration, quality control, and design and safety engineering (p. 257). These positions demand persons to be based solidly in reality. It appears that a flexible approach to optimism can be useful at home or on the job.

**Reasons for Present Study**

It is evident that at the present time there is a divergence in the theoretical conceptualization of the construct of optimism because varying researchers have defined the construct of optimism in different manners. As such, despite receiving a large amount of recent publication promoting the benefits of maintaining an optimistic outlook, the construct of optimism remains diversely defined. This poses serious questions for the study of optimism as concerns arise about the theoretical convergent and divergent validity of the construct.

As the literature base presently stands one must seriously question the validity of integrating research utilizing differing definitions of the same construct. This occurs despite the recognitions of researchers such as Scheier and Carver (1987) who note that conceptual diversity may actually provide some benefits such as allowing a generality of findings. This leads one to also question whether the optimism literature should be integrated into a cohesive whole or must one separate the results of given studies into subareas based upon the theoretical underpinnings of each conceptualization of optimism. This is extremely important as the findings from one study may not prove to be a useful indicator for future research in another area of study using a different conceptualization of the construct. Although there is little if any study supporting the necessity of separating findings from different studies into subgroup areas of optimism research, from a strictly theoretical perspective a separation of findings using differing definitions of optimism would seem well-advised. However, there is essentially no study investigating the
relationship between these differing conceptualizations, the unique aspects of each
viewpoint, nor the relative utility of adhering to a given conceptualization.

As the construct appears diversely defined, the cross-generality of research results
also seems suspect. The use of results from studies using one definition of optimism may
or may not be supportive of research results using a different definition of optimism.
Thus, a segregation of findings from optimism studies may be required to maintain the
theoretical integrity of the entire field of optimism study.

The measurement of optimism has been of interest to clinicians and academicians
alike since at least the early 1980s when scales designed to specifically assess this
dimension were beginning to be published. Today, there are well over a dozen measures
of optimism (or similar constructs) available in the literature with each major contributor to
the field of optimism offering their own scale. Weinstein's (1980) scale purportedly
measures one's cognitive bias which leads an individual to underestimate one's own
chances for experiencing a specific negative event (being a victim of cancer) or
overestimating their chances for a specific positive event (no night in hospital for 5 years).
Scheier and Carver (1987) offered a measure of dispositional optimism which has been
referenced perhaps more than any other optimism measure. Seligman has been involved
with the development of two different measures—the Attributional Style Questionnaire
(Peterson, et. al., 1982) and the Seligman Optimism Questionnaire (Seligman, 1990) with
each essentially measuring aspects of one's optimistic attributional style. In addition, a
number of other researchers have developed measures of optimism including Prola (1984)
with the Optimism about College Life Scale, Kline and Storey (1977) with the Oral
Optimism Scale, and Stipek, Lamb, and Zigler (1981) with the Optimism-Pessimism Test
Instrument. While many of these scales have shown good psychometric properties, no in-
depth, formal investigation of the convergent validity of these optimism measures has been
completed. This leaves the researcher to accept the contention that these measures are in
fact, measuring a similar dimension basing their decision only upon their own integration of a very sparse amount of isolated literature.

One must question whether the measurements of optimism, based upon these differing conceptualizations of the construct, are indeed assessing the same dimension. Thus, integration or comparison of optimism research using the presently available optimism scales is tenuous as there has been no in-depth formal study investigating the inter-relationship of optimism scales. This suggests that one’s understanding of the convergent and divergent validity of the measures of optimism is also ill-defined. As there is a growing number of optimism scales derived from the differing definitions of the construct, a study into the convergent and divergent nature of these scales is perhaps necessary before there is continued proliferation of study in this area. The paucity of research addressing the inter-relatedness of optimism measures makes it critical that a better understanding of the measurement of optimism be ascertained before expansion of research continues promulgating information based upon foundations which are not clearly delineated.

In addition, study into the differential predictive validity of each measure of optimism, done on a comparative basis, is also likely essential to an understanding of which measures provide information of predictive use and which fail (if any) to provide predictive utility. Certainly, some optimism measures (i.e., Life Orientation Test) have proven to be well-associated with future outcomes such as health recovery. However, there is no published study comparing the relative predictive validity of optimism measures and their relationship to future performance on specific experimental behavioral tasks. This needs to be addressed to aid in clarifying the predictive utility of optimism measures.

Scales measuring constructs other than optimism, but which are also conceptually tied to future outcomes, are available and their use in conjunction with a study of the scales of optimism may help to provide a more complete understanding of the construct of
optimism. Few published studies have investigated the relationship between optimism and such constructs as hope, hopelessness, and general expectancy for success. Investigation into the relationship between optimism measures and scales tapping into these other dimensions may aid in providing evidence for the divergent validity of optimism scales.

The intent of the present study was to examine the relationship between optimism measures. Based on the previous research review, it appeared likely that many optimism measures would not show high correlations with one another as they are based upon differing theoretical conceptualizations of the construct. However, there is some degree of theoretical similarity in the varying conceptualizations of optimism. As such, a moderate degree of correlation between optimism measures would be expected. This would then suggest that most optimism measures share some commonality in what they are assessing but in addition to measuring a common factor, some may be tapping into other attributes or constructs. Given that optimism is a relatively distinct construct, yet mildly related to similar constructs such as hope, measures of each of these constructs would likely show low to moderate correlations with each other. In addition, as prior research has associated optimism with improved task performance and goal attainment, optimism measures should show at least a mild association with performance on a behavioral task (requiring skill for success) in an experimental setting. To investigate these questions the following predictions were made:

Hypothesis 1. It is predicted that measures of optimism will show stronger relationships with one another, than with measures of theoretically distinct constructs.

Hypothesis 2. It is predicted that there is a positive relationship between optimism and hope.

Hypothesis 3. It is predicted that measures of optimism will show a strong relationship with one’s stated expectation for success on a behavioral task.
Hypothesis 4. It is predicted that the optimism measures, as a group, assess multiple factors.

Hypothesis 5. It is predicted that optimism will be significantly related to performance on a behavioral task of skill.
METHOD

Subjects

One hundred twenty-two undergraduates (83 females and 39 males; mean age = 22.39 years, with a range from 18 to 52) from the University of North Texas participated in this study. These students were recruited from introductory psychology classes and were offered extra-credit for their involvement in the experiment. All subjects’ participation was voluntary and each individual was instructed through written material that they could discontinue their participation in the experiment at any time. Participants distribution of reported ethnicity included: 77.87% Caucasian, 9.84% African-American, 6.56% Hispanic, 4.92% Asian-American, and 0.81% Native American.

Measures of Optimism

Weinstein Health Optimism Scale. Weinstein (1980) developed this scale based upon his conceptualization of optimism as a cognitive bias which leads an individual to underestimate their own chances of experiencing a specific negative outcome and overestimate their chances of a specific positive outcome. He proposed a method of determining one’s optimism by comparing one’s estimation of likelihood for positive/negative future events (i.e., chance of a broken arm, chance of developing cancer) to the chances of these same events occurring to one’s peers. Although viewed by some as perhaps more of a procedure than a specific scale of optimism, his research is often cited as being the seminal work in the measurement of optimism. Despite the lack of specific references to the reliability of this approach in his original study, in the context of health psychology an adaptation of this style could be beneficial in pursuing study of the
relationship of optimism and specific health-related events. The 20-item health-related events from Weinstein’s scale (WHOS) are supplied in Appendix A.

**Life Orientation Test.** The Life Orientation Test (LOT) (Scheier & Carver, 1985), a measure of dispositional optimism, is often considered the gold standard by which measures of optimism are compared and is premised on the developers conceptualization of optimism as a generalized outcome expectancy (which is pervasive across situations) that positive outcomes will occur and negative outcomes will not occur in one’s future. It is both a brief instrument to complete (as it consists of only twelve questions) as well as a psychometrically sound instrument (test-retest reliability $r = .79$, 12-week stability $r = .72$, and internal consistency $r = .76$). The LOT measures “the favorability of a person’s generalized outcome expectancy” (Scheier & Carver, 1985, p. 232) without alleged contamination of variables such as satisfaction, meaningfulness, morale, and causal-event attributions (Scheier & Carver, 1987). The focus of this instrument is upon the expectancy itself without regard for attribution of causation such as is apparent in other measures of optimism (i.e., Seligman Optimism Scale). Perhaps, because of this the LOT has become something of a “flagship” of optimism measures with a small but growing number of studies using it to support their claims of concurrent validity (Hale, Feidler, & Cochran, 1992; Staats, 1989). See Appendix B for a sample of the LOT.

**Optimism about College Life Scale.** Prola (1984) developed the Optimism about College Life Scale (OCL) as a measure of one’s expectations for being successful in college and interestingly, is the only published measure of it’s type in use today. Utility comes from the brief nature of the instrument (15 questions) and strong reliability (coefficient alpha = .85). However, as there is limited study with this measure, further research is needed to assess it’s relationship to other measures of optimism. See Appendix C for a sample of the OCL.
Optimism and Pessimism Scale. To provide an indice of both optimism and pessimism, Dember, Martin, Hummer, et. al. (1989) developed the Optimism-Pessimism Scale (OPS) as a measure of expectations for a positive and also a negative future. In fact, the OPS provides a separate score for optimism (OPSOP) and pessimism (OPSPM) alike. Although the scale takes about 15 minutes to complete it’s 56 questions make it substantially longer instrument than the LOT. However, it is the most widely recognized measure to provide scores for both optimism and pessimism alike. The OPS has shown strong internal consistency (r = .83 for the subscale of optimism and r = .86 for pessimism), test-retest reliability (r = .75 for the subscale of optimism and r = .84 for pessimism), and only a moderate correlation between the subscales (r = -.54 to r = -.61) (Dember & Brooks, 1989). Unfortunately though, there is little research assessing the relationship of this measure to other scales of optimism and pessimism and further study to clarify it’s utility. See Appendix D for a sample of the OPS.

Oral Optimism/Pessimism Scales. The Oral Optimism Questionnaire (OOQ) and the Oral Pessimism Questionnaire (OPQ) are unique as they are the only measures in the optimism/pessimism literature which are derived from psychoanalytic theory (Kline & Storey, 1977). The developers of these measures report that the concept of orality is important to the understanding of personality and that behaviors such as overeating, heavy smoking, and drinking can manifest from early childhood experience of an oral nature. From these early experiences an oral character is developed which can be expressed in terms of optimism and pessimism. Based upon the conceptual basis of psychoanalytic literature which supported the distinctiveness of optimism and pessimism, Kline and Storey developed a measure for each construct.

The OOQ is a brief (20 question) measure of optimism. Unfortunately, statistical reliability is poor (r = .46). Apparently several traits subsumed under the umbrella of optimism including: sociability, dependence, and oral fluency are also measured.
Although the OOQ does not possess strong psychometric properties, it is the only measure of its type originating from psychoanalytic theory, which has received recent investigation (Kline & Storey, 1977). See Appendix E for a sample of the OOQ.

The OPQ is a brief (20 question) measure of pessimism with adequate reliability ($r = .71$), but unfortunately like the OOQ apparently taps several traits including: independence, verbal aggression, and envy. Despite this, the OPQ is the only measure of its type which is originating from psychoanalytic theory (Kline & Storey, 1977). See Appendix E for a sample of the OPQ. Further research into the relationship between the OOQ and OPQ and other measures of optimism/pessimism may aid in assessing their utility and construct validity.

**Optimism-Pessimism Test Instrument.** The Optimism-Pessimism Test Instrument (OPTI), a measure of children’s optimism, was developed by Stipek, Lamb, and Zigler (1981) and is based upon similar theoretical grounds as that previously described by Scheier and Carver. The OPTI consists of 20 short stories in which one of two possible outcomes are chosen by the child. Optimism is determined by the number of positive outcomes chosen by a given child which is then expressed in a single index of overall optimism. The OPTI retains good test-retest reliability ($r = .71$) and moderate stability ($r = .53$) and evidence for its validity with school-age children is discussed by the authors in the original article. Although this instrument was designed for children, its application to an adult population may be useful as no other instrument designed to measure optimism utilizes the short-story format. Informal content analysis suggests that the short-stories present in the OPTI may be an appropriate and useful format to measure optimism in an adult population. Due to this, investigation into the utility of this measure with an adult population appears warranted as is further inquiry into the relationship of this scale to other measures of optimism. See Appendix F for a sample of the OPTI.
Attributional Style Questionnaire. The Attributional Style Questionnaire (ASQ) was originally developed by Peterson, et al. (1982) as a measure of one's attributional style but has since come into favor as a measure of optimism as its proponents contend that optimist's and pessimist's exhibit a measurable attributional style which is expressed in one's optimism/pessimism. According to the original authors, attributional style is conceptualized in terms of three components of causal attributes: (a) internal/external, (b) stable/unstable, and (c) global/specific. Pessimists as defined by Seligman (1990) explain bad events in terms of internal, stable, and global attributes while explaining good events in terms of external, unstable, and specific terms. Optimists explain these events in a polar or opposite nature. The ASQ includes “Good” and “Bad” life events in an attempt to increase cross-situational generality of the instrument (Peterson, Semmel, von Baeyer, et. al., 1982; Seligman, 1990). Thus, the original article proposes the use of two separate indexes of optimism/pessimism for the ASQ (ASQ-G for “good events” and ASQ-B for “bad events”). In this respect it is similar in conceptualization to the OPS; however, the ASQ is unique in that it's theoretical basis derives from attributional theory and not from a likelihood-of-outcome basis. Also, while the OPS is theoretically predicated upon the distinct nature of optimism and pessimism, the ASQ essentially views optimism/pessimism as polar counterparts to a single dimension. Thus, there are significant differences between the ASQ and the OPS.

The ASQ has shown good internal consistency (r = .75 for good events and r = .72 for bad events); unfortunately, test-retest reliability is poor to moderate (r = .57 and r = .70). Despite these rather questionable psychometric properties, the ASQ has been widely used in studies of optimism. Study into the relationship between the ASQ and other measures of optimism such as the OPS and LOT may aid in our understanding of the relationship between these measures. See Appendix G for a sample of the ASQ.
Seligman Optimism Questionnaire. Seligman provided this scale in his book “Learned Optimism.” He provides no empirical support for the psychometric adequacy of this scale though he does note that the rationale for this scale is similar to that of the Attributional Style Questionnaire. Thus, he essentially contends that this too is a measure of optimism. Despite this obvious lack of empirical support, the Seligman Optimism Questionnaire (SOQ) may be useful in that it provides an overall index of one’s attributional optimism as opposed to separating one’s optimism scores into “good and bad” subtypes. As such, and given Seligman’s stature in the field, the SOQ was included in the present study. See Appendix H for a sample of this scale.

Measures of Other Constructs

Hope Scale. The Hope Scale (HS) is a twelve-item measure of the construct of hope and is based upon the theoretical underpinnings described by Snyder (1994). The HS has exhibited adequate internal consistency (r = .74 to r = .84) and test-retest reliability (r = .85). Stability appears adequate with r = .73 at an eight week retest and r = .76 to r = .82 over a ten week period. This scale appears to contain two factors (termed agency and pathways by the authors), however use of the full scale score is proper due to the high inter-relationship between the factors (r = .38 to r = .46) (Snyder, et al., 1991). Unfortunately, there is a paucity of published research investigating the relationship of this scale to measures of optimism such as the LOT or OPS. See Appendix I for an example of this scale.

Hopelessness Scale. Beck, Weissman, Lester, and Trexler (1974) constructed the Hopelessness Scale (BHS) as a 20-item quantifiable measure of hopelessness. Their conceptualization of the construct of hopelessness though appears rather similar to that of pessimism in that this instrument was designed to tap into “the respondent’s negative expectancies.” Factor analysis later confirmed that this scale measures more than simple outcome expectancy though; despite this it has exhibited a moderate inverse relationship
(r = -.55) with optimism (as measured by the LOT) (Staats, 1989). Investigation into the relationship of optimism and hope(lessness) may be useful in gaining a better understanding of the nature of each of these constructs and of the relationship between themselves.

The BHS has shown high internal consistency (KR20) (r = .93), exhibited strong concurrent validity with a correlation between itself and clinical ratings of hopelessness (r = .74), and adequate construct validity with a r = .60 between itself and the Stuart Future Test (a semantic differential test of hopelessness. Stuart, 1962) (Beck, Weissman, Lester, & Trexler, 1974). Unfortunately, other research reports a low association between the Hopelessness Scale and measures of hope such as the Hope Index (r = -.30) (Staats, 1989). The utility for employing this scale as a valid and reliable method to measure hopelessness, however, does appear to be evident from the widespread use of this measure in clinical practice and it’s adequate psychometric properties. Further research into the relationship of the BHS and measures of optimism such as the LOT and ASQ is recommended. See Appendix J for an example of this scale.

Generalized Expectancy for Success Scale. Fibel and Hale (1978) constructed the Generalized Expectancy for Success Scale (GESS) as a single index, measure of generalized expectancy for success. They define this construct as “the expectancy held by an individual that in most situations he/she will be able to attain desired goals.” The construction of this instrument developed from a Social Learning perspective which notes that an individual’s behavior is partially a function of one’s expectancies for reinforcement. Factor analysis of this instrument displayed four factors: (a) personal life expectancy, (b) vocational life expectancy, (c) generalized event expectancy, and (d) helplessness. Although their definition of generalized expectancy contains references to “ability” to attain goals which is perhaps similar to hope, the factor analysis suggests that this instrument may be measuring something at least similar to optimism. Also, it’s brief nature (thirty
questions) lends itself to research application. A strong relationship between the GESS and measures of optimism borne out by research may help provide an important historical context from which to view recent conceptualizations of optimism as the GESS was published at least five years earlier than Weinstein’s seminal work on the construct of optimism.

The GESS has shown adequate test-retest reliability ($r = .83$), internal consistency ($r = .83$ to $r = .91$) and has shown minimal relationship with social desirability ($r = .15$ to $r = .25$). The GESS is moderately correlated to hopelessness ($r = -.31$), locus of control ($r = -.27$), and depression ($r = -.54$ to $r = -.61$) (Fibel & Hale, 1978). Although a relationship between generalized expectancies for success and hopelessness or optimism is evident, published investigations of the relationship of the GESS and measures of these constructs are scarce. However, Staats (1989) reported a correlation of $r = .50$ between the GESS and Life Orientation Test (LOT) and a $r = -.55$ between the GESS and the Beck Hopelessness Scale. Further investigation into the relationship of this instrument to measures of optimism is recommended. See Appendix K for an example of this scale.

Recently, a twenty-five question revision of this instrument (GESS-R) was developed by Hale, Fiedler, and Cochran (1992). Despite a high correlation between the scores of the two versions ($r = .98$) and a high internal consistency of $r = .92$ (split-half method with Spearman-Brown correction), the revised version exhibited only moderate test-retest reliability ($r = .69$). The instrument’s poorer reliability than its predecessor precludes its use in this investigation while utilization of the original GESS will be initiated.

**Premorbid Pessimism Subscale.** This 39-item subscale (PPS) from the Millon Behavioral Health Inventory (MBHI) is reported to measure “the dispositional attitude of helplessness-hopelessness” and “characterologic tendencies toward viewing the world in a negative manner.” The subscale retains strong test-retest reliability ($r = .85$) and strong
internal consistency (KR20 $r = .90$). The subscale has exhibited a moderate relationship to the Beck Depression Inventory ($r = .54$), the Minnesota Multiphasic Personality Inventory Hypochondriasis subscale ($r = .55$), and the California Personality Inventory Well-Being subscale ($r = -.60$) (Millon, Green, & Meagher, 1979). Although the Premorbid Pessimism subscale appears to possess good psychometric properties, no published literature relating this clinical subscale to academically-based measures of optimism is available. See Appendix L for an example of this scale.

**Apparatus**

In completing a test packet, each subject completed the Weinstein Health Optimism Scale, Life Orientation Test, Optimism and Pessimism Scale, Optimism about College Life Scale, Attributional Style Questionnaire, Seligman Optimism Questionnaire, Oral Optimism Questionnaire, Oral Pessimism Questionnaire, and a version of the Optimism-Pessimism Test Instrument. All were given in a written format and the order in which these scales were completed by an individual was previously determined by ordering procedures and random assignment. These scales concerned with the measure of optimism/pessimism, were completed first and comprised the first section of the test packet. A series of questionnaires concerned with the measurement of constructs other than that specifically of optimism/pessimism were completed next and comprised the second section of the test packet. This second section was completed immediately following completion of the scales measuring optimism/pessimism. The questionnaires in this second section consisted of the Hope Scale, Hopelessness Scale, Generalized Expectancy for Success Scale, and the Premorbid Pessimism subscale. All were given in a written format and the questionnaires in this section were also completed in an order determined by a blocking procedure to counter order effect.

A small conference room, equipped with fluorescent lighting, twelve chairs, and a conference table was utilized for subjects to complete the scales and questionnaires.
Following completion of the scales and questionnaires, subjects were asked to complete the experiment in an adjacent, similarly equipped, conference room. In this second conference room the subject was asked to complete two tasks (a card-sorting task and a coin-toss task) of which the materials utilized in completion of these tasks included: a deck of fifteen playing cards, three U.S. quarters, and a stopwatch. All materials were in full view of the subject and were placed immediately in front of the subject prior to completion of the tasks.

**Procedure**

Subjects were to attend one of several testing sessions subsequent to signing an intent to participate form upon a posted experiment announcement (See Appendix M). Each session was completed in a small conference room seating 8-12 persons. At the testing session each subject received a packet of scales and questionnaires relating to the measurement of optimism, pessimism, and related constructs. Subjects were asked to seat themselves upon arrival at a conference table and were told that all participants would begin at an identical time. When it was time to begin the session, subjects were asked to open their packets and read the directions supplied in written form on the first page. The directions from this page are available in Appendix N. Further clarification of directions were given on an individual basis as indicated by subject's request and stated need. Subjects were requested via written format to read and sign the research consent form before beginning the completion of the scales and questionnaires. The research consent form used in this study is available in Appendix O. Subjects completed this portion of the experiment in a group format.

Following completion of the packet materials, subjects were individually escorted by an experimenter to an adjacent conference room. Subjects completed this second part of the experiment individually with the experimenter being the only other person present in the room. Each subject was given a written copy of the directions for this second part of the experiment. These directions are available in Appendix P and are adapted from Miller and
Seligman (1976) and Hinze (1993). Further clarification of completion directions were given on an individual basis as indicated by subject’s request and stated need.

Subsequent to the reading of the task directions, subjects were to complete the two tasks (adapted from Hinze, 1993) used in the present study and described in the directions just previously given. Before they began the tasks, each subject rated their chances of success on a 1 to 10 scale for each task (Card Rating and Coin Rating). One task was a card-sorting task which consisted of manually sorting 15 playing cards into 4 piles (hearts, clubs, spades, and diamonds) with like suited cards upon like suited cards. If the subject correctly sorted the cards within the 15 second time limit the effort was deemed a success. If not, the effort was deemed as a failure. Each subject was handed the cards in a previously determined random manner and then told to begin the task. Each subject received the cards in that same order. A second task was a coin task which consisted of the subjects predicting whether a coin toss would come up heads or tails. Three coin tosses were completed for each subject. If the subject correctly guessed the coin toss three times consecutively, the effort was deemed a success. If not, the effort was deemed a failure. The task’s (card-sorting and coin-toss) order of presentation was previously determined by random assignment. Before each task was completed though, each subject rated their probability for success on the task using the rating scale’s described in Appendix’s Q and R. Following completion of the tasks, each subject was told that the present experiment was over and that they were allowed to leave. It was at this time that each subject was given a description of information concerning this experiment which is provided in Appendix S.

Due to the scope of this research project, with it’s associated use of a moderate to high number of scales and questionnaires, experimental controls were instituted according to the importance of the hypotheses to be tested. While a completely counter-balanced methodology would have been most beneficial to results interpretation, the extremely large number of subjects necessary to adequately utilize this procedure, as well as a consideration
for the proportional and appropriate use of an undergraduate subject pool, precluded the employment of this method. Thus, a procedure of blocking the measures into groups, based upon the order of importance of investigatory hypotheses (to counter-balance for order effects) was employed in the present experiment's design to maximize the utility and interpretability of this research. Placement of instruments in the blocking procedure was determined based upon degree of publication citation and standardization integrity with group one consisting of the LOT, ASQ, Optimism for College Life, and Optimism and Pessimism Scale, group two consisting of the Oral Optimism Scale, Oral Pessimism Scale, and the Seligman Optimism Questionnaire, and group three consisting of a version of the OPTI and the Weinstein Health Optimism Scale. The measures of similar constructs were blocked into a group of four consisting of the Hope Scale, Hopelessness Scale, GESS, and the Premorbid Pessimism Subscale.
CHAPTER 3

RESULTS

Table 1 provides the means, standard deviations, and range of scores for each of the scales and the personal ratings of success for the card and coin tasks. Scores derived from the scales are labeled as follows: Life Orientation Test (LOT), Hopelessness Scale (BHS), Oral Optimism Questionnaire (OOQ), Oral Pessimism Questionnaire (OPQ), Generalized Expectancy for Success Scale (GESS), Optimism-Pessimism Test Instrument (OPTI), Optimism about College Life Scale (OCL), Premorbid Pessimism Subscale (PPS), Hope Scale (HS), Weinstein Optimism Scale (WHOS), Optimism and Pessimism Scale (OPSOP and OPSPM), Seligman Optimism Questionnaire (SOQ), and the Attributional Style Questionnaire (ASQ-G and ASQ-B).

Hypotheses 1 and 2

The first hypothesis predicted that measures of optimism measures would show stronger relationships with one another than with measures of theoretically distinct constructs while the second hypothesis predicted that optimism measures would show a positive relationship with measures of hope. To test the first two hypotheses, product-moment inter-correlation coefficients were computed between the scale scores. Hypothesis 1 was not supported as most correlations between optimism scales were poorer than anticipated suggesting that optimism measures were not assessing a similar dimension(s). In addition, optimism measures did not show consistently stronger relationships with one another than with measures of theoretically distinct construct. Hypothesis 2 was partially supported as several, though not all, measures of optimism
Table 1

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOT</td>
<td>20.88</td>
<td>5.20</td>
<td>7 to 32</td>
</tr>
<tr>
<td>BHS</td>
<td>2.23</td>
<td>2.59</td>
<td>0 to 17</td>
</tr>
<tr>
<td>OOQ</td>
<td>12.13</td>
<td>2.90</td>
<td>6 to 18</td>
</tr>
<tr>
<td>OPQ</td>
<td>7.12</td>
<td>2.96</td>
<td>1 to 15</td>
</tr>
<tr>
<td>GESS</td>
<td>119.58</td>
<td>14.14</td>
<td>80 to 150</td>
</tr>
<tr>
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<td>14.73</td>
<td>3.31</td>
<td>4 to 20</td>
</tr>
<tr>
<td>OCL</td>
<td>43.25</td>
<td>6.39</td>
<td>25 to 58</td>
</tr>
<tr>
<td>PPS</td>
<td>10.03</td>
<td>7.36</td>
<td>0 to 36</td>
</tr>
<tr>
<td>HS</td>
<td>25.17</td>
<td>3.73</td>
<td>4 to 32</td>
</tr>
<tr>
<td>WHOS</td>
<td>73.44</td>
<td>10.66</td>
<td>37 to 97</td>
</tr>
<tr>
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<td>54.50</td>
<td>5.47</td>
<td>39 to 71</td>
</tr>
<tr>
<td>ODSOPM</td>
<td>37.72</td>
<td>6.74</td>
<td>19 to 53</td>
</tr>
<tr>
<td>SOQ</td>
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<td>-11 to 10</td>
</tr>
<tr>
<td>ASQ-G</td>
<td>97.02</td>
<td>11.00</td>
<td>65 to 123</td>
</tr>
<tr>
<td>ASQ-B</td>
<td>74.34</td>
<td>11.28</td>
<td>39 to 105</td>
</tr>
<tr>
<td>CARD Rating</td>
<td>6.83</td>
<td>2.29</td>
<td>0 to 10</td>
</tr>
<tr>
<td>COIN Rating</td>
<td>5.58</td>
<td>1.60</td>
<td>0 to 10</td>
</tr>
</tbody>
</table>

showed mild to moderate correlations with scores on scales of hope. This provided some support for the divergent validity of the construct of optimism. See Table 2 for these correlation coefficients.

**Hypothesis 3**

The third hypothesis predicted that measures of optimism would show a strong relationship with one’s stated expectation for success on a behavioral task. Hypothesis 3 was not supported as the measures of optimism and the participants personal ratings of success likelihood were poorly correlated. See Table 2 for these correlation coefficients.

**Hypothesis 4**

The fourth hypothesis predicted that the optimism measures, as a group, will assess multiple factors. To test this hypothesis a principal components factor analysis with
### Table 2

**Inter-Correlations Between Scale Scores and Ratings for Success on Experimental Tasks**

<table>
<thead>
<tr>
<th></th>
<th>LOT</th>
<th>BHS</th>
<th>OOQ</th>
<th>OPQ</th>
<th>GESS</th>
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<tr>
<td>LOT</td>
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<td>--</td>
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<td>--</td>
<td>--</td>
</tr>
<tr>
<td>BHS</td>
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<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>OOQ</td>
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<td>1.00</td>
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<td>--</td>
</tr>
<tr>
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<td>1.00</td>
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</tr>
<tr>
<td>GESS</td>
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<tr>
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</tr>
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</tr>
<tr>
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<td>0.61*</td>
<td>-0.53*</td>
</tr>
<tr>
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<td>-0.12</td>
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<table>
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<td>0.11</td>
<td>0.12</td>
<td>-0.06</td>
</tr>
</tbody>
</table>

* = significant at p < .0001.
retention of components using Kaiser's criterion (Kaiser, 1974) and rotation to the varimax criterion was completed with the scores from the respective scales to aid in broadly determining if the overall scale scores were in fact assessing a similar dimension(s) or multiple dimensions. The hypothesis was supported as multiple factors were evident within the scores from the optimism measures. Six eigenvalues were greater than unity, so six components were extracted for further interpretation. The eigenvalues of the components and the percent of total variance explained by the components following varimax rotation are provided in Table 3. The total amount of variance explained by the components in the Factor analysis was 71.12%. The rotated component loadings of the scale scores for the analysis are provided in Table 4.

Table 3

<table>
<thead>
<tr>
<th>Component</th>
<th>Eigenvalue</th>
<th>Percent of Total Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.98</td>
<td>18.97%</td>
</tr>
<tr>
<td>2</td>
<td>2.23</td>
<td>10.60%</td>
</tr>
<tr>
<td>3</td>
<td>2.38</td>
<td>11.34%</td>
</tr>
<tr>
<td>4</td>
<td>3.09</td>
<td>14.73%</td>
</tr>
<tr>
<td>5</td>
<td>1.63</td>
<td>7.74%</td>
</tr>
<tr>
<td>6</td>
<td>1.63</td>
<td>7.74%</td>
</tr>
</tbody>
</table>

Principal Components Factor Analysis of Test Items

A principal components factor analysis with retention of components using Kaiser's criterion and rotation to the varimax criterion was completed with the items from the optimism scales to aid in clarification of factor structure loadings of the test items. Based on recommendations by Tabachnick and Fidell (1989), components with eigenvalues greater than unity while also showing at least two items loading upon it at greater than .30,
Table 4

Loadings of Scale Scores for Factor Extraction and Varimax Rotation

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
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<td>.54</td>
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<td>-.08</td>
</tr>
<tr>
<td>BHS</td>
<td>-.68</td>
<td>.14</td>
<td>.11</td>
<td>-.23</td>
<td>-.10</td>
<td>.01</td>
</tr>
<tr>
<td>OOQ</td>
<td>.08</td>
<td>.05</td>
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<td>.64</td>
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<td>.27</td>
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<td>.03</td>
<td>-.75</td>
<td>-.19</td>
<td>.06</td>
</tr>
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<td>-.07</td>
<td>.35</td>
<td>.11</td>
<td>.24</td>
</tr>
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<td>-.06</td>
<td>-.02</td>
<td>.75</td>
<td>-.03</td>
<td>.05</td>
</tr>
<tr>
<td>OCL</td>
<td>.67</td>
<td>-.10</td>
<td>.01</td>
<td>.09</td>
<td>.22</td>
<td>.13</td>
</tr>
<tr>
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<td>.09</td>
<td>.19</td>
<td>-.59</td>
<td>.02</td>
<td>.07</td>
</tr>
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<td>.03</td>
<td>-.12</td>
<td>-.10</td>
<td>-.08</td>
<td>.15</td>
</tr>
<tr>
<td>WHOS</td>
<td>.09</td>
<td>-.23</td>
<td>.04</td>
<td>.60</td>
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<td>.16</td>
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<td>OPSOP</td>
<td>.70</td>
<td>.13</td>
<td>.03</td>
<td>.32</td>
<td>.10</td>
<td>.08</td>
</tr>
<tr>
<td>OPSPM</td>
<td>-.66</td>
<td>.02</td>
<td>.19</td>
<td>-.44</td>
<td>-.03</td>
<td>.09</td>
</tr>
<tr>
<td>SOQ</td>
<td>.17</td>
<td>-.05</td>
<td>-.68</td>
<td>.10</td>
<td>-.01</td>
<td>.68</td>
</tr>
<tr>
<td>ASQ-G</td>
<td>.23</td>
<td>.32</td>
<td>-.02</td>
<td>.04</td>
<td>.81</td>
<td>.21</td>
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<tr>
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<td>.87</td>
<td>.15</td>
<td>-.02</td>
<td>-.01</td>
<td>-.16</td>
</tr>
</tbody>
</table>

were extracted for rotation. This analysis indicated the presence of eighteen components. The eigenvalues of the components and the percent of total variance explained by the components following varimax rotation are provided in Table 5. The total amount of variance explained by the components in this Factor analysis was 56.44%.

Hypothesis 5

The fifth hypothesis predicted that optimism measures would be significantly related to performance on a behavioral task of skill. To test this hypothesis, intercorrelation's between the test scores and task outcomes were computed. Results did not support the hypothesis as the optimism scales in general appeared to be poor predictors of future task performance. These intercorrelation's are provided in Table 6.
Table 5

**Eigenvalues of Factors and Percent of Total Variance Explained by Factors Following Varimax Rotation of Items**

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
<th>% of Total Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component 1</td>
<td>11.99</td>
<td>(12.11%)</td>
</tr>
<tr>
<td>Component 2</td>
<td>6.20</td>
<td>(6.26%)</td>
</tr>
<tr>
<td>Component 3</td>
<td>3.77</td>
<td>(3.41%)</td>
</tr>
<tr>
<td>Component 4</td>
<td>3.17</td>
<td>(3.20%)</td>
</tr>
<tr>
<td>Component 5</td>
<td>2.93</td>
<td>(2.96%)</td>
</tr>
<tr>
<td>Component 6</td>
<td>2.88</td>
<td>(2.91%)</td>
</tr>
<tr>
<td>Component 7</td>
<td>2.55</td>
<td>(2.57%)</td>
</tr>
<tr>
<td>Component 8</td>
<td>2.54</td>
<td>(2.56%)</td>
</tr>
<tr>
<td>Component 9</td>
<td>2.46</td>
<td>(2.49%)</td>
</tr>
<tr>
<td>Component 10</td>
<td>2.37</td>
<td>(2.40%)</td>
</tr>
<tr>
<td>Component 11</td>
<td>2.17</td>
<td>(2.19%)</td>
</tr>
<tr>
<td>Component 12</td>
<td>2.02</td>
<td>(2.13%)</td>
</tr>
<tr>
<td>Component 13</td>
<td>2.01</td>
<td>(2.04%)</td>
</tr>
<tr>
<td>Component 14</td>
<td>1.93</td>
<td>(1.94%)</td>
</tr>
<tr>
<td>Component 15</td>
<td>1.90</td>
<td>(1.91%)</td>
</tr>
<tr>
<td>Component 16</td>
<td>1.86</td>
<td>(1.88%)</td>
</tr>
<tr>
<td>Component 17</td>
<td>1.78</td>
<td>(1.79%)</td>
</tr>
<tr>
<td>Component 18</td>
<td>1.67</td>
<td>(1.69%)</td>
</tr>
</tbody>
</table>

**Intercorrelations Between Item Scores and Task Outcomes**

As the overall scale scores proved to be relatively poor predictors of task performance, an item analysis to determine the relationship between the items of each scale and the behavioral outcomes for the tasks was completed to see if any specific items from the scales would exhibit predictive utility. This analysis was completed post-hoc with no specific hypotheses previously generated. In addition, the further use of these scores significantly increased the chances for increased Type I error associated with substantial overuse of item scores. As such, the correlations are provided tentatively and only as a possible guide for future research into item analysis of optimism scales and not as specific hypotheses to be tested in the present study. As there were over 350 items making up the assorted scales, only the correlation's with a value of $p < .01$ are provided. See Table 7 for these items.
Table 6

**Correlations between Scale Scores, Ratings of Success, and Card and Coin Behavioral Tasks**

<table>
<thead>
<tr>
<th></th>
<th>Success at Card Task</th>
<th>Success at Coin Task</th>
<th>Time on Card Task</th>
<th>Coins Correctly Predicted</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOT</td>
<td>-0.03</td>
<td>0.04</td>
<td>0.06</td>
<td>0.05</td>
</tr>
<tr>
<td>BHS</td>
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<td>0.05</td>
<td>0.12</td>
<td>-0.03</td>
</tr>
<tr>
<td>OOQ</td>
<td>0.08</td>
<td>-0.02</td>
<td>-0.13</td>
<td>-0.03</td>
</tr>
<tr>
<td>OPQ</td>
<td>0.01</td>
<td>0.06</td>
<td>0.03</td>
<td>0.01</td>
</tr>
<tr>
<td>GESS</td>
<td>0.01</td>
<td>0.02</td>
<td>-0.17+</td>
<td>0.01</td>
</tr>
<tr>
<td>OPTI</td>
<td>-0.07</td>
<td>0.08</td>
<td>-0.03</td>
<td>0.03</td>
</tr>
<tr>
<td>OCL</td>
<td>-0.09</td>
<td>0.11</td>
<td>-0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>PPS</td>
<td>-0.00</td>
<td>0.10</td>
<td>-0.03</td>
<td>0.03</td>
</tr>
<tr>
<td>HS</td>
<td>-0.11</td>
<td>0.06</td>
<td>-0.03</td>
<td>0.15+</td>
</tr>
<tr>
<td>WHOS</td>
<td>0.15+</td>
<td>0.05</td>
<td>-0.12</td>
<td>0.14</td>
</tr>
<tr>
<td>OPSOP</td>
<td>-0.08</td>
<td>-0.02</td>
<td>-0.03</td>
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<td>0.01</td>
<td>0.03</td>
</tr>
<tr>
<td>SOQ</td>
<td>0.17+</td>
<td>0.11</td>
<td>-0.17+</td>
<td>0.02</td>
</tr>
<tr>
<td>ASQ-G</td>
<td>-0.01</td>
<td>-0.04</td>
<td>-0.05</td>
<td>-0.07</td>
</tr>
<tr>
<td>ASQ-B</td>
<td>-0.14</td>
<td>-0.08</td>
<td>0.09</td>
<td>0.01</td>
</tr>
<tr>
<td>CARD Rating</td>
<td>0.09</td>
<td>-0.08</td>
<td>-0.32*</td>
<td>-0.02</td>
</tr>
<tr>
<td>COIN Rating</td>
<td>0.05</td>
<td>-0.16+</td>
<td>-0.12</td>
<td>0.02</td>
</tr>
</tbody>
</table>

*p < .01.

+*p < .10.

Table 7

**Correlations between Scale Items and Card and Coin Behavioral Tasks**

<table>
<thead>
<tr>
<th></th>
<th>Success at Card Task</th>
<th>Success at Coin Task</th>
<th>Time on Card Task</th>
<th>Coins Correctly Predicted</th>
</tr>
</thead>
<tbody>
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</tr>
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<td>Success at Card Task</td>
<td>Success at Coin Task</td>
<td>Time on Card Task</td>
<td>Coins Correctly Predicted</td>
</tr>
<tr>
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<td>Time on Card Task</td>
<td>Coins Correctly Predicted</td>
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<td>ASQ S3 Item 2</td>
<td></td>
<td></td>
<td></td>
<td>-.22</td>
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<tr>
<td>ASQ S3 Item 3</td>
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<td>-.29</td>
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<tr>
<td>ASQ S3 Item 5</td>
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<tr>
<td>ASQ S4 Item 2</td>
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<td>.19</td>
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<tr>
<td>ASQ S4 Item 3</td>
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<td>ASQ S4 Item 4</td>
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<td>ASQ S5 Item 2</td>
<td></td>
<td></td>
<td>-.25</td>
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<td>ASQ S6 Item 4</td>
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<td></td>
<td></td>
<td>.21</td>
</tr>
<tr>
<td>ASQ S6 Item 5</td>
<td></td>
<td></td>
<td>-.25</td>
<td></td>
</tr>
<tr>
<td>ASQ S8 Item 5</td>
<td></td>
<td>-.31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASQ S10 Item 4</td>
<td></td>
<td>.23</td>
<td></td>
<td>-.29</td>
</tr>
<tr>
<td>ASQ S10 Item 5</td>
<td></td>
<td>-.19</td>
<td>-.19</td>
<td></td>
</tr>
<tr>
<td>ASQ S11 Item 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASQ S12 Item 4</td>
<td></td>
<td>.30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* all correlation's $p < .01$. 
CHAPTER 4

DISCUSSION

The results of the present study illuminate a number of concerns not discussed nor addressed in the published literature on optimism. These concerns include low to moderate intercorrelations between measures of optimism, seeming poor predictive utility for optimism measures with experimental task performance, and questionable factor analytic properties of certain tests. In addition, some scales which purport to measure optimism may not be adequately assessing this dimension at all and instead tapping into other constructs such as hope.

The low to moderate intercorrelations between optimism scales predisposes the field of optimism study to erroneous conclusions as the assumption that all optimism scales are properly assessing this (and only this dimension) appears tenuous at the present time. Aside from same-test intercorrelations, no intercorrelation between scale scores was observed above $r = .70$. Only five intercorrelation’s above $r = .60$ were evident: The LOT correlated with the PPS $r = -.69$ and the OPSPM $r = -.67$; the OPQ and the PPS correlated $r = .61$; the OPSOP and the GESS correlated $r = -.62$; and the PPS correlated with the OPSPM $r = .66$. Although thirteen further intercorrelation’s above $r = .5$ were observed between scale scores from different tests, none would indicate a shared variance larger than 34%. In addition, the attribution-based scales (ASQ and SOQ) failed to exhibit a single statistically significant correlation with any derived score from any measure other than one to themselves. At best these intercorrelations suggest that the scales are measuring different aspects of a similar dimension. At worst these intercorrelations suggest that very few measures of the optimism dimension are interchangeable, in theory or practice, and sets up
serious questions as to the integrity of assimilating into a cohesive entity optimism research which is based upon differing measures of the construct.

The mild to moderate intercorrelations between most optimism measures did indicate however that at some level there is a shared factor. Curiously, the correlations between measures of hope and optimism are about the same as those between measures of optimism alone. Again, suggesting some degree of commonality (likely an orientation to future outcomes). Considering though, that the measures of optimism and hope were poorly correlated with a more “live” measure of optimism (the participant’s own estimation of success on behavioral tasks), this factor may well be the nature of paper-and-pencil responding itself. It is likely that “paper and pencil testing” is of a qualitatively different nature than that of a more “behavioral” index such as a persons own estimation of specific outcome.

The low intercorrelations between the measures overall scores strongly suggested that the tests were not all tapping into the same dimension(s) or were assessing multiple dimensions. This was to be expected to some degree, though, as multiple constructs were being assessed by the measures (i.e., optimism, hope, etc.) and prior research has exhibited that some tests (i.e., BHS) do assess multiple factors. In addition, there are theoretical differences in the defining of the construct of optimism and this may account for some of the reason why low intercorrelations were found. As such the principal components analysis of the overall scores served a dual purpose (a) to determine how much of the variance could be explained by the smallest number of components, and (b) to determine if the measures of optimism would load on a single (or multiple) component(s). The fact that only about 70% of the total variance was attributable to the six common components was a signal that a significant portion of variance (approximately 30%) was either attributable to unorganized, perhaps even randomized variance or that there may possibly be smaller second-order components present in some structured form.
The principal components analysis of the overall scores provided very interesting results. While the intercorrelations of the tests were "poor" by standards of interchangability, they often were of a moderate nature (i.e., around $r = .4$ to $r = .6$). This suggested that there was a significant degree of shared variance amongst the tests, but that multiple components were a distinct possibility. Actually, it was the component analysis of the overall scores which provided a clearer description of this multidimensionality. While some measures of optimism appeared to assess the dimension of optimism in a moderately clear fashion, some scales appeared contaminated by also assessing other dimensions such as hope. The BHS and HS both substantially loaded upon Component 1 without moderately (above $r = .30$), nor heavily (above $r = .70$), loading on any other component. Thus, Component 1 was considered as assessing the dimension of Hope. The only other component which the scales of optimism (excluding those of an attributional base) moderately to heavily loaded upon was Component 4. Thus, component 4 was considered as assessing the dimension of Optimism. The OPTI and OPQ each loaded heavily, with the OOQ and WHOS each loading moderately, upon this dimension without loading substantially upon any other component. The scale scores which loaded moderately upon both Hope and Optimism though included the LOT, GESS, PPS, OPSOP, and OPSPM. The OCL only loaded substantially upon the dimension of HOPE. This suggests that some of the more highly regarded measures of optimism may actually also be assessing the dimension of hope instead of providing a clean measure of the construct of optimism itself.

Of prominent concern from the present study is the exceedingly poor relationship the attributionally-based measures showed to other measures of optimism. This was especially evident in the principal components analysis. Component 2 appeared to be assessing an attributional style for negative outcome events as the ASQ-B was the only score which significantly loaded upon this component while Component 5 appeared to be assessing an attributional style for positive outcome events as the ASQ-G score was the
only score to heavily load upon it. Component 3 and Component 6 appeared to be assessing a more generalized attributional style; perhaps because these scores were designed to fulfill this function. It is clear though, as would be theoretically hypothesized to some degree, that the attribution based subscales are not measuring a singular dimension as they load upon different components. Curiously, none of the attribution based scale scores loaded even moderately upon Component 1 (Hope) nor Component 4 (Optimism) and conversely no scale outside of the attributionally-based measures loaded even moderately upon Component 2, 3, or 6. This strongly suggests that the attributionally-based scales of optimism are in fact not measuring optimism at all but some other construct--more likely one’s attributional style. As such, caution should be used when attempting to consolidate research from attributional studies with research from other areas of optimism study as the scales from these theoretical positions do not appear interchangeable.

As there was some indication that the scales were assessing factors in addition to optimism, a principal components analysis was completed using the individual items from the optimism tests. A review of the background literature of several scales indicates that the creators of the measures do recognize the multidimensionality of their scales (i.e., O0Q), though these components comprise very little of the variance associated with the scale and usually “wash out” in an analysis of the component structure. However, when a large number of measures are utilized in one study, such as was done in the current one, these previously non-significant components derive support from the addition of items from theoretically similar scales which may also contain items which load upon these components. As such, these factors then account for a statistically significant, though marginal portion, of the overall variance of the tests. This is evident in the relatively small eigenvalues associated with these factors (most of which are between 1.0 and 2.0). Thus, although the scales used in the current study appear to assess multiple factors, many of
these account for very little of the overall variance associated with the tests. In addition, a
number of these factors were defined by very few items making the utility of interpreting
their meaning in the context of optimism research marginal. As such, many of the tests
likely are assessing the dimension of optimism; however, there is evidence that some
measures may be assessing more than simply this one dimension (as was suggested by the
principal components analysis of the overall scores). In light of this the principal
components analysis of the overall scores probably does provide a rather good description
of the actual factor loadings of each test. However, it is apparent that the measures of
optimism are measuring something in addition to optimism itself.

While prior research has indicated that optimism is a useful predictor of future
success, the present study did not find such promising results. In fact, no scale score
correlated more than $r = .30$ with any behavioral outcome. Although it has been noted that
optimism itself may only account for a small to moderate portion of portion of one's
likelihood of success in given tasks, even when a more liberal $p$ value of $p < .1$ is used
very few significant correlation's are evident. Of curious note is the correlation between
the Seligman Optimism Questionnaire (SOQ) score and the card task. Even though this
scale appears to be measuring neither optimism nor hope, it does show one of the highest
correlations between itself and task success. This alone perhaps lends at least some merit
to the attributional approach in defining the construct of optimism. Also in support of
situation specific estimates of optimism, the subject's own estimation of likelihood of
success was moderately associated to performance in the Card task and to a lesser degree in
the coin task.

One limitation of the present study was the utilization of short-duration experimental
tasks. As the prior literature has suggested, optimism may take a longer duration to
manifest it's influence and that is why prolonged study of tasks (such as academic success
over the course of several years) is recommended (Seligman, 1990). However, the present
results are useful as they are based upon standardized experimental tasks contained within the psychological literature and also showed that even with short-duration tasks optimism is at least mildly related to one’s future success at these tasks. This is important as this suggests that optimism is not only beneficial over the long haul but also in the here-and-now.

Looking at the item-task intercorrelations, there is evidence that at least certain items of the measures of optimism retain a degree of predictive utility. Of course, the large number of comparisons using these scores does not allow definitive statements, but there does appear promise for future study in the results. Of particular interest is the number of items from the SOQ and ASQ which show some correlation with the behavioral tasks. Although these scales do not appear to measure optimism per se, they do tap into the dimension of Learned Helplessness (Seligman, 1990) and there is an immense literature base supporting the relationship between this construct and later task success. So these results are essentially not surprising. As such, perhaps future research will be able to clarify which optimism items provide the best predictive utility over a course of several studies or across behavioral tasks and eventually consolidate these items into a strong, stable, useful, and highly valid measure of optimism.

The present results impact the field of optimism study in several manners. First, continued research is apparently needed to determine the status and utility of each scale as a measure of the construct of optimism. This may aid in determining whether a given scale have significantly better predictive utility than another measure of optimism. The results of the present study are somewhat vague as there is no clear-cut measure which “outperforms” the other scales and further study (perhaps with more complex and temporally prolonged tasks) will be needed to clarify this question. Second, consolidation of the optimism research based upon the results of studies utilizing differing measures of optimism, appears tenuous at the present time. Some of the optimism scales appear to be measuring (either
exclusively or additionally) dimensions other than optimism. Thus, either the given individual researcher will need to bear this in mind when comparing or combining the results from different studies or research using differing scales may have to be viewed separately in the optimism literature. Third, the questionnaires derived from attributional theory simply do not appear to be measuring optimism at all. Neither of the attributional scales exhibited a single statistically significant relationship to any optimism measure other than one to themselves nor did they load upon the same factors. This is unacceptable and warrants serious investigation as to the status of these scales in the optimism literature.

Future research may be best served by focusing upon the development of situation-specific or outcome-specific measures since the results of the present study indicated that an individual's estimate of success at a specific task is essentially as predictive, if not more so, of their actual success than are measures of general optimism. These measures may entail assessment of one's optimism for health recovery, completion of recovery programs, or even job success. Also continued investigation into the relationship between optimism and theoretically similar constructs such as hope may be of benefit not only to help clarify the theoretical distinctiveness of the construct of optimism but also to aid in deriving measures of optimism which are not contaminated with additional factors or dimensions. Finally, factor analysis of optimism scales using populations such as persons with cancer or AIDS may provide additional understanding of the dimensionality of the measures of optimism since the present study utilized essentially a college-based undergraduate pool.

In summary, despite the large amount of integration of optimism literature completed thus far, serious concerns are now evident which lead one to conclude that the present measures of optimism are not all assessing the same dimension. The "state of the union" of optimism measures, is at present, unsatisfactory and should be questioned and fully investigated. In fact, it appears that some degree of a "dis-union" of optimism measures exists at present. Without further study, any continued integration of the
optimism literature, as it exists today, may only "cloud" our understanding of the state of optimism and lead us further away from fully understanding the nature and measurement of this construct.
APPENDIX A

WEINSTEIN HEALTH OPTIMISM SCALE
Compared to other University of North Texas students, same sex as yourself, what do you think are the chances that the following events will happen to you?

Circle the number that corresponds best to what you think are the chances that the following events will happen to you.

<table>
<thead>
<tr>
<th></th>
<th>Well Below Average</th>
<th>Below Average</th>
<th>Average</th>
<th>Above Average</th>
<th>Well Above Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tripping and breaking a bone</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>2.</td>
<td>Victim of psychiatric disorder</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>Having a drinking problem</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>Contracting venereal disease</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>5.</td>
<td>Living past age 80</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>6.</td>
<td>Getting lung cancer</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>7.</td>
<td>Victim of HIV/AIDS</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>8.</td>
<td>Having gum problems</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>9.</td>
<td>Developing an ulcer</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>10.</td>
<td>Developing cancer</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>11.</td>
<td>Victim of severe depression</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>12.</td>
<td>In bed ill two or more days</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>13.</td>
<td>Having a heart attack</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>14.</td>
<td>Being sterile</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>15.</td>
<td>Decayed tooth extracted</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>16.</td>
<td>Attempting suicide</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>17.</td>
<td>Victim of radiation contamination</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>18.</td>
<td>Heart attack before age 40</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>19.</td>
<td>Having a stroke</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>20.</td>
<td>No night in hospital for 5 years</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>
APPENDIX B

LIFE ORIENTATION TEST
Please indicate the extent to which you agree with each of the following statements. Be as accurate and honest as you can throughout the test and try not to let your answer to one question influence your answers to other questions. There are no correct or incorrect answers.

Use the following responses to answer the questions below:

4 = Strongly agree
3 = Agree
2 = Neutral
1 = Disagree
0 = Strongly disagree

1. ____ In uncertain times, I usually expect the best.
2. ____ It’s easy for me to relax.
3. ____ If something can go wrong for me, it will.
4. ____ I always look on the bright side of things.
5. ____ I’m always optimistic about my future.
6. ____ I enjoy my friends a lot.
7. ____ It’s important for me to keep busy.
8. ____ I hardly ever expect things to go my way.
9. ____ Things never work out the way I want them to.
10. ____ I don’t get upset too easily.
11. ____ I’m a believer in the idea that “every cloud has a silver lining.”
12. ____ I rarely count on good things happening to me.
APPENDIX C

OPTIMISM FOR COLLEGE LIFE SCALE
Listed below are some things that might happen to you while in college. Indicate what you think are the chances that they might happen to you, using the following scale:

- an EXCELLENT chance: circle E
- a FAIR chance: circle F
- a GOOD chance: circle G
- a POOR chance: circle P

1. I will graduate with a degree in 5 years or less.
   E G F P
2. I will get satisfactory grades.
   E G F P
3. When necessary, I'll have chosen a career.
   E G F P
4. I will be able to study well enough.
   E G F P
5. I will work out a nice schedule of classes.
   E G F P
6. I will make just the right amount of friends.
   E G F P
7. I will like this college.
   E G F P
8. I will like the other students.
   E G F P
9. I will be satisfied with the professors.
   E G F P
10. I will graduate with academic honors.
    E G F P
11. I will not need any special help.
    E G F P
12. Traveling will not be a great problem.
    E G F P
13. I will be able to handle any financial problems that come along.
    E G F P
14. When I graduate, I will find a job in my chosen field.
    E G F P
15. I will not be nervous on the first day of classes.
    E G F P
APPENDIX D

OPTIMISM-PESSIMISM SCALE
Instructions: The 56 statements printed below represent individual differences in viewpoint. Using the scale shown below, please respond with your own point of view to all of the statements: for example, if you strongly agree with a statement then circle 1 (S.A.). Do not spend a lot of time thinking about each one; just indicate your first impression. Remember, respond to these statements according to how you feel about them right now.

1 = strongly agree
2 = agree
3 = disagree
4 = strongly disagree

1. I like people I get to know.
S.A. 1
A. 2
D. 3
S.D. 4

2. It is best not to set your hopes too high since you will probably be disappointed.
S.A. 1
A. 2
D. 3
S.D. 4

3. There is so much to be done and so little time to do it in.
S.A. 1
A. 2
D. 3
S.D. 4

4. I have a tendency to make mountains out of molehills.
S.A. 1
A. 2
D. 3
S.D. 4

5. Rarely do I expect good things to happen.
S.A. 1
A. 2
D. 3
S.D. 4

6. Everything changes so quickly these days that I often have trouble deciding which are the right rules to follow.
S.A. 1
A. 2
D. 3
S.D. 4

7. All in all the world is a good place.
S.A. 1
A. 2
D. 3
S.D. 4

8. When it comes to my future plans and ambitions in life, I expect more to go wrong than right.
S.A. 1
A. 2
D. 3
S.D. 4

9. My hardest battles are with myself.
S.A. 1
A. 2
D. 3
S.D. 4

10. I believe there's not much hope for the human race.
S.A. 1
A. 2
D. 3
S.D. 4

11. It does not take me long to shake off a bad mood.
S.A. 1
A. 2
D. 3
S.D. 4

12. If you hope and wish for something long and hard enough, you will eventually get it.
S.A. 1
A. 2
D. 3
S.D. 4

13. People get ahead by using 'pull' and not because of what they know.
S.A. 1
A. 2
D. 3
S.D. 4

14. Even when things in my life are going okay, I expect them to get worse soon.
S.A. 1
A. 2
D. 3
S.D. 4

15. With enough faith, you can do almost anything.
S.A. 1
A. 2
D. 3
S.D. 4
<table>
<thead>
<tr>
<th></th>
<th></th>
<th>S.A.</th>
<th>A.</th>
<th>D.</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.</td>
<td>I enjoy myself most when I am alone, away from other people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17.</td>
<td>When I undertake something new, I expect to succeed.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18.</td>
<td>Honesty is the best policy in all cases.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19.</td>
<td>I generally look at the brighter side of life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20.</td>
<td>If I make a decision on my own, I can pretty much count on the fact that it will turn out to be a poor one.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21.</td>
<td>I generally make light of my problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>22.</td>
<td>It is always a good thing to be frank.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23.</td>
<td>Where there's a will, there's a way.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24.</td>
<td>I have a tendency to blow up problems so they seem worse than they really are.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>25.</td>
<td>All in all, it is better to be humble and honest than important and dishonest.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26.</td>
<td>As time goes on, things will most likely get worse.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27.</td>
<td>It is the slow, steady worker who usually accomplishes the most in the end.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>28.</td>
<td>When I go to a party I expect to have fun.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>29.</td>
<td>Times are getting better.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>30.</td>
<td>Everyone should have an equal chance and an equal say.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>31.</td>
<td>Better to expect defeat: then it doesn't hit so hard when it comes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>32.</td>
<td>It is wise to flatter important people.</td>
<td>1</td>
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<td>33.</td>
<td>I expect to achieve most of the things I want to in life.</td>
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<tr>
<td>34.</td>
<td>It seems the cards of life are stacked against me.</td>
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<td>35.</td>
<td>What is lacking in the world today is the old kind of friendship that lasted for a lifetime.</td>
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<td>36.</td>
<td>When the weatherman predicts 50% chance of rain, you might just as well count on seeing rain.</td>
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<td>37.</td>
<td>Before an interview, I am usually confident that things will go well.</td>
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<td>38.</td>
<td>Sometimes I feel down, but I bounce right back again.</td>
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</table>
39. The future seems too uncertain for people to make serious plans.
   S.A. A. D. S.D.
   1 2 3 4

40. When I have undertaken a task, I find it difficult to set it aside even for a short time.
   S.A. A. D. S.D.
   1 2 3 4

41. Tenderness is more important than love.
   S.A. A. D. S.D.
   1 2 3 4

42. When gambling, I expect to lose.
   S.A. A. D. S.D.
   1 2 3 4

43. Anybody who is willing to work hard has a good chance for success.
   S.A. A. D. S.D.
   1 2 3 4

44. The future looks very dismal.
   S.A. A. D. S.D.
   1 2 3 4

45. If I had to choose between happiness and greatness, I'd choose greatness.
   S.A. A. D. S.D.
   1 2 3 4

46. Minor setbacks are something I usually ignore.
   S.A. A. D. S.D.
   1 2 3 4

47. In general, things turn out all right in the end.
   S.A. A. D. S.D.
   1 2 3 4

48. It is better to be a dead hero than a live coward.
   S.A. A. D. S.D.
   1 2 3 4

49. Give me 50/50 odds and I will choose the wrong answer every time.
   S.A. A. D. S.D.
   1 2 3 4

50. It is hard to get ahead without cutting corners here and there.
   S.A. A. D. S.D.
   1 2 3 4

51. If I were in competition and contestants were narrowed down to myself and one other person, I would expect to be runner-up.
   S.A. A. D. S.D.
   1 2 3 4

52. April showers bring May flowers.
   S.A. A. D. S.D.
   1 2 3 4

53. I can be comfortable with nearly all kinds of people.
   S.A. A. D. S.D.
   1 2 3 4

54. The worst defeats come after the best victories.
   S.A. A. D. S.D.
   1 2 3 4

55. In the history of the human race there have probably been just a handful of really great thinkers.
   S.A. A. D. S.D.
   1 2 3 4

56. Every cloud has a silver lining.
   S.A. A. D. S.D.
   1 2 3 4
APPENDIX E

ORAL OPTIMISM/PESSIMISM QUESTIONNAIRES
Please circle "Yes" or "No" in response to each statement.

1. Yes No I keep calm and most things turn out reasonably well.
2. Yes No Are you a good patient when ill?
3. Yes No Once you’re talking, do you often find you can go on and on without difficulty?
4. Yes No Is the environment going to be destroyed by pollution in the next 50 years?
5. Yes No Do you sometimes know what you want to say but can’t say it?
6. Yes No Do you really enjoy laying on a big party with plenty of food and wine and hundreds of guests?
7. Yes No Do you, almost without thinking, reject novel ideas?
8. Yes No When you are unwell do you like to be left alone?
9. Yes No Do you find it difficult sometimes to talk or find the right words?
10. Yes No Are you one of those people who for some reason are usually bursting with good ideas?
11. Yes No It’s pointless worrying for something usually turns up.
12. Yes No Do you prefer to work with a group of people to working alone?
13. Yes No A good party is the way I celebrate anything.
14. Yes No Do you find yourself intrigued by the latest ideas?
15. Yes No Do you like to sit with people even if you don’t speak or look at one another?
16. Yes No Do you usually keep quiet in a group?
17. Yes No Are you a person who likes the newest and trendiest things?
18. Yes No Life’s good when you just relax.
19. Yes No When you are hurt do you find sympathy helpful?
20. Yes No Are you good with children?
Please circle “Yes” or “No” in response to each statement.

1. Yes No Do you sometimes feel that no matter what you do things will never work out?
2. Yes No Have you been considered rude because you are not very forthcoming?
3. Yes No Do you tend to argue with people just for the sake of the argument?
4. Yes No Do you resent having to go along with a group?
5. Yes No Are you prepared to spend time talking to uninteresting people?
6. Yes No Do you really enjoy abusing somebody?
7. Yes No Do you mind when your friends have more than you do?
8. Yes No Do you feel warm to people when you meet them?
9. Yes No Are your efforts usually in vain?
10. Yes No Are you thought of as patient by those who know you well?
11. Yes No Do you hope (even if privately) to pull off some great achievement?
12. Yes No When you are really annoyed, are people afraid of your tongue?
13. Yes No Do you find that what you really want you cannot get?
14. Yes No Do you sometimes feel hostile to a person on sight for no apparent reason?
15. Yes No Are you careful to avoid hurting people when you talk?
16. Yes No Do you enjoy malicious jokes or gossip about other people?
17. Yes No Do you tend to take your mind off your problems by reading?
18. Yes No Do you dislike taking part in fierce debates?
19. Yes No Do you get annoyed if you have to repeat an explanation to someone who has failed to understand?
20. Yes No Do you easily tolerate fools?
APPENDIX F

OPTIMISM-PESSIMISM TEST INSTRUMENT
These are a series of short stories. There are two short descriptions for how the story ends, please circle the choice of how you think the story ends.

1. Doug is trying to eat his vegetables fast because his aunt has told him that if he finishes them she will give him a dessert that he has never tasted before. Do you think that:
   a) he will like the dessert.
   b) he will not like the dessert.

2. These girls are walking home from school. Alice suddenly sees something shiny by the stream. She is excited, but she's not sure what it is. Do you think she will:
   a) find a shiny new quarter.
   b) find just part of an old tin can.

3. John has been learning to play the trumpet. Tomorrow John is playing in a contest. Do you think that:
   a) John is going to win a prize tomorrow.
   b) John will lose tomorrow.

4. Daryl is thinking about the baseball season which is just beginning. This year Daryl will be playing in the Little League for the first time, and he is wondering how well he will play. Do you think:
   a) Daryl will play badly.
   b) Daryl will play well.

5. Marcie is riding along the sidewalk on her bicycle when she suddenly sees a $5.00 bill blowing along in front of her. Will the money:
   a) blow away before she can get to it.
   b) not blow away before she can get to it.

6. Martin has been looking for his cat in the basement all day. He's afraid that if he doesn't find her today, the room will be locked and she will be trapped without food. Do you think:
   a) Martin will find his cat.
   b) Martin will not find his cat.

7. Shirley's mother and father just left her at nursery school for the first time. Shirley is so sad that she started to cry. The teacher picked her up and tried to make her feel better. Shirley is afraid because her brother said that nursery school was horrible. Do you think:
   a) Shirley is going to be sad at school.
   b) Shirley is not going to be sad at school.

8. Dick and Michael spent all day looking for bird's eggs to make a collection. They found so many eggs that they had to leave some near the path in a paperbag. Now they are worried that someone may have taken them. Do you think:
   a) their eggs are stolen.
   b) their eggs are not stolen.
9. Wendy’s friend Tracey is moving from the house next door, and Wendy is wondering what will happen when they move. She is hoping that the new neighbor will also have a boy or girl her age who she can play with - otherwise she will be all alone on the block. Do you think:
   a) Wendy will be all alone.
   b) Wendy will not be all alone.

10. Eric went to the store for his mom, and on the way home, he lost the money he had left over. He is looking for the change in the street. Do you think:
    a) he has lost the change.
    b) he will find the change.

11. Poor Kelly is trying to carry home a big brown bag filled with bottles of Coke. She’s trying to carry it without the bag breaking. Do you think:
    a) she’ll get the Coke home okay.
    b) the bag will break.

12. Oh dear! Spot has just moved into a new home, and he is taking a walk around the block. Then he meets three other dogs from the neighborhood. You can see that two of them don’t look very friendly. Do you think:
    a) they’ll be mean to Spot.
    b) they will see that Spot wants to make friends.

13. Betsy just saw a beehive behind a tree. She is afraid that one of the bees will sting her. Do you think:
    a) that she will be able to get home without a bee sting.
    b) that she will not be able to get home without a bee sting.

14. Everytime Dave goes to the baseball game he has to sit and watch the others because there are too many children who want to play. Do you think:
    a) Dave will have to watch again today.
    b) Dave will get a chance to play.

15. Somebody just gave Sharon something to eat that she has never had before. Do you think:
    a) She is going to like it.
    b) She is going to hate it.

16. Jim found this little puppy in the park. The puppy doesn’t have a home. Jim’s mom and dad won’t let him keep the puppy. Do you think:
    a) Jim will be able to find a home for the puppy.
    b) Jim will not be able to find a home for the puppy.

17. Two little girls have come to a birthday party. Their mother has left them there, but none of the other children have come. They wonder if they are in the wrong place! Do you think:
    a) they are in the wrong place and the other children won’t come.
    b) they are not in the wrong place and the other children will come.
18. Janice is waiting for Linda to give her a turn with the jump rope. Recess is going to be over soon, and Janice is afraid that she won’t get to jump rope before the bell rings. Will:
   a) the bell ring before she gets a chance.
   b) Janice will have a chance to jump rope.

19. Chris and sisters Janet and Debbie are at the beach for the day. When he left them, their father gave Chris some money to buy ice cream and hamburgers for lunch. Now Chris can’t find the money near his towel where he left it. Do you think:
   a) Chris will find the money in the sand.
   b) They’ll have to stay the day without the food.

20. Janine and her friends are all painting for the New Haven Art Contest tomorrow. If her painting is the best, Janine knows she will win a big box of paints and crayons which she has wanted for a long time. Do you think:
   a) she will win the prize.
   b) she will not win the prize.
APPENDIX G

ATTRIBUTIONAL STYLE QUESTIONNAIRE
Please try to vividly imagine yourself in the situations that follow. If such a situation happened to you, what would you feel would have caused it? While events may have many causes, we want you to pick only one - the major cause if this event happened to you. Please write this cause in the blank provided after each event. Next we want you to answer some questions about the cause and a final question about the situation. To summarize, we want you to:

1. Read each situation and vividly imagine it happening to you.
2. Decide what you feel would be the major cause of the situation if it happened to you.
3. Write one cause in the blank provided.
4. Answer three questions about the cause.
5. Answer one question about the situation.
6. Go on to the next situation.

Situation: You meet a friend who compliments you on your appearance.

1. Write down the one major cause: _________________.
2. Is the cause due to something about you or to something about other people or circumstances? (circle one number)
   - Totally due to other people
   - Totally due to me
3. In the future will this cause again be present? (circle one number)
   - Will never again
   - Will always be present
4. Is the cause something that just influences this one thing or does it also influence other areas of your life? (circle one number)
   - Influences just this particular situation
   - Influences all situations in my life
5. How important would this situation be if it happened to you? (circle one number)
   - Not at all important
   - Extremely important

Situation: You have been looking for a job unsuccessfully for some time.

1. Write down the one major cause: _________________.
2. Is the cause due to something about you or to something about other people or circumstances? (circle one number)
   - Totally due to other people
   - Totally due to me
3. In the future will this cause again be present? (circle one number)
   - Will never again
   - Will always be present
4. Is the cause something that just influences this one thing or does it also influence other areas of your life? (circle one number)

   Influences just  Influences all
   this particular   situations in
   situation           my life

5. How important would this situation be if it happened to you? (circle one number)

   Influences just  Influences all
   this particular   situations in
   this situation     my life

   Not at all  Extremely
   important     important

Situation: You become very rich.
1. Write down the one major cause ________________________________.
2. Is the cause due to something about you or to something about other people or circumstances? (circle one number)

   Totally due to other people  Totally due
   or circumstances                  to me

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

   Will never again  Will always
   be present        be present

4. Is the cause something that just influences this one thing or does it also influence other areas of your life? (circle one number)

   Influences just  Influences all
   this particular   situations in
   situation               my life

5. How important would this situation be if it happened to you? (circle one number)

   Not at all  Extremely
   important     important

Situation: A friend comes to you with a problem and you don’t try to help.
1. Write down the one major cause ________________________________.
2. Is the cause due to something about you or to something about other people or circumstances? (circle one number)

   Totally due to other people  Totally due
   or circumstances                  to me

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

   Will never again  Will always
   be present        be present

4. Is the cause something that just influences this one thing or does it also influence other areas of your life? (circle one number)

   Influences just  Influences all
   this particular   situations in
   situation               my life

5. How important would this situation be if it happened to you? (circle one number)

   Not at all  Extremely
   important     important

Situation: You give an important talk in front of a group and the audience reacts negatively.
1. Write down the one major cause ________________________________.
2. Is the cause due to something about you or to something about other people or circumstances? (circle one number)

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

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

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

4. Is the cause something that just influences this one thing or does it also influence other areas of your life? (circle one number)

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

5. How important would this situation be if it happened to you? (circle one number)

   Not at all 1 2 3 4 5 6 7
   Extremely important
   important

Situation: You do a project that is highly praised.

1. Write down the one major cause

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

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

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

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

4. Is the cause something that just influences this one thing or does it also influence other areas of your life? (circle one number)

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

5. How important would this situation be if it happened to you? (circle one number)

   Not at all 1 2 3 4 5 6 7
   Extremely important
   important

Situation: You meet a friend who acts hostilely toward you.

1. Write down the one major cause

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

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

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

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

4. Is the cause something that just influences this one thing or does it also influence other areas of your life? (circle one number)

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

5. How important would this situation be if it happened to you? (circle one number)

   Not at all 1 2 3 4 5 6 7
   Extremely important
   important
5. How important would this situation be if it happened to you? (circle one number)
   Not at all 1 2 3 4 5 6 7 Extremely important

Situation: You can’t get all the work done that others expect of you.

1. Write down the one major cause

2. Is the cause due to something about you or to something about other people or circumstances? (circle one number)
   Totally due to other people or circumstances 1 2 3 4 5 6 7 to me

3. In the future will this cause again be present? (circle one number)
   Will never again be present 1 2 3 4 5 6 7

4. Is the cause something that just influences this one thing 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

5. How important would this situation be if it happened to you? (circle one number)
   Not at all important 1 2 3 4 5 6 7 Extremely important

Situation: Your spouse (boyfriend/girlfriend) has been treating you more lovingly.

1. Write down the one major cause

2. Is the cause due to something about you or to something about other people or circumstances? (circle one number)
   Totally due to other people or circumstances 1 2 3 4 5 6 7 to me

3. In the future will this cause again be present? (circle one number)
   Will never again be present 1 2 3 4 5 6 7

4. Is the cause something that just influences this one thing 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

5. How important would this situation be if it happened to you? (circle one number)
   Not at all important 1 2 3 4 5 6 7 Extremely important

Situation: You apply for a position that you want very badly (e.g., job, graduate school admission) and you get it.

1. Write down the one major cause

2. Is the cause due to something about you or to something about other people or circumstances? (circle one number)
   Totally due to other people or circumstances 1 2 3 4 5 6 7 to me

3. In the future will this cause again be present? (circle one number)
   Will never again be present 1 2 3 4 5 6 7

4. Is the cause something that just influences this one thing 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

5. How important would this situation be if it happened to you? (circle one number)
   Not at all important 1 2 3 4 5 6 7 Extremely important
4. Is the cause something that just influences this one thing or does it also influence other areas of your life? (circle one number)

- Influences just this particular situation
- Influences all situations in my life

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5. How important would this situation be if it happened to you? (circle one number)

- Not at all important
- Extremely important

Situation: You go out on a date and it goes badly.

1. Write down the **one** major cause_____________________________________.
2. Is the cause due to something about you or to something about other people or circumstances? (circle one number)

- Totally due to other people or circumstances
- Totally due to me

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

- Will never again be present
- Will always be present

4. Is the cause something that just influences this one thing or does it also influence other areas of your life? (circle one number)

- Influences just this particular situation
- Influences all situations in my life

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5. How important would this situation be if it happened to you? (circle one number)

- Not at all important
- Extremely important

Situation: You get a raise.

1. Write down the **one** major cause_____________________________________.
2. Is the cause due to something about you or to something about other people or circumstances? (circle one number)

- Totally due to other people or circumstances
- Totally due to me

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

- Will never again be present
- Will always be present

4. Is the cause something that just influences this one thing or does it also influence other areas of your life? (circle one number)

- Influences just this particular situation
- Influences all situations in my life

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5. How important would this situation be if it happened to you? (circle one number)

- Not at all important
- Extremely important
APPENDIX H

SELMAN OPTIMISM QUESTIONNAIRE
Take as much time as you need to answer each of the questions. On average this takes about fifteen minutes. There are no right or wrong answers.

Read the description of each situation and vividly imagine it happening to you. You have probably not experienced some of the situations, but that doesn’t matter. Perhaps neither response will seem to fit; go ahead anyway and circle either A or B, choosing the cause likelier to apply to you. You may not like the way some of the responses sound, but don’t choose what you think you should say or what sounds right to other people; choose the response you’d be likelier to have.

Circle only one response for each question.

1. The project you are in charge of is a great success.
   A. I kept a close watch over everyone's work.
   B. Everyone devoted a lot of time and energy to it.

2. You and your spouse (boyfriend/girlfriend) make up after a fight.
   A. I forgave him/her.
   B. I'm usually forgiving.

3. You get lost driving to friend's house.
   A. I missed a turn.
   B. My friend gave me bad directions.

4. Your spouse (boyfriend/girlfriend) surprises you with a gift.
   A. He/she just got a raise at work.
   B. I took him/her out to a special dinner the night before.

5. You forgot your spouse's (boyfriend's/girlfriend's) birthday.
   A. I'm not good at remembering birthdays.
   B. I was preoccupied with other things.

6. You get a flower from a secret admirer.
   A. I am attractive to him/her.
   B. I am a popular person.

7. You run for a community office position and you win.
   A. I devote a lot of time and energy to campaigning.
   B. I work very hard at everything I do.

8. You miss an important engagement.
   A. Sometimes my memory fails me.
   B. I sometimes forget to check my appointment book.

9. You run for a community office position and you lose.
   A. I didn't campaign hard enough.
   B. The person who won knew more people.

10. You host a successful dinner.
    A. I was particularly charming that night.
    B. I am a good host.
11. You stop a crime by calling the police.
   A. A strange noise caught my attention.
   B. I was alert that day.

12. You were extremely healthy all year.
   A. Few people around me were sick, so I wasn’t exposed.
   B. I made sure I ate well and got enough rest.

   A. When I am really involved in what I am reading, I often forget when it’s due.
   B. I was so involved in writing the report that I forgot to return the book.

14. Your stocks make you a lot of money.
   A. My broker decided to take on something new.
   B. My broker is a top-notch investor.

15. You win an athletic contest.
   A. I was feeling unbeatable.
   B. I train hard.

16. You fail an important examination.
   A. I wasn’t as smart as the other people taking the exam.
   B. I didn’t prepare for it well.

17. You prepared a special meal for a friend and he/she barely touched the food.
   A. I wasn’t a good cook.
   B. I made the meal in a rush.

18. You lose a sporting event for which you have been training for a long time.
   A. I’m not very athletic.
   B. I’m not good at that sport.

19. Your car runs out of gas on a dark street late at night.
   A. I didn’t check to see how much gas was in the tank.
   B. The gas gauge was broken.

20. You lose your temper with a friend.
   A. He/she is always nagging me.
   B. He/she was in a hostile mood.

21. You are penalized for not returning your income-tax forms on time.
   A. I always put off doing my taxes.
   B. I was lazy about getting my taxes done this year.

22. You ask a person out on a date and he/she says no.
   A. I was a wreck that day.
   B. I got tongue-tied when I asked him/her on the date.
23. A game-show host picks you out of the audience to participate in the show.
   A. I was sitting in the right seat.
   B. I looked the most enthusiastic.

24. You are frequently asked to dance at a party.
   A. I am outgoing at parties.
   B. I was in perfect form that night.

25. You buy your spouse (boyfriend/girlfriend) a gift and he/she doesn't like it.
   A. I don’t put enough thought into things like that.
   B. He/she has very picky tastes.

26. You do exceptionally well in a job interview.
   A. I felt extremely confident during the interview.
   B. I interview well.

27. You tell a joke and everyone laughs.
   A. The joke was funny.
   B. My timing was perfect.

28. Your boss gives you too little time in which to finish a project, but you get it finished anyway.
   A. I am good at my job.
   B. I am an efficient person.

29. You've been feeling run-down lately.
   A. I never get a chance to relax.
   B. I was exceptionally busy this week.

30. You ask someone to dance and he/she says no.
   A. I am not a good enough dancer.
   B. He/she doesn’t like to dance.

31. You save a person from choking to death.
   A. I know a technique to stop someone from choking.
   B. I know what to do in crisis situations.

32. Your romantic partner wants to cool things off for a while.
   A. I’m too self-centered.
   B. I don’t spend enough time with him/her.

33. A friend says something that hurts your feelings.
   A. She always blurts things out without thinking of others.
   B. My friend was in a bad mood and took it out on me.

34. Your employer comes to you for advice.
   A. I am an expert in the area about which I was asked.
   B. I am good at giving useful advice.
35. A friend thanks you for helping him/her get through a bad time.
   A. I enjoy helping him/her through tough times.
   B. I care about people.

36. You have a wonderful time at a party.
   A. Everyone was friendly.
   B. I was friendly.

37. Your doctor tells you that you are in good physical shape.
   A. I make sure I exercise frequently.
   B. I am very health-conscious.

38. Your spouse (boyfriend/girlfriend) takes you away for a romantic weekend.
   A. He/she needed to get away for a few days.
   B. He/she likes to explore new areas.

39. Your doctor tells you that you eat too much sugar.
   A. I don't pay much attention to my diet.
   B. You can't avoid sugar, it's in everything.

40. You are asked to head an important project.
   A. I just successfully completed a similar project.
   B. I am a good supervisor.

41. You and your spouse (boyfriend/girlfriend) have been fighting a great deal.
   A. I have been feeling cranky and pressured lately.
   B. He/she has been hostile lately.

42. You fall down a great deal while skiing.
   A. Skiing is difficult.
   B. The trails were icy.

43. You win a prestigious award.
   A. I solved an important problem.
   B. I was the best employee.

44. Your stocks are at an all-time low.
   A. I didn't know much about the business climate at the time.
   B. I made a poor choice of stocks.

45. You win the lottery.
   A. It was pure chance.
   B. I picked the right numbers.

46. You gain weight over the holidays and you can't lose it.
   A. Diets don't work in the long run.
   B. The diet I tried didn't work.

47. You are in the hospital and few people come to visit.
   A. I'm irritable when I am sick.
   B. My friends are negligent about things like that.
48. They won't honor your credit card at a store.
A. I sometimes overestimate how much money I have.
B. I sometimes forget to pay my credit-card bill.
APPENDIX I

HOPE SCALE
Directions: Read each item carefully. Using the scale below, please select the number that best describes you and put that number in the blank provided.

1 = Definitely false  2 = Mostly false  3 = Mostly true  4 = Definitely true

1. I can think of many ways to get out of a jam.
2. I energetically pursue my goals.
3. I feel tired most of the time.
4. There are lots of ways around any problem.
5. I am easily downed in an argument.
6. I can think of many ways to get the things in life that are most important to me.
7. I worry about my health.
8. Even when others get discouraged, I know I can find a way to solve the problem.
9. My past experiences have prepared me well for my future.
10. I've been pretty successful in life.
11. I usually find myself worrying about something.
12. I meet the goals that I set for myself.
APPENDIX J

BECK HOPELESSNESS SCALE
This questionnaire consists of twenty statements. Please read the statements carefully one by one. If the statement describes your attitude for the past week including today, respond “true” in the column next to the statement. If the statement does not describe your attitude, respond “false” in the column next to the statement. Please be sure to read each statement carefully.

T= True
F= False

1. ____ I look forward to the future with hope and enthusiasm.
2. ____ I might as well give up because I can’t make things better for myself.
3. ____ When things are going badly, I am helped by knowing they can’t stay that way forever.
4. ____ I can’t imagine what my life would be like in ten years.
5. ____ I have enough time to accomplish the things I most want to do.
6. ____ In the future, I expect to succeed in what concerns me most.
7. ____ My future seems dark to me.
8. ____ I expect to get more of the good things in life than the average person.
9. ____ I just don’t get the breaks, and there’s no reason to believe I will in the future.
10. ____ My past experiences have prepared me well for my future.
11. ____ All I can see ahead of me is unpleasantness rather than pleasantness.
12. ____ I don’t expect to get what I really want.
13. ____ When I look ahead to the future, I expect I will be happier than I am now.
14. ____ Things just won’t work out the way I want them to.
15. ____ I have great faith in the future.
16. ____ I never get what I want so it’s foolish to want anything.
17. ____ It is very unlikely that I will get any real satisfaction in the future.
18. ____ The future seems vague and uncertain to me.
19. ____ I can look forward to more good times than bad times.
20. ____ There’s no use in really trying to get something I want because I probably won’t get it.
APPENDIX K

GENERALIZED EXPECTANCY FOR SUCCESS SCALE
This is a questionnaire to find out how people believe they will do in certain situations. Each item consists of a 5-point scale and a belief statement regarding one's expectations about events. Please indicate the degree to which you believe the statement would apply to you personally by circling the appropriate number. (1 = highly improbable, 5 = highly probable).

Give the answer that you truly believe best applies to you and not what you would like to be true or think others would like to hear. Answer the items carefully, but do not spend too much time on any one item. Be sure to find an answer for every item, even if the statement describes a situation you presently do not expect to encounter. Answer as if you were going to be in each situation. Also try to respond to each item independently when making a choice; do not be influenced by your previous choices.

Scale:

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<tr>
<th>Highly Improbable</th>
<th>Neutral</th>
<th>Highly Probable</th>
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<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td></td>
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<td>4</td>
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<td></td>
<td></td>
<td>5</td>
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</table>

You may use any number from 1 to 5 depending upon where on the scale you deem appropriate.

In the future I expect that I will:

1. 1 2 3 4 5 find that people don't seem to understand what I am trying to say.
2. 1 2 3 4 5 be discouraged about my ability to gain the respect of others.
3. 1 2 3 4 5 be a good parent.
4. 1 2 3 4 5 be unable to accomplish my goals.
5. 1 2 3 4 5 have a successful marital relationship.
6. 1 2 3 4 5 deal poorly with emergency situations.
7. 1 2 3 4 5 find my efforts to change situations I don't like are ineffective.
8. 1 2 3 4 5 not be very good at learning new skills.
9. 1 2 3 4 5 carry through my responsibilities successfully.
10. 1 2 3 4 5 discover that the good in life outweighs the bad.
11. 1 2 3 4 5 handle unexpected problems successfully.
12. 1 2 3 4 5 get the promotions I deserve.
13. 1 2 3 4 5 succeed in the projects I undertake.
14. 1 2 3 4 5 not make any significant contributions to society.
15. 1 2 3 4 5 discover that my life is not getting much better.
16. 1 2 3 4 5 be listened to when I speak.
17. 1 2 3 4 5 discover that my plans don't work out too well.
18. 1 2 3 4 5 find that no matter how hard I try, things just don't turn out the way I would like.
19. 1 2 3 4 5 handle myself well in whatever situation I'm in.
20. 1 2 3 4 5 be able to solve my own problems.
21. 1 2 3 4 5 succeed at most things I try.
22. 1 2 3 4 5 be successful in my endeavors in the long run.
23. 1 2 3 4 5 be very successful working out my personal life.
24. 1 2 3 4 5 experience many failures in my life.
25. 1 2 3 4 5 make a good impression on people I meet for the first time.
26. 1 2 3 4 5 attain the career goals I have set for myself.
27. 1 2 3 4 5 have difficulty dealing with my superiors.
28. 1 2 3 4 5 have problems working with others.
29. 1 2 3 4 5 be a good judge of what it takes to get ahead.
30. 1 2 3 4 5 achieve recognition in my profession.
APPENDIX L

PREMORBID PESSIMISM SUBSCALE
This consists of a number of statements which people use to describe themselves. Read each statement, decide whether or not it applies to you, and then mark your choice on the special answer sheet. If you agree with a statement or decide that it describes you, mark true. If you disagree with a statement or decide it does not describe you, mark false. If you have some doubt about the truth of a statement as it applies to you, mark false.

1. T F I have always been able to overcome the problems I’ve had.
2. T F I am very pleased with all the things I have done up to now.
3. T F This year I was successful at something that was very important to me.
4. T F Most people wouldn’t care much if I were very sick.
5. T F Even in difficult time, I always try to be cheerful.
6. T F I’ve had serious money problems this past year.
7. T F I almost always have medical problems.
8. T F I often feel that others do not want to be friendly to me.
9. T F If I ever got a serious illness, I think it would be the end of me.
10. T F So little of what I have done has been appreciated by others.
11. T F When I think about the past, I remember mostly the good things.
12. T F I have had more than my share of troubles in the past year.
13. T F There are always a number of reasons why most problems can’t be solved.
14. T F I feel pretty upset about most things in my life.
15. T F My family has had really bad problems in the past year.
16. T F I sometimes feel I am in this world all alone.
17. T F I often think about unhappy things that have happened to me.
18. T F I guess I’m a complainer who expects the worst to happen.
19. T F It is not unusual to feel lonely and unwanted.
20. T F I worry a lot about my health.
21. T F Lots of people would care about me if I became very sick.
22. T F If I had a very serious sickness, I think I would fall apart mentally.
23. T F Most of my problems just go on and on.
24. T F I very often think I am not wanted by others in a group.
25. T F Even when things seem to be going well, I expect that they’ll soon get worse.
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<tbody>
<tr>
<td>26.</td>
<td>T</td>
<td>I often feel that there is nothing I can do to make my life easier.</td>
</tr>
<tr>
<td>27.</td>
<td>T</td>
<td>This past year has been one of the most difficult ones in my life.</td>
</tr>
<tr>
<td>28.</td>
<td>T</td>
<td>If I were young again, I would do things very differently.</td>
</tr>
<tr>
<td>29.</td>
<td>T</td>
<td>I've had a lot of shocks and disappointments this past year.</td>
</tr>
<tr>
<td>30.</td>
<td>T</td>
<td>I get very upset when I feel pain in any part of my body.</td>
</tr>
<tr>
<td>31.</td>
<td>T</td>
<td>For me, the future looks like it will be full of trouble and problems.</td>
</tr>
<tr>
<td>32.</td>
<td>T</td>
<td>I have never felt much life in me.</td>
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<tr>
<td>33.</td>
<td>T</td>
<td>I often doubt whether people are really interested in what I am saying to them.</td>
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<tr>
<td>34.</td>
<td>T</td>
<td>Life has never gone well for me.</td>
</tr>
<tr>
<td>35.</td>
<td>T</td>
<td>I've been touchy or tearful about everything most of my life.</td>
</tr>
<tr>
<td>36.</td>
<td>T</td>
<td>I often think that I have serious illness.</td>
</tr>
<tr>
<td>37.</td>
<td>T</td>
<td>I'd be a pretty lonely person if I ever were hospitalized.</td>
</tr>
<tr>
<td>38.</td>
<td>T</td>
<td>I become very excited or upset once a week or more.</td>
</tr>
<tr>
<td>39.</td>
<td>T</td>
<td>I get so touchy that I can't talk about certain things.</td>
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APPENDIX M

EXPERIMENT ANNOUNCEMENT
EXPERIMENT ANNOUNCEMENT

**Location:** TERRILL HALL PSYCHOLOGY CLINIC - located on the first floor of Terrill Hall just inside the east entrance.

**Extra-Credit:** 5 POINTS

**Approximate time to complete experiment:** 2 1/2 HOURS OR LESS

**Experimenter:** Travis Hinze

**Phone:** (817) 491-0308

**Nature of experiment:** Participants will be required to complete a number of questionnaires about attitudes. Each participant will then complete two game-like tasks which will take an additional ten minutes.

Each participant will sign a research consent form which discusses the nature of the experiment and contains an explanation that they are free to withdraw from the study at any time.

1. **IF YOU FOR ANY REASON CANNOT KEEP AN APPOINTMENT TIME, PLEASE CONTACT THE EXPERIMENTER AT THE ABOVE PHONE NUMBER.**

2. **THE FACULTY SPONSOR FOR THIS EXPERIMENT IS JOSEPH DOSTER, PH. D.**

3. **IF FOR SOME REASON THE EXPERIMENTER DOES NOT KEEP AN APPOINTMENT, LEAVE YOUR NAME, SOCIAL SECURITY NUMBER, PSYCHOLOGY COURSE NUMBER, AND SECTION WITH THE DEPARTMENT SECRETARY, THE COORDINATOR OF THE SUBJECT POOL, OR THE FACULTY SPONSOR. IF YOU REPORT CHECKS OUR RECORDS, YOU WILL RECEIVE THE PROPER CREDIT.**

4. **PLEASE DO NOT ATTEND THIS EXPERIMENT MORE THAN ONCE!**
APPENDIX N

EXPERIMENT DIRECTIONS
PLEASE READ THESE DIRECTIONS BEFORE BEGINNING!

Thank you for participating in this study. You may discontinue your participation in this study at any time even before you start; simply alert the experimenter to your wishes. However, if you choose to participate you will receive extra-credit which you can use for your individual classes. If you agree to participate, simply sign and return the research consent form at this time.

Today you will participate in a study about attitudes and personality factors. You will be asked to fill out or complete a number of questionnaires. You will need a writing utensil such as a pen or pencil. If you do not have one, please alert the experimenter. ANSWER ALL QUESTIONS!

The time allotted for you to complete all the questionnaires is 2 1/2 hours. You may take the whole time or you may finish early. Either is O.K. However, it is helpful to this study if you take your time and think about the questions being asked and respond to them in an honest fashion. Please respond to the statements or questions in the way that you feel right now, and not in a way in which you expect others will answer or in a way in which you believe others expect you to answer. DON'T FORGET ANY QUESTIONS!

This study is comprised of two sections. During the first section you will complete the questionnaires provided in the packet placed in front of you by the experimenter. IT IS VERY IMPORTANT THAT YOU COMPLETE THE QUESTIONNAIRES IN THE ORDER IN WHICH THEY ARE PLACED IN YOUR PACKET. PLEASE DO NOT SHUFFLE THE QUESTIONNAIRES NOR COMPLETE THEM IN ANY ORDER OTHER THAN THE WAY IN WHICH THEY ARE PLACED IN YOUR PACKET. When completing these questionnaires, take care not to forget answering any questions. PLEASE READ THE DIRECTIONS AT THE TOP OF EACH QUESTIONNAIRE. If you have any questions at all during this study, feel free to ask the experimenter. When you finish the questionnaires, you will be led to a nearby room in which you will be asked to complete two further tasks and then you will be finished with the study. The first section will take up most of your time. The second section will only take ten minutes. PLEASE WAIT FOR THE EXPERIMENTER TO TELL YOU WHEN TO START. Don’t forget to answer every question. Thank you for participating in this study!
APPENDIX O

RESEARCH CONSENT FORM
RESEARCH CONSENT FORM

I, ________________________, agree to participate in a study about attitudes and personality factors. This study is part of research being conducted by Travis Hinze, a Ph.D. student in Health Psychology/Behavioral Medicine at the University of North Texas.

I understand that I will be expected to participate in a number of experimental tasks including completion of forms, checklists, and questionnaires relating to my attitudes, perceptions, and beliefs. I will also be expected to participate in two tasks which I will attempt to complete successfully according to the directions to be explained by the experimenter at the time I complete them.

I understand that all information obtained in this study is confidential to the extent that my personal identity cannot be determined as I will not be requested to provide information of this sort. Under this condition, I agree that information obtained from this study may be used in any way thought best for the field of psychology (i.e. publication or further research).

I understand that there is no personal risk or discomfort directly involved with this research and that I am free to withdraw my consent and discontinue participation in this study at any time without penalty, prejudice, or loss of benefits.

I understand that the length of subject participation time is approximately 2 1/2 hours. The phone number of the experimenter (Travis Hinze) in the event that any participant has questions regarding this study is (817) 491-0308.

This project has been reviewed and approved by the UNT Committee for the Protection of Human Subjects (817) 565-3940.

_________________________________________  _________________________
Participant Signature                      Date
APPENDIX P

TASK DIRECTIONS
PLEASE READ THESE DIRECTIONS.

Directions for Task Assessment Probabilities - 1
Counterbalanced

I would like you to complete two tasks. But before you do them, I would like you to estimate your probability of success on each of them (i.e.: estimate how likely you are that you can succeed at this task). You will do this using a scale ranging from 0 to 10, where high numbers indicate a high probability of success and low numbers a low probability of success. You can think of the numbers on the scale as equivalent to probabilities (i.e.: 10 equals a 100% chance of succeeding, 5 equals a 50% chance of succeeding, and 0 equals a 0% chance of succeeding). You can use any of the numbers on the scale from 0 to 10 inclusive. Please circle the appropriate number on the questionnaire given to you. Do you have any questions?

The first task is designed to measure two types of ability that people have: perceptual and motor. It is a task in which your skill will affect whether you succeed or not. This task involves sorting 15 playing cards into 4 piles (hearts, clubs, spades, and diamonds) - with like cards on top of like cards. To be successful you must complete the task within 15 seconds. I would like you to now estimate your probability of success at this task using the method previously described. Please circle the appropriate number on the questionnaire given to you when doing this estimation. Do have any questions?

The second task is designed to see how well you can predict the outcome of three coin tosses (i.e.: whether heads or tails on each coin will appear) consecutively. It is a task of prediction in which success is defined as correctly predicting 3 coin tosses in a row. I would like you to now estimate your probability of success at this task using the method previously described. Please circle the appropriate number on the questionnaire given to you. Do have any questions? O.K. let’s begin.
PLEASE READ THESE DIRECTIONS.

Directions for Task Assessment Probabilities-2
Counterbalanced

I would like you to complete two tasks. But before you do them, I would like you to estimate your probability of success on each of them (i.e.: estimate how likely you are that you can succeed at this task). You will do this using a scale ranging from 0 to 10, where high numbers indicate a high probability of success and low numbers a low probability of success. You can think of the numbers on the scale as equivalent to probabilities (i.e.: 10 equals a 100% chance of succeeding, 5 equals a 50% chance of succeeding, and 0 equals a 0% chance of succeeding). You can use any of the numbers on the scale from 0 to 10 inclusive. Please circle the appropriate number on the questionnaire given to you when doing this estimation. Do you have any questions?

The first task is designed to see how well you can predict the outcome of three coin tosses (i.e.: whether heads or tails on each coin will appear) consecutively. It is a task of prediction in which success is defined as correctly predicting 3 coin tosses in a row. I would like you to now estimate your probability of success at this task using the method previously described. Please circle the appropriate number on the questionnaire given to you. Do have any questions?

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APPENDIX Q
SORTING TASK RATING SHEET
Likelihood of Success on Card-Sorting Task:

0 = 0% chance of success
5 = 50% chance of success
10 = 100% chance of success

Please circle the appropriate number:

0 1 2 3 4 5 6 7 8 9 10
APPENDIX R

COIN TASK RATING SHEET
Likelihood of Success on Coin-Toss Task:

0 = 0% chance of success
5 = 50% chance of success
10 = 100% chance of success

Please circle the appropriate number:

0 1 2 3 4 5 6 7 8 9 10
APPENDIX S
DEBRIEFING MESSAGE
PLEASE READ THIS BEFORE LEAVING!

You have now completed all the requirements for this study. PLEASE DO NOT DISCUSS YOUR PARTICIPATION IN THIS STUDY WITH OTHER STUDENTS AS THEY MAY WISH TO PARTICIPATE IN THIS STUDY AS WELL. IT IS VERY IMPORTANT THAT THESE STUDENTS ARRIVE TO COMPLETE THIS STUDY WITHOUT PRIOR INFORMATION ABOUT ANY DETAILS OF THIS STUDY. After this study is fully completed, information about this study will be mailed to you if you have requested this and have provided your address on the research consent form. Do you have any questions?
REFERENCES


Reker, G., & Wong, P. (1983). The salutary effects of personal optimism and meaning-
fullness on the physical and psychological well-being of the elderly. In M. Scheier
and C. Carver, Dispositional Optimism and Physical Well-Being: The Influence of

influence of generalized outcome expectancies on health. *Journal of Personality, 55*,

Scheier, M., & Carver, C. (1985). Optimism, coping, and health: Assessment and

Optimism and recovery from coronary artery bypass surgery. In M. Scheier and
C. Carver, Dispositional Optimism and Physical Well-Being: The Influence of


Snyder, C., Harris, C., Anderson, J., Holleran, S., Irving, L., Sigmon, S., Yoshinobu,
Development and validation of an individual-differences measure of hope. *Journal
of Personality and Social Psychology, 60*, 570-585.

of Personality Assessment, 53*, 366-375.


