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Evaluation of Contextualization of the Life Orientation Test - Revised to Enhance Validity in Sport

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THE EVALUATION OF CONTEXTUALIZATION OF THE LIFE ORIENTATION TEST – REVISED TO ENHANCE PREDICTIVE VALIDITY IN SPORT

by

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ABSTRACT

Over time and across various situations, optimistic individuals have mostly positive expectancies for future events. The Life Orientation Test - Revised (LOT-R) was designed to assess individual's global expectancies for the future as an indication of dispositional optimism; however, global assessment may include content irrelevance related to sport outcomes. The present study evaluated the inter-item preferred sport contextualization of the LOT-R to decrease attenuation and thus enhance predictive validity. College athletes ($N = 423$) completed an online version of a variety of questionnaires. With dispositional optimism controlled, regression analyses revealed sport optimism to explain additional variance in both general and sport related measures. Sport optimism contributed more to overall variance explained for sport, compared to global, outcomes. Sport psychology professionals may benefit from utilizing preferred sport contextualization of the LOT-R.

INDEX WORDS: Optimism, Sport, Life Orientation Test - Revised

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DEDICATION

This project is dedicated to my parents whose love and support have made my life possible.

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INTRODUCTION

Dispositional optimism, the tendency to generally expect positive outcomes in life (Scheier & Carver, 1985), has been associated with a variety of general beneficial psychological and behavioral outcomes. Studies have consistently shown the benefits of optimistic thinking on the psychological well-being (see Scheier, Carver, & Bridges, 2001). For example, benefits of optimism include lower trait anxiety in college students (Schuller, 1995), less stress and higher satisfaction with life (Chang, 1998). Additionally, dispositional optimism has been shown to be related to improved physical health (Scheier et al., 1989; Scheier & Carver, 1985), lower rates of depression (Carver & Gaines, 1987), stress coping strategies (Scheier & Carver, 1987; Scheier, Weintraub, & Carver, 1986), self-efficacy or self-mastery (Marshall & Lang, 1990), and exercise (Kavussanu & McAuley, 1995). Research on dispositional optimism in sport settings has also demonstrated significant associations with a variety of sport-related outcomes; however, effect sizes have been smaller than for general outcomes. It is plausible that the predictive validity of optimism in sport may be enhanced by contextualizing optimism measurement (Czech et al., 2002). The purpose of the current study was to evaluate the predictive validity of dispositional optimism scores contextualized specifically to an individual's sport.

Over the past decades, researchers have shown increased interest in optimism, broadly defined as thinking in a positive manner. Scholarship has produced distinct lines of conceptualization and assessment of optimism (see Chang, 2001 for a review). Related constructs, such as defensive pessimism and hope, have emerged alongside the refinement of optimism. While each line shares some conceptual overlap, each

conceptualization offers a unique view of specific aspects that constitute optimism or optimistic thinking. Consequently assessment techniques vary across conceptualizations of optimism.

Optimism as an Explanatory Style

There are two lines of optimism research that have received much attention in the literature within the realm of positive psychology. One line which has been particularly prevalent in sport psychology scholarship has been largely influenced by the work of Martin Seligman who characterized optimistic thinking in terms of how individuals explain previous events. Explanatory style can be defined as the way people routinely explain events in their lives (Seligman, 2006). Individuals are high in optimism if they attribute problems in their lives to temporary, specific, and external causes, whereas they are high in pessimism if they attribute problems to permanent, pervasive, and internal causes (Gillham, Shatté, Reivich, & Seligman, 2001). The explanatory style approach to optimism labels thoughts and feelings as optimistic, not necessarily people. This view of optimism assumes expectancies for the future can be determined by causal explanations of past events (Seligman, 2006).

A number of techniques have been utilized to operationalize optimism in terms of explanatory style. Seligman, Abramson, Semmel, and von Baeyer (1979) developed the Attributional Style Questionnaire (ASQ) to assess explanatory style based on individuals' perceptions of 12 hypothetical situations. The ASQ measures an individual's tendencies to consistently explain events in their lives in a specific manner and thus operationalizes optimism on a global level (Seligman, et al. 1979). The content analysis of verbatim explanations (CAVE) technique serves as an alternate method for measuring explanatory

style as an indicator of optimism (Peterson, Bettes, and Seligman, 1985). This technique codes causal explanation for internality, stability, and globality, which can be summarized as optimistic or pessimistic. A significant disadvantage of the CAVE technique is that it requires proper training, and the analysis of statements can be time consuming. A unique advantage of the CAVE technique is that it captures specific explanations of actual events; therefore, it can assess optimistic thinking within a variety of domains (e.g., sport, school, work).

Sport optimism, conceived in terms of explanatory style, can be conceptualized as athletes' general tendencies to attribute negative events in sport to temporary, specific, and external causes. Research on explanatory style in sport has shown that basketball teams who are more optimistic were more likely to move on from a loss and win the following game than teams with a more pessimistic explanatory style (Rettew & Reivich, 1995). Seligman et al. (1990) found optimistic explanatory style to be associated with increased performance following false feedback in a study of swimmers. In this study researchers told the participants they swam a slower time than they actually did. From investigations of optimism assessed by explanatory style utilizing both the ASQ and CAVE technique, Seligman (2006) concluded that teams with a more optimistic explanatory style have a greater chance of winning against teams with similar talent, but possess less optimistic explanatory style.

The predictive power of explanatory style as an indicator of optimism in sport may be due in part to the use of a contextualized measure. Whereas the ASQ (Seligman, et al., 1979) has been employed to assess global explanatory style as an indicator of

global optimism, the Sport Attributional Style Scale (Hanrahan & Grove, 1990) has been used to measure explanatory style within sport as an indicator of sport optimism.

Future Oriented Expectancies as Measures of Optimism

Assessment of explanatory style as an indicator of future oriented expectancies has been criticized by scholars because it looks to past events to explain ideas about the future (Scheier & Carver, 1985). The alternate assessment technique is to evaluate expectations about the future. One assessment tool created in this vein was the OP Instrument (Dember et al., 1989). This self report measure was designed to evaluate individual differences based on the Pollyanna principle (Dember, 2001). This scale consists of 18 optimism items, 18 pessimism items, and 20 filler. Factor analysis of OP scores revealed a multidimensional structure that was difficult to interpret (Chang et al., 1994). Given that the OP instrument asks individuals to respond to items regarding how they currently feel, it may measure state, and not dispositional, optimism and pessimism. In fact, research has revealed state-like characteristics of this scale (Burke, Joyner, Czech, & Wilson, 2000). Therefore, based upon previous methods of contextualizing measures (Schmit, Ryan, Stierwalt, & Powell, 1995) which have moved assessment from global to domain specific, the OP instrument may not shift toward domain assessment.

Optimism as General Future Expectancies

Scheier and Carver offered an alternate conceptualization and assessment of global optimism. According to these scholars, dispositional optimism is the tendency to believe that good things will happen in the future (Scheier & Carver, 2001). In other words, optimistic individuals tend to have global positive expectancies for future events (Carver & Scheier, 2003). Scheier and Carver's approach differs from the explanatory

style approach in that it does not examine causal expectations of the past to determine an individual's expectation for the future.

To measure expectancies about the future, Carver and Scheier favor direct assessment over indirect assessment via explanatory style. An advantage to assessing expectancies directly is that it specifically targets the construct of interest (Carver & Scheier, 2003). The research tool utilized in the approach is the Life Orientation Test (LOT; Scheier & Carver, 1985) and its subsequent version the Life Orientation Test – Revised (LOT-R; Scheier, Carver, & Bridges, 1994). Both versions were designed to measure an individual's generalized perceptions about future events. The revisions to the original scale removed two items which related to measuring the personality variable of neuroticism (Scheier et al, 1994). The resulting scale included ten total items, three optimistic, three pessimistic, and four filler (Scheier et al., 1994). Instead of limiting each item to a specific domain, the items are worded in a way so that they are evaluated across all situations and domains. Ey et al. (2005) developed a youth version (YLOT) to measure general expectancies in children. Items were reworded to make them more understandable and relevant to elementary aged school children. Additional items were added that reflected positive or negative expectations children might have (Ey et al., 2005). The resulting measure displayed adequate reliability and validity (Ey et al., 2005).

Scheier and Carver (2001) grounded their view of optimism within an expectancy – value framework of motivation which suggests that behavior is predicted best from expectancies when the level of specificity of the expectancy matches that of the behavior. Therefore, to predict behavior that spans over the broadest range (i.e. entire life domain), it is best to assess expectancies in broad, general terms (Carver & Scheier, 2003). In

contrast, to predict outcomes specific to sport, it may be best to assess expectancies within the context of sport.

Recently the dimensionality of the optimism and pessimism construct has come under scrutiny (Reilley, et al., 2005; Vautier, Raufaste, & Cariou, 2003; Creed, Patton, & Bartrum, 2002). During its development, Scheier and Carver (1985) designed the LOT to measure optimism with items worded to reflect presence or absence of optimism (i.e., reverse-scored items). Alternately, some researchers contend that optimism and pessimism are two unique constructs. Intrinsically it would appear that these two concepts are linked in such a manner; however, there is increasing support for the bidimensional model the optimism and pessimism constructs (Burke et al, 2000; Creed, Patton, & Bartrum, 2002; Reilley et al., 2005). These studies reported confirmatory factor analyses that support bidimensionality over unidimensionalty of LOT scores (Scheier el al, 1994). Vautier, Raufaste, and Cariou (2003) subjected LOT-R scores to a variety of models using structural equation modeling and concluded that there is not enough clear evidence to suggest the need to separate the two constructs. These scholars tested a bidimensional model including dispositional optimism and response style factors. Results suggested that score variance could be due to a response style for positively and negatively worded items. In the present study, optimism scores were assumed to be unidimensional based on conceptualization in development and statistically acceptable fit for previous data (Scheier et al., 1994).

Scheier and Carver (1985) designed the LOT to assess generalized expectancies about future events in an attempt to predict behavior at the broadest level as well as other theoretically convergent global constructs. As a measure of *generalized* dispositional

optimism, scholars might expect scores on the LOT-R to be more strongly associated with global outcomes. For example, Creed, Patton, and Bartrum (2002) revealed a strong positive relationship (r = .55) between total LOT-R score and self-esteem. Huprich and Frisch (2004) reported a strong positive relationship between trait hope and LOT-R scores for women (r = .42) and men (r = .48).

Dispositional Optimism and Sport Outcomes

As a measure of global optimism, the LOT may not associate strongly with context or domain-specific outcomes or constructs. In a sample of athletes recalling a recent performance slump, Grove and Heard (1997) reported that optimism was associated positively with task-oriented and negatively with avoidance-oriented coping. A sample of national level rowers also indicated a significant association of optimism with task-oriented coping and well-being (Baltzell, 1999). Wilson, Raglin, and Pritchard (2002) revealed optimistic individuals experienced significantly lower levels of pre-competitive anxiety when assessing optimism and pessimism levels using the Defensive Pessimism Questionnaire. Waddell (2003) reported that optimism did not predict global self-worth, adjustment, mood disturbance. Interestingly enough, this study revealed that optimism was not a significant predictor of sport optimism utilizing the assessment technique of adding "in sports" to the original form of the LOT-R. Waddell (2003) also reported a weak association (r = .22) between LOT-R scores and active sport coping (Crocker & Graham, 1995). The association between LOT-R and sport-specific constructs may be attenuated due to measurement error characteristic of an instrument which attempts to measure a global construct.

The measurement approach employed by the LOT-R was to imbed generality in items by not restricting items to specific domains (Carver & Scheier, 2003). This approach relies on the assumption that respondents are able to merge their expectancies across many situations (Carver & Scheier, 2003). Given the expanse of domains (e.g., interpersonal, school, sport, work) in which individuals could feel optimistic, global assessment across individuals may include content irrelevance related to sport optimism. Even if researchers' assumption that all domains are represented in this global assessment holds, researchers must also assume that individuals weight various domains in life in approximately the same way (Carver & Scheier, 2003). For example, an individual may be highly optimistic about the sport domain of his or her life, but less optimistic about their job. Similarly, a person may be highly optimistic about their racquetball skills, but less optimistic about their golf game. To decrease attenuation and thus enhance predictive validity, measurement error may be reduced by contextualizing the LOT-R specifically to an individual's sport.

Contextualization of Global Measures

To enhance predictive validity within personality research, scholars have modified generalized assessments to reflect a specific context or situation of interest. Inter-item contextualization of personality measures has increased predictive validity by modifying the items to reflect the domain of interest (Bing, 2004). For example, by contextualizing conscientiousness items on the NEO-PIR, Bing (2004) found a significant increase in R^2 when predicting GPA with school-specific conscientiousness. The essence of the items remain, however, the domain in which the items are interpreted are limited to the domain of interest. In other words, the NEO-PIR is designed to predict

behavior across all situations. These particular scholars were interested in predicting behavior at school, which led to their manipulation of a broad, general assessment tool. A similar framework has been suggested within sport motivation research.

In sport, Vallerand's (2001) hierarchical model of motivation provides a salient and effective example for conceptualizing and operationalizing self-determined motivation on three levels for analysis. In Vallerand's (2001) model, the highest, overarching level of self-determined motivation is global motivation which spans all contexts of a person's life. One level down in the model is contextual motivation which suggests that an individual may have high levels of self-determined motivation in school while simultaneously having low levels of self-determined motivation in sport. Finally, the lowest level, labeled situational motivation, characterizes individuals' motivation in the present moment, thus, it reflects individuals' state-like self-determined motivation. Similar to Carver and Scheier, Vallerand (2001) argued that different levels of analysis should associate differently with convergent and divergent constructs depending on the level of the construct of interest. Consequently, sport psychology scholars and practitioners who are interested in sport related consequences may gain more utility from examining contextual constructs in sport.

Optimism may be operationalized on similar levels analogous to work on motivation conducted by Vallerand (2001). Indeed, the LOT-R has previously been modified to make items relevant to the sport setting. Waddell (2003) modified the LOT-R by adding the phrase "in sports" to items on the scale where appropriate. The modified version of the LOT-R showed a weak relationship with active coping (r = .23) and global self-worth (r = .28). Waddell's efforts represented the first attempt at contextualizing the

LOT-R in hopes of increasing predictive utility of optimism in sport. Although the LOT-R contextualized for sport did enhance the resolution of optimism measurement beyond global assessment, the measure operates on the assumption that individuals weight their expectancies about participation across all sports evenly. In other words, scores on the LOT-R modified for sport may have reflected an aggregation of optimism across a variety of sports. Individuals who are optimistic in baseball but not in basketball likely have attenuated scores compared to individuals optimistic in both. Moreover, these items place the interpretive burden on participants to judge which sport(s) to include in their ratings of future expectancies.

It is plausible that contextualizing the LOT-R based on an individual's sport will provide individuals with the specific domain to evaluate their expectancies and thus enhance the utility of the assessment. Therefore, the purpose of this investigation is to examine the incremental predictive validity of the LOT-R contextualized to an individual's sport. Controlling for dispositional optimism, it was expected that a significant amount of additional variance in sport-related constructs would be explained by sport optimism. In contrast, it was expected that sport optimism would not add substantially to the prediction of general outcomes beyond the variance explained by dispositional optimism. The global constructs included in this analysis are self-esteem, hope, and fear of failure. The sport measures will assess sport confidence, sport anxiety, and coping skills within the sport setting.

METHODS

Participants

The sample included current collegiate athletes (N =423) from institutions across the United States recruited via email through a contact person at their school. These contact people either served in an academic advising role, coaching role, director role, or a similar appointment. To encourage completion of the online survey, participants received their scores on each scale along with information to help interpret these scores upon completion of the survey. The sample included 131 men (31.0%) and 292 women (69.0%). Participants ranged in age from 17 to 24 (M = 19.88, SD = 1.36). The sample comprised 25 African American (5.9%), 5 Asian (1.2%), 365 Caucasian (86.3%), 9 Hispanic (2.1%), 7 multiple racial/ethnic background (1.7%), and 12 other (2.8%) races. All school classifications were represented with 131 freshman (31.0%), 119 sophomores (28.1%), 96 juniors (22.7%), 72 seniors (17.0%), and 5 graduate students (1.2%). Among the 19 sports, track and field (15.6%), soccer (12.8%), and rowing (11.3%) served as the top three most frequently represented. Participants competed in five divisions recognized by the NCAA including Division I-A (n = 280, 66.2%), Division I-AA (n = 35, 8.3%), Division II (n = 33, 7.8%), Division III (n = 44, 10.4%), and NAIA (n = 31, 7.3%). Of the 423 participants to begin the survey, only 260 completed all sets of scales, a completion rate of 61.5%. Participants represented 30 different institutions across the United States. Sample sizes for each regression model vary because of completion rate of the individual scales within the overall study.

Of the 260 participants who completed all the entire set of scales, 191 (73.5%) were women and 69 (26.5%) were men. This portion of the sample comprised 232

Caucasian (89.2%), 12 African Americans (4.6%), 5 Hispanic (1.9%), 1 Asian (0.4%), 5 multiple racial/ethnic background (1.9%), and 5 people who reported other as their ethnicity (1.9%).

Instrumentation

Dispositional Optimism. The 10-item Life Orientation Test – Revised (LOT-R; Scheier, Carver, & Bridges, 1994) was used to assess an individual's level of dispositional optimism. Individuals indicate expectations about the future by rating the extent to which they think their future outcomes will be good or bad using a 5-point Likert type scale anchored by *strongly disagree* (0) to *strongly agree* (4). The LOT-R was scored as measuring a unidimensional construct.

Sport Optimism. Sport optimism was assessed using a contextualized version of the LOT-R (CLOT-R). Modification was inter-item contextualization based on each participant's sport gathered from input on the demographics page. For example, the item "I usually expect the best" was changed to "I usually expect the best in baseball." The filler items were removed from the scale, leaving the three optimistic items and the three pessimistic items. The scale was scored treating optimism/pessimism as a unidimensional construct.

Self esteem. The 10-item Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965) provided scores of an individual's global self worth. Responses are gathered using a 10-item Guttman scale with responses ranging from *strongly agree* (3) to *strongly disagree* (0).

Fear of Failure. The 25-item Performance Failure Appraisal Inventory (PFAI; Conroy, Willow, & Metzler, 2002) provided scores for fear of failure. Participants rated

their beliefs concerning the likelihood of five aversive consequences of failure on a five-point scale ranging from *do not believe at all* (–2) to *believe 100% of the time* (+2). Previous research supported the factorial validity, external validity, and temporal stability of PFAI scores and its items (Conroy & Metzler, 2004; Conroy, Metzler, & Hofer, 2003; Conroy et al., 2002; Conroy, 2001).

Trait Hope. The 12-item Adult Trait Hope Scale was used to assess trait levels of hope (ATHS; Snyder et al., 1991). Using a four point scale ranging from *definitely false* (1) to *definitely true* (4), participants rated the extent to which each item describes them.

Sport Anxiety. The 21-item Sport Anxiety Scale (SAS; Smith, Smoll, & Schutz, 1990) provided scores for individual difference in trait anxiety in the sport settings. Participants responded using a 4-point ordinal scale. This scale is comprised of three subscales: somatic anxiety, cognitive disruption, and worry.

Sport Confidence. The 13-item Trait Sport-Confidence Inventory (TSCI; Vealey, 1986) provided scores for sport confidence. Participants responded on a 9-point Likert scale relating the participant's level of confidence compared to the most confident athlete they know.

Coping Skills in Sport. The 28-item Athletic Coping Skills Inventory (ACSI-28; Smith, Shutz, Smoll, & Ptacek, 1995) was used to assess psychological skills employed within the sport setting. Participants provided responses utilizing a 4-point ordinal scale with responses ranging from *almost never* (0) to *almost always* (3). This scale consists of seven subscales: freedom from worry, coachability, peaking under pressure, confidence and achievement motivation, concentration, coping with adversity, and goal setting and mental preparation.

Procedure

In order to recruit across a large geographical area, data were collected via an interactive, dynamic website. This was to ensure adequate sample size based on expected effect sizes. Web-based research has been shown to be reliable, valid, cost effective, and efficient (Meyerson & Tryon, 2003). A recruitment email was sent to contact persons on college campuses who interact with athletes, e.g. academic advisor for the athletic department, coach, or athletic administrator. The email was divided into two sections. The top section explained to the contact person about background information, contact information for questions, and instructions for forwarding the appropriate section to any athletes they have contact with. This was accomplished by cutting and pasting the designated portion into a new email, which was sent onto the athletes. The first webpage served as the informed consent which explained the purpose and procedures of the study, participant rights, and anonymity of responses provided. The next webpage gathered demographics responses including age, sex, year in school, competitive experience, institution, and sport. Participants' institution data was collected to facilitate recruitment efforts. To ensure anonymity, institution data was stored separately from other responses. Seven subsequent webpages followed, one for each instrument: LOT-R, CLOT-R, RSE, ATHS, PFAI, SAS, TSCI, & ASCI-28. The order of surveys was randomized for each participant. The CLOT-R and LOT-R never appeared closer than two webpages from each other. Upon completion of the surveys, participants received a results webpage that revealed their scores and score interpretation information. All results were stored in a database. At any time the researcher could sign in and run a routine to create a flat file

output of all the present results in the database to be downloaded and processed. The data was then transferred into SPSS 15.0 for analysis.

Data Analysis

Fourteen separate hierarchical regression analyses were conducted to evaluate the incremental validity of CLOT-R scores. In each model, Step 1 included global optimism and Step 2 included sport optimism. Significant change in R^2 indicated variance explained by sport optimism beyond that which was explained by global optimism. Table 1 displays descriptive statistics and internal consistencies for each scale. Sample size varies for each scale because participants may have voluntarily stopped participation resulting in incomplete data. All scales achieved adequate reliability ($\alpha > .70$).

RESULTS

Table 1 presents descriptive statistics for this sample. Due to the majority of the sample being female, *t*-tests were run for both the LOT-R and CLOT-R with no significant difference between genders for either score.

Table 2 presents intercorrelations among variables. Dispositional optimism and sport optimism displayed a strong, positive relationship ($r = .57$, $p < .001$). Despite the relationship, 68% of the variance was not shared between the two scales suggesting a high degree of conceptual uniqueness.

Table 3 displays hierarchical regression analyses. Dispositional optimism was a significant predictor of each outcome variable. LOT-R scores explained between 16% and 36% of the variance in global outcome measures. For sport related outcomes, dispositional optimism accounted for less variance ranging from 3% to 20%. The addition of sport optimism for predicting global outcomes (i.e., trait hope and self-esteem) explained additional variance; however, the significant change in R^2 was minimal at .03 and .04, respectively. For predicting fear of failure, a dispositional motive specifically confined to domains where competence is relevant, sport optimism accounts for an additional 3% of the variance. In general, the addition of sport optimism for predicting sport related measures produced larger changes in R^2 than when predicting global measures. Sport optimism did not significantly explain additional variance in three of the subscales of the ACSI-28 including goal setting and mental preparation, coachability, and freedom from worry.

DISCUSSION

The central research question in this study was whether or not modification of the LOT-R by inter-item contextualization based on an individual's sport would account for additional variance in sport related measures but not global measures. A large sample size served to evaluate anticipated small effect sizes; however, given that effect sizes were larger than anticipated, statistical significance emerged for a majority of the models. In practical terms, sport optimism was able to account for more variance in sport related outcomes than global outcomes.

Effects of Global Optimism

The data revealed that dispositional optimism was a significant predictor for all of the global measures. For these global characteristics dispositional optimism accounted for the most variance in self-esteem. This result was consistent with previous results found during the revision process for the LOT-R (Scheier, Carver, & Bridges, 1994) where the correlation between dispositional optimism and self-esteem was (r = .54). When predicting trait hope, dispositional optimism accounted for 24% of the variance which is consistent with previous reported relationships (r ranged between .50 and .60; Lopez, Snyder, & Teramoto-Pedrotti, 2003). Hope and optimism are constructs that deal in part with an individuals positive expectations about future events, which explains the strong associations. Compared to predicting self-esteem and trait hope, dispositional optimism contributed less variance (16%) in fear of failure. Unlike self-esteem and trait hope, fear of failure does not span across all domains. Fear of failure is conceptualized as a motive confined solely to competence domains (i.e., school, work, sport), although it is theorized to endure across time and situations relevant to competence. Dispositional optimism is

grounded in an expectancy-value model of motivation, which includes a sense of confidence or doubt about the attainability of a goal (Carver & Scheier, 2003). This conceptual similarity could account for the significant relationship.

Dispositional optimism also significantly explained variance in all of the sport related measures. People who are high in dispositional optimism scored higher on the concentration and coping with adversity subscales of the ACSI-28. This result for the coping with adversity subscale was consistent with research that has linked dispositional optimism with active, problem-focused coping responses (see Scheier, et al., 2001). These coping responses could explain the link between dispositional optimism and the scores on two of the subscales of the SAS. Data from the present study revealed high dispositional optimism related to low cognitive disruption and worry based on their scores on the SAS. Further, people high in dispositional optimism also revealed higher scores for trait sport confidence. However, the strength of these relationships were small to moderate.

Dispositional optimism demonstrated its weakest association with goal setting and mental preparedness. While researchers have reported high optimism moderately related to career goal setting (Creed, Patton, & Bartrum, 2002), the instrument was geared more toward assessing an individual's belief in his or her ability to reach their goals. The current study employed the ACSI-28 which assesses the frequency that goals are set. The somatic anxiety subscale of the SAS indicated the second lowest R^2 (.04). This could be due in part to the items reflecting symptoms that result from competing in sport, which would be more state-like. It is highly unlikely that an athlete filled out this survey just before or just after a competition due to it being on a computer. The temporal distance

between competition and completing the survey could have resulted in measurement error. Although dispositional optimism provides some explanatory power, between 80% and 97% of variance in sport-related outcomes was left unexplained.

Incremental Effects of Sport Optimism

Contrary to expectations, sport optimism explained additional variance in global outcomes. Indeed, sport optimism explained additional variance in self-esteem. This relationship could be explained by previous scholar's contentions that self-esteem is derived in part from the possession of domain-specific skills (Rosenberg, 1979). Evidence from the present study would suggest that indeed sport optimism was able to account for that portion of self-esteem which is derived from self-perceptions within the domain of sport. In terms of practical significance, sport optimism contributed an additional 4% to explained variance for self-esteem as opposed to 36% variance initially explained by dispositional optimism - a relative increase of only 11%.

A similar finding occurred when adding sport optimism to optimism for predicting trait hope. Trait hope was included in the analysis as a similar, yet empirically distinct, global construct. In this model, total explained variance increased from 24% to 27%, a rather small (13.5%) relative increase, when sport optimism was added. Therefore, while significant ΔR^2 were present, the additional variance was minimal. Trait hope could operate in a similar fashion as self-esteem, in that dispositional hope may include the hope derived from being hopeful with in a life domain, i.e. sport life. Given that optimism and hope are both derived from expectancy-value approaches to motivation (Snyder, et al, 2001), it is certainly plausible that each construct would operate in similar fashions moving from the global to domain level. It is therefore certainly reasonable that

sport optimism would be related to state hope or sport hope, which then would relate back to trait hope.

As expected, sport optimism contributed additional variance in fear of failure; however, the relationship was not as strong as expected. There was a significant negative relationship, but change in R^2 was minimal (.03), which was a 19% increase in variance explained over the 16% accounted for by dispositional optimism. Fear of failure is defined as an avoidance-valenced competence motive, which confines it conceptually to competence domains but not specifically to the sport context. Given that fear of failure may include a variety of competence relevant contexts (i.e., sport, school, work); it is understandable that adding sport optimism did not add greatly to the explained variance.

Unlike the global measures, sport optimism was able, in most of the cases, to considerably increase the variance explained in sport related measures. Sport optimism explained an additional 63% of the 16% explained by dispositional optimism for the peaking under pressure subscale of the ACSI-28. Similarly, sport optimism added an additional 72% of the 18% explained by dispositional optimism. Although the ACSI-28 has been criticized as being a measure of more general psychological characteristics (Crocker, Kowalski, & Graham, 1998) the items were initially developed to measure these traits in sport. Therefore these two subscales could be more in line with the original purpose of the scale.

As expected both the worry subscales of the SAS saw marked increases in explained variance. For worry sport optimism contributed an additional 12% to explained variance for self-esteem as opposed to 16% variance initially explained by dispositional optimism - a relative increase of 75%. When considering the changes in R^2 in terms of

relative increase supports the notion that a contextualized measure of optimism can explain more variance in the sport setting. Many of the increases in explained variance for the sport related outcomes were drastic. This supports the notion that a contextualized measure does indeed assess optimism as manifested in the sport situation.

As expected adding sport optimism to dispositional optimism in order to predict trait sport confidence resulted in a ΔR^2 of .18. This was a 95% increase over the 19% of variance explained by dispositional optimism. This could due in part to the possible conceptual link of the sport optimism and sport confidence. Manzo, Silva, & Mink (2001) proposed dispositional optimism as a component of sport confidence which could explain why some athletes maintain their belief in sport competence in favorable and unfavorable competition conditions.

Sport optimism did not significantly explain additional variance for the ACSI-28 subscales of goal setting and mental preparedness, freedom from worry, and coachability. One possibility why sport optimism did not explain additional variance in these subscales could be that these subscales tap a dispositional characteristic which is more stable across situations, including sport life. Indeed the ACSI-28 has been criticized for not being developed out of theories which explain coping processes (Crocker, Kowalski, & Graham, 1998). It has also been suggested that the items on the ASCI-28 may be too broad to capture coping related to sport performance, and instead capture more general personality characteristics (Crocker, Kowalski, & Graham, 1998).

Limitations

One limitation of this study was the use of only two measures of global psychological characteristics. A couple of considerations went into making this decision.

Overall time for completion was important. The authors wanted to keep the total number of items as limited as possible to guard against attrition. Even with only 125 total items, the completion rate was around 60%. Secondly, measuring such characteristics such as depression or a similar construct may not be considered ethically appropriate given the nature of how data were collected and feedback was provided. Certainly attrition could have impacted this study, but scores were calculated only using completed scales. In other words, if a participant stopped in the middle of one of the scales in the battery, we did not calculate a score for that scale. Although we cannot be absolutely certain that collegiate athletes filled out the survey, the recruiting methods employed helped ensure this. During the recruiting process the contact people at the different schools were instructed to send the email to athletes they have contact with. Therefore, it is highly unlikely that a non-athlete received the email. This does not mean that a non-athlete could have filled out the scale. In live authentication of the participants would have faced similar criticism as much information about the participant would have to be collected in order to ensure anonymity. The feedback at the end of the scales was assumed to serve as incentive to complete the surveys. As with many research projects it is uncertain if this provided sufficient motivation to elicit the most accurate responses from the participants.

Further, the demographics of the sample were slanted in two particular directions. Although the majority of the sample was female, follow up analysis revealed no significant difference between gender on the CLOT-R and the LOT-R scores. Secondly, the majority of the participants were Caucasian. This may limit the generalizability of these findings to Caucasian female athletes. The demographic distribution in the current sample stimulates questions regarding web-based methodologies in sport research.

Female athletes may be more inclined to take the time to fill out a survey about them. Many of the contact persons at the various schools were women. My personal contacts within the realm of women's track could have skewed the data in such a manner. This could support the notion that recruiting methods should focus on capitalizing on personal connections and networking skills. Another limitation coming from the demographics of the sample was the large number of athletes who were freshman. This could be accounted for by freshman athletes being required to attend study hall. During which it they could complete the surveys.

Given the limitations of the web-based design of this study, the benefits outweigh the possible negative implications. A large sample size was recruited from many institutions across the United States. This large sample sized helped to ensure adequate statistical power. Additionally, the web-based design allowed for inter-item contextualization with on a large scale across all NCAA sports for every individual taking the test. The design also allowed the randomization of the order in which each scale appeared for each participant.

Future research should include factor analysis of both the LOT-R and the CLOT-R as the dimensionality of the optimism and pessimism construct is still under debate. This would also further validate the CLOT-R as a valid measure from a factor structure standpoint. Data from this study can be further evaluated to examine relationships such as the effect of optimism on completion rate.

It is important to note that this article presents a new method of assessing sport optimism. This investigation did not necessarily create an entirely new scale as the items only change by two words. One benefit of using this method with athletes is that it is time

friendly. The new method only has six items, which should require only a short amount of time to complete. The scoring system is easy to use and straightforward. Sport psychology consultants could use this to measure progress in an intervention designed to promote optimistic thinking. Due to recent conceptualization of this method, it leaves room for more rigorous investigation into its validity. Of course this method is in the beginning stages on its conceptualization resulting in less than rigorous investigation into factor structure or model. However, this is not to say that future projects could add to further validation of this method. Although this study could potentially indicate that contextualizing does indeed move assessment to the context of interest, this could be due to the theoretical foundation of dispositional optimism.

In conclusion, the evidence from this study indicated that measuring sport optimism based on sport played generally increases predictive validity in the sport domain of a person's life. This study also suggests that sport optimism may be more transient across the sporting situation, therefore can be improved. Sport psychology consultants can use this method of assessing optimism to evaluate the effectiveness of their interventions on improving an athlete's optimistic thinking.

TABLES

Table 1

Descriptives

	N	*M*	*SD*	*Skewness (SE)*	*Kurtosis (SE)*	*Cronbach α*
Age	423	19.88	1.38	0.39 (.12)	-0.44 (.24)	
Optimism	316	16.36	3.64	-0.27 (.14)	0.20 (.27)	.77
Sport Optimism	320	16.73	3.86	-0.51 (.14)	0.25 (.27)	.78
Self-Esteem	308	21.32	3.72	-0.40 (.14)	-0.01 (.28)	.71
Trait Hope	311	26.03	2.87	-0.19 (.14)	0.04 (.28)	.89
Fear of failure	298	-0.47	0.78	0.33 (.14)	-0.42 (.28)	.78
Goal setting and mental	297	6.47	2.81	0.06 (.14)	-0.53 (.28)	.76
Confidence and achievement	297	8.32	2.20	-0.38 (.14)	0.12 (.28)	.73
Coachability	297	9.19	2.25	-0.53 (.14)	-0.29 (.28)	.73
Concentration	297	7.52	2.30	-0.07 (.14)	-0.40 (.28)	.72
Peaking under pressure	297	6.80	3.09	0.01 (.14)	-0.65 (.28)	.90
Coping with adversity	297	6.35	2.40	-0.09 (.14)	-0.15 (.28)	.72
Freedom from worry	297	5.87	2.75	0.29 (.14)	-0.24 (.28)	.79
Sport Confidence	298	82.06	19.93	-0.77 (.14)	0.72 (.28)	.96
Somatic Anxiety	302	19.45	6.17	0.53 (.14)	-0.21 (.28)	.89
Cognitive Disruption	302	8.05	2.70	0.90 (.14)	0.65 (.28)	.75
Worry	302	16.35	4.89	0.28 (.14)	-0.28 (.28)	.88

Table 2

Correlation Matrix

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Optimism	-															
2. Sport optimism	.57[b]	-														
3. Self-esteem	.60[b]	.50[b]	-													
4. Trait Hope	.49[b]	.39[b]	.51[b]	-												
5. Fear of failure	-.40[b]	-.36[b]	-.46[b]	-.25[b]	-											
6. Goal setting / mental preparation	.18[b]	.17[b]	.10	.36[b]	.02	-										
7. Confidence & Achievement motivation	.44[b]	.53[b]	.48[b]	.58[b]	-.25[b]	.44[b]	-									
8. Coachability	.30[b]	.23[b]	.36[b]	.28[b]	-.24[b]	.02	.26[b]	-								
9. Concentration	.44[b]	.36[b]	.41[b]	.47[b]	-.20[b]	.33[b]	.60[b]	.33[b]	-							
10. Coping with adversity	.44[b]	.40[b]	.42[b]	.42[b]	-.29[b]	.25[b]	.48[b]	.33[b]	.60[b]	-						
11. Freedom from worry	-.36[b]	-.38[b]	-.36[b]	-.20	.54[b]	-.16[b]	-.25	.13[a]	.05	.14[a]	-					
12. Peak	.40[b]	.47[b]	.35[b]	.40[b]	-.19[b]	.23[b]	.51[b]	.22[b]	.56[b]	.53[b]	.14[a]	-				
13. Sport confidence	.44[b]	.58[b]	.50[b]	.41[b]	-.36[b]	.18[b]	.60[b]	.22[b]	.49[b]	.51[b]	.27[b]	.54[b]	-			
14. Somatic anxiety	-.19[b]	-.27[b]	-.16[b]	-.14[a]	.32[b]	.08	-.19[b]	-.10	-.21[b]	-.30[b]	-.35[b]	-.29[b]	-.26[b]	-		
15. Cognitive disruption	-.36[b]	-.38[b]	-.35[b]	-.28[b]	.32[b]	-.05[b]	-.42[b]	-.26[b]	-.51[b]	-.37[b]	-.33[b]	-.38[b]	-.43[b]	.39[b]	-	
16. Worry	-.41[b]	-.49[b]	-.38[b]	-.31[b]	.50[b]	-.04	-.44[b]	-.15[b]	-.42[b]	-.44[b]	-.44[b]	-.51[b]	-.54[b]	.57[b]	.57[b]	-

[a] $p < .05$, [b] $p < .01$

Table 3

Hierarchical Regression Analysis

		Optimism			Sport Optimism				
Outcome(*n*)	Step	*B*	*SEB*	β	*B*	*SEB*	β	R^2	ΔR^2
Self Esteem (308)	1	.62	.05	.60**				.36**	-
	2	.47	.06	.46**	.24	.06	.25**	.41**	.04**
Trait Hope (311)	1	.38	.04	.49**				.24**	-
	2	.29	.05	.37**	.15	.05	.20**	.27**	.03**
Fear of failure (298)	1	-.09	.01	-.40**				.16**	-
	2	-.06	.01	-.26**	-.04	.01	-.21**	.19**	.03**
ACSI–Goal (297)	1	.12	.05	.16**				.03**	-
	2	.06	.06	.08	.10	.05	.14	.04	.01
ACSI–C/Ach (297)	1	.25	.03	.42**				.18**	-
	2	.11	.04	.18**	.25	.04	.44**	.31**	.13**
ACSI–Coachability (297)	1	.19	.04	.31**				.10**	-
	2	.17	.04	.27**	.04	.04	.07	.10	.00
ACSI–Concentration (297)	1	.28	.03	.44**				.20**	-
	2	.21	.04	.34**	.11	.04	.18**	.22**	.02**
ACSI–Peak (297)	1	.33	.05	.40**				.16**	-
	2	.15	.05	.18**	.31	.05	.39	.26**	.10**
ACSI–Coping (297)	1	.28	.04	.43**				.19**	-
	2	.19	.04	.30**	.15	.04	.23**	.22**	.04**
ACSI–Freedom (297)	1	.19	.04	.25**				.06**	-
	2	.13	.05	.18*	.10	.05	.14**	.08	.01
SAS–Somatic Anxiety (302)	1	-.32	.10	-.19*				.04**	-
	2	-.11	.12	-.07*	-.36	.11	-.23	.07**	.04**
SAS–Cognitive Disruption (302)	1	-.25	.04	-.36**				.13**	-
	2	-.15	.05	-.21**	-.17	.04	-.26**	.17**	.05**
SAS–Worry (302)	1	-.53	.07	-.40**				.16**	-
	2	-.23	.08	-.17**	-.51	.08	-.41**	.27**	.12**
Trait Sport Confidence (298)	1	2.311	.29	.43**				.19**	-
	2	.77	.31	.14*	2.62	.30	.52**	.37**	.18**

*$p < .05$, **$p < .01$

Note: Bonferroni adjustments were conducted to reduce the chance of inflated Type I error.

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APPENDICES

APPENDIX A

HYPOTHESES

Hypotheses:

1. With global optimism controlled, sport optimism will not explain additional variance ($\Delta R^2 = 0$) in global constructs including self-esteem, fear of failure, and trait hope.
2. With global optimism controlled, sport optimism will explain additional variance ($\Delta R^2 > 0$) in sport related constructs including sport confidence, sport anxiety, and athletic coping skills.
    a. Sport optimism will be negatively associated with low sport confidence, high sport anxiety, and low sport coping.
    b. Sport optimism will be positively associated with high sport confidence, low sport anxiety, and high sport coping.

Delimitations:

1. Sample included current collegiate athletes from various regions of the United States.

Limitations:

1. Participants may not answer questions truthfully.
2. Interest level of participants cannot be controlled.
3. Access to athletes may be limited.
4. Participants may not want to take time to answer questions thoughtfully.
5. Participants may not be intercollegiate athletes.

Assumptions:

1. Participants were being honest when answering items.
2. Participants answered each item.

3. Participants understood the wording of each item.
4. Items measure sport specific optimism not some other trait.

Definitions:

1. Athlete – Person who competes through an organized body that oversees competition of chosen sport.
2. Sport Specific – Referring to items that only pertain to how a person behaves in respect to all aspects of competing in their chosen sport.
3. Optimism – The general expectation that the future holds positive outcomes.
4. Pessimism – The general expectation that the future inevitably holds negative outcomes.
5. Expectancies – Beliefs about the nature of future events.
6. Explanatory Style – Causal explanations of past events.

APPENDIX B

EXTENDED LITERATURE REVIEW

Extended Literature Review

History of Optimism/Pessimism

The roots of optimism and pessimism are found in philosophy. As man began to search for meaning, philosophers saw differences in how people generally felt about life. They needed to account for differences in people's outlooks about the world. Some people were happy and seemed to always look positively on the world, where some people were not happy and tended to view the world in a negative light. This topic began receiving attention philosophers like Rene Descartes and Gottfried Leibniz and remains a topic of debate and research to this day (Domino & Conway, 2001).

In philosophy, optimism and pessimism are presented as equal opposites on the same continuum (Domino & Conway, 2001). Optimistic philosophers treat the cosmos as generally hospitable to the aims and aspirations of human beings; they are pessimistic if they treat the cosmos as generally indifferent or even hostile to the flourishing of human beings (Domino & Conway, 2001). Philosophical statements of optimism or pessimism are based on a priori reasoning where a person attempts to accurately forecast the future based on speculative or unchallenged truths, or posteriori reasoning based on empirical evidence the person attempts to accurately forecast future events (Domino & Conway, 2001). The prediction whether positive events will occur or negative events will occur is where the labeling of optimist or pessimist comes about.

One of the first philosophers to formulate an optimistic philosophical position was Rene Descartes (1596-1650). Descartes concluded that the continually improving state of the world warrants the optimism that permeates his philosophy (Domino & Conway, 2001). He viewed humans as being able to improve their world by their own efforts

(Domino & Conway, 2001). According to his views, humans should be seen as participating in the ongoing improvement of the condition of human life, and that they need not be resigned to accepting what fate brings (Domino & Conway, 2001).

The origin of optimism as a technical term can be traced to the writings of Gottfried Leibniz (1646-1716) (Domino & Conway, 2001). Leibniz used the term *optimum* to name the unique maximum or minimum instance of an infinite class of possibilities (Domino & Conway, 2001). It is Leibniz who famously asserted that God created "the best of all possible worlds" (Domino & Conway, 2001).

Leibniz was countered by Voltaire (1694-1778) in *Candide, or Optimism* (1759/1959). The characters in the book ascribe to the idea that this world is the best of all possible worlds and fail to learn from their misfortunes (Domino & Conway, 2001). Voltaire presents the point that optimism sanctions a numbing indifference to human suffering (Domino & Conway, 2001). Voltaire goes so far to suggest that if reason is properly applied to the world then neither optimism nor pessimism is sound philosophical outlook on life (Domino & Conway, 2001).

Completely opposite of Leibniz's view that this world is the best of all possible worlds, Arthur Schopenhauer (1788-1860) argued that this is the worst of all possible worlds (Domino & Conway, 2001). According to Schopenhauer's view, human beings cannot be happy, and optimists are merely ignorant that this worse world is our own (Domino & Conway, 2001). He attributed to the feeling of satisfaction to the brief reduction in pain (Domino & Conway, 2001).

Although largely known for his work with psychoanalysis and the unconscious, Sigmund Freud contributed to understanding optimism and pessimism. Freud believed

that humans naturally seek happiness by avoiding suffering and pursuing extreme feelings of pleasure (Domino & Conway, 2001). He also suggests that there is no hope of eliminating the pains of life, only redirecting them (Domino & Conway, 2001). After seeing the massive slaughter in World War I, Freud's writings became more pessimistic and thus had more dim connotations about the future of civilization (Domino & Conway, 2001). William James would agree with Freud that individual's seek out happiness and avoid unhappiness (Domino & Conway, 2001). For James optimism can be thought of as something that protects us from the inequities of life (Domino & Conway, 2001).

The next stages of the study of optimism and pessimism begin to gain popularity with the rise of positive psychology. Psychologists in this area adhere to the model where a person is not necessarily functioning poorly, but that maybe the person could function better. This is different from the medical model which seeks to uncover the problem and solve it with treatment.

Dispositional Optimism

Defined in broad terms optimism is the general expectation that good things will happen. Conversely, pessimism is the general expectation that bad things will happen. These two themes are consistent within the literature as part of operational definitions. Where the literature tends to diverge is when researchers operationally define optimism and pessimism in terms of measurement and testing. The differences in conceptualization lend to the differences in measurement of these variables.

The conceptual basis for Scheier and Carver's view of optimism and pessimism lies within an expectancy – value model of motivation, which includes the notion that behavior is based on feedback control processes (Scheier & Carver, 2001). The

expectancy – value model assumes that behavior is centered around the pursuit of goals (Scheier & Carver, 2001). Goals serve as the value component in the expectancy – value model (Scheier & Carver, 2001). People act in accordance to the value of the goal they are pursuing (Scheier & Carver, 2001) Behavior will reflect how desirable or undesirable a goal is (Scheier & Carver, 2001). The expectancy part of the model refers to a sense of confidence or doubt about the goal's attainability (Scheier & Carver, 2001). If a sufficient level of confidence is present a person will act towards a goal and maintain that effort if the confidence persists (Scheier & Carver, 2001).

A second facet that is important to understanding Scheier and Carver's view of behavior is that behavior incorporates feedback control processes (Scheier & Carver, 2001). Central to this concept is the discrepancy – reducing feedback loop which consists of four elements (Scheier & Carver, 2001). These elements are an input function, a reference value, a comparator, and an output function (Scheier & Carver, 2001). An input function brings information in, which can be thought of as perception (Scheier & Carver, 2001). The reference value serves as a second source of information and within Scheier and Carver's viewpoint can be thought of as goals (Scheier & Carver, 2001). The comparator component compares the input and reference values resulting in a conclusion that either the values are different or they are not (Scheier & Carver, 2001). The output function is the behavior aspect (Scheier & Carver, 2001). The output function will change if there is a discrepancy in the comparison, but it will remain the same if no discrepancy is found (Scheier & Carver, 2001).

There are two variations of the feedback loops. First, a discrepancy diminishing feedback loops aims to diminish the discrepancy between the input and reference value

(Scheier & Carver, 2001). This behavior directed at creating and maintaining conformity between input and standard (Scheier & Carver, 2001). The second kind of feedback loop is discrepancy enlarging where the value is to be avoided (Scheier & Carver, 2001). In this loop present conditions are compared with the anti-goal and the output tries to enlarge the discrepancy between the two (Scheier & Carver, 2001). In their view Scheier and Carver (2001) posit that when these various goals are being used, they are serving as a reference point for feedback processes involved in the creation of the resulting behavior.

Scheier and Carver view of dispositional optimism centers around notion that individuals have both positive and negative expectations about future events (Scheier & Carver, 2001). People can have expectations about infinite situations they may encounter during their life. Expectancy-based theories suggest that behavior is predicted best from expectancies when the level of specificity of the expectancy matches that of the behavior (Scheier & Carver, 2001). To predict a specific performance measure you should measure a specific expectancy (Scheier & Carver, 2001). To predict many kinds of performance in a given domain, you measure a broader sort of expectancy (Scheier & Carver, 2001). This leads to the idea that in order to predict behavior over the broadest ranges, you should measure a generalized expectancy (Scheier & Carver, 2001). This is the essence of dispositional optimism: the generalized expectancy of good versus bad outcomes in life (Scheier & Carver, 1985). Scheier and Carver (2001) suggest that generalized expectancies may be useful for predicting behavior and emotion when encountering a novel situation.

Scheier and Carver (1985) developed the Life Orientation Test (LOT), and later the Life Orientation Test – Revised (LOT-R; Scheier, Carver, & Bridges, 1994), to measure one's expectations about future events directly. Their approach to measure expectancies directly is to ask individuals to indicate the extent to which they believe their future outcomes will be good or bad (Scheier, Carver, & Bridges, 2001).

Explanatory Style

Another facet associated with optimism and pessimism is the notion of an individual's explanatory style and the root of causal attributions. Explanatory style can be thought of the ways in which people routinely explain events in their lives (Seligman, 2006). People are considered optimistic when they attribute problems in their lives to temporary, specific, and external causes, meaning that pessimistic individuals attribute problems to permanent, pervasive, and internal causes (Gillham, Shatté, Reivich, & Seligman, 2001). Research has shown that an optimistic explanatory style is associated with higher levels of motivation, achievement, and physical well-being and lower levels of depressive symptoms (Buchanan & Seligman, 1995). The Reformulated Learned Helplessness Theory (Abramson, Seligman, & Teasdale, 1978) proposes that the stability of the cause is related to the duration of helplessness symptoms, the globality of the cause is related to the generalization of helplessness across multiple situations, and the internality of the cause is related to the occurrence of self-esteem deficits in depression (Gillham et al., 2001).

On the explanatory style side of optimism the majority of studies have used the Attributional Style Questionnaire (ASQ; Seligman, Abramson, Semmel, & von Baeyer, 1979). The ASQ yields composite scores for explanatory style for positive events (CP)

and negative events (CN), as well as scores for 6 subscales that include internal, stable, and global for positive and negative events. An overall composite (CP-CN) is calculated by subtracting the negative-event composite from the positive-event composite. The most common instrument used for measuring explanatory style in children is the Children's Attributional Style Questionnaire (CASQ; Kaslow, Tannebaum, & Seligman, 1978). The CASQ presents 48 hypothetical events in a forced-choice format while utilizing the same composite and subscale scores as the original ASQ.

Self report measures are not the only way to investigate an individual's explanatory style. Explanatory style can be determined by exploring an individual's verbal or written account of an event using the Content Analysis of Verbatim Explanations (CAVE) technique (Peterson, Bettes, & Seligman, 1985). In CAVE, causal explanations for positive and negative events are extracted and then coded for their internality, stability, and globality (Peterson et al., 1985).

Optimistic and pessimistic explanatory styles have been linked to a variety of outcomes. Research has shown that optimistic explanations for negative events are linked to higher academic achievement in college students and increased job productivity (Schulman, 1995). Students who explain events in an optimistic manner are more likely than those who explain them in a pessimistic manner to exceed the level of academic performance predicted by their high school class rank, SAT scores, and achievement test scores (Schulman, 1995). Optimistic college students report fewer physical symptoms, make fewer doctor visits, and feel more able to prevent health problems than their pessimistic peers (Peterson, 1988; Peterson & De Avila, 1995).

Hope

Hope is a similar construct to optimism in that they are both future oriented. Where they differ is in the root of an individual's basis for forming their expectations about the future. Snyder, Sympson, Michael, and Cheavers (2001) state that hope has two interrelated components that act in a reciprocal manner. The first component involves the person having a sense of being able to pursue one's goals successfully. This is the cognitive motivation a person uses to pursue goals. The second component is a person's belief in their ability to successfully come up with processes that allow them to reach their goals (Snyder, et al., 2001). In simple terms hope involves the feeling of being able to reach goals and creating the mechanism by with these goals can be attained. The important characteristic of the hope theory that differentiates it from the dispositional optimism theory is the added component of pathway of goal-directed thought (Snyder, et al., 2001).

Using a sample of female collegiate track athletes, Curry, Snyder, Cook, Ruby, & Rehm (1997) found that dispositional and hope scores accounted for 56% of the variance in the performance during a track meet. Results from the Hope Scale provided information about the athlete's performance above natural ability as reported by coaches (Curry, et al., 1997).

Even though the Hope Scale and the LOT seem to assess very similar constructs a study by Holleran and Snyder (1990) attempted to distinguish the unique predictive ability of the Hope Scale. In their investigation participants completed the Problem Focused Coping index of the Revised Ways of Coping Checklist (Folkman & Lazarus, 1985) along with the LOT (Scheier & Carver, 1985), the GESS (Fibel & Hale, 1978), and the Hope Scale. Using hierarchical regression analysis when predicting problem-focused

coping as the outcome variable, Holleran and Snyder found the Hope Scale to be a better that the scores from the LOT and the GESS. The researchers forced scores from the LOT into the equation at step one resulting in $R^2 = .04$, $p<.05$. Subsequently when the GESS scores were forced into the equation at step two they found $R^2 = .04$, $p<.05$. Finally when the Hope Scale scores were entered into the equation the results were $R^2 = .03$, $p<.05$. Going the other way when Hope Scale scores were entered into the equation at step one, $R^2 = .085$, $p<.001$. When LOT scores were entered at step two and the GESS at step three neither resulted in augmenting the prediction with results of $R^2 = .005$ and $R^2 = .015$ respectively. Summarily these findings show that the Hope Scale was able to predict problem-focused coping beyond the expectancies assessed by the LOT and the GESS (Holleran & Snyder, 1990).

Defensive Pessimism

The term defensive pessimism refers to a cognitive strategy in which individuals set low expectations for an upcoming performance, despite having done well in similar situations in the past (Norem, 2001). Using this cognitive strategy, individuals are able to alleviate the impact of failure and use it as a form of motivation (Norem, 2001). Norem (2001) views defensive pessimism as a cognitive strategy. Strategies such as defensive pessimism develop within the context of specific goals (Norem, 2001). Therefore, these strategies change as the goals change (Norem, 2001). These strategies are developmental in nature in that initially defensive pessimism might be used as a coping strategy for anxiety provoking situations (Norem, 2001). As the appraisal of the situation changes the strategy will change (Norem, 2001). Caution should be used when classifying defensive

pessimism as a cognitive strategy because people may not be aware of the specific strategies they employ (Norem, 2001).

Optimism and Well-Being

From analysis of relevant studies Peterson and Bossio (2001) report that optimism predicts good health as measured in a number of ways, from self-report, to physical ratings of general well-being, to doctor visits, to survival time following a heart attack, to immunological efficiency, to successful rehabilitation programs, to longevity. The link between optimism and good health must satisfy at least two conditions (Peterson & Bossio, 2001). First optimistic thinking must lead a person to act in a vigorous and sustained fashion (Peterson & Bossio, 2001). Secondly the behaviors perpetuated by optimistic thinking must have a realistic link to health (Peterson & Bossio, 2001).

In a sample of college students, Ausbrooks, Thomas, and Williams (1995) found associations with LOT scores demonstrated less chronic anger and less anger suppression. Scores on the LOT revealed less loneliness in elderly low-vision women (Barron, Foxall, von Dollen, Shull, & Jones, 1992). Blankstein, Flett, and Koledin (1991) reported higher scores on the LOT were related to fewer perceived hassles and more positive psychological adjustment. Chang (1998b) reported LOT scores to be associated with less stress, fewer depressive symptoms, and higher satisfaction with life. In the same year, Chang (1998a) found college students who scored higher on the LOT were less depressed and had a higher satisfaction with life. Long, Kahn, & Shultz (1992) demonstrated LOT scores in a sample of female business managers to be related to lower anxiety and higher job satisfaction. In professional women LOT scores were related to

less depression (Marshall & Lang, 1990). Schuller (1995) found LOT scores to be related to lower trait anxiety in college students.

Psychometric Properties of O/P Measures

The General Expectancy for Success Scale (GESS) (Fibel & Hale, 1978) is based on social learning theory wherein an individual's behavior potential is a function of reinforcement value and expectancies. Simply put an individual with high expectancies for success will experience greater achievement than a person with lower expectancies (Fibel & Hale, 1978). The researchers developed the GESS to measure expectancies of individuals that in most situations he or she will be able to obtain desired goals (Fibel & Hale, 1978). Hale, Fiedler, and Cochran (1992) demonstrated convergent validity by obtaining significant positive correlations between the GESS-R and LOT. In addition non significant correlations between the instruments and neuroticism and extraversion demonstrated discriminant validity (Hale, et al., 1992). Hale et. al (1992) demonstrated that the GESS-R and the LOT shared only 16% of the variance, whereas an early study by Smith, Pope, Rhodewalt, & Poulton (1989) revealed a much higher shared variance of 39.7%.

The Life Orientation Test (LOT) developed from Scheier and Carver (1985) conceptualization of optimism derived from a model of self-regulation wherein goal directed behavior is best predicted by outcome expectancies. General expectations of good things are characteristic of optimists, while general expectations of negative things are characteristic of pessimists. Scheier and Carver developed the LOT based on their idea that individual differences stemmed from a stable personality characteristic (Scheier & Carver, 1985). The LOT, and more recently the LOT-R, have been used frequently in

research, but have been criticized based on its attempts to avoid domain specifity (Nunn, Lewin, Walton, & Carr, 1996). One difference between the LOT and the GESS-R is the LOT's focus on generalized expectancy rather than domain specific-expectancies (Steed, 2002).

Scheier and Carver (1985) performed principal factor analysis with oblique rotation, retaining eigenvalues greater than one. The analysis revealed one factor which is comprised of positively worded items and another factor which is comprised of the negatively worded items. After subjecting the data to confirmatory factor analysis (CFA), they found that a single factor provided an acceptable fit to the data when allowing error terms to correlate. Even though the data showed that a two-factor model fit slightly better, Scheier and Carver argued that the scale should be treated as unidimensional because all the items loaded at least .5 on the first unrotated factor. As further backing for the unidimensionality, they cited the high correlation between the two factors in the CFA solution.

Another instrument utilized to assess optimism is the Optimism Pessimism instrument (Dember, et al., 1989). This is a 56-time scale that includes 18 optimism items and 18 pessimism items. Participants respond on a Likert type sclale (strongly agree to strongly disagree). Adequate internal consistency and reliability have been established (Dember & Brooks, 1989). The developers of this scale scored the instrument as supporting a bidimensional model of optimism and pessimism. The scale is conceptually linked to Polyanna optimism, which is being overly optimistic regardless of reality (Dember, 2001). The scale has not gone without criticism, Chang, D'Zurilla, and Maydeu-Olivaries (1994) reported more than the two intended factors using factor

analysis. This measure asks participants to evaluate the items about how they currently feel. This design by nature would seem to make the OP instrument more of a state measure, which has been supported by evidence (Burke, Joyner, Czech, & Wilson, 2000).

Contextualization: Global to Contextual

Situation-specific measures predict behavior more reliably for given situations because they consider both the personality of the participant and the specific situation (Weinberg & Gould, 2003). Therefore, we can predict behavior better when we have more knowledge of the specific situation (Weinberg & Gould, 2003). Sport-specific tests provide more reliable and valid measures of personality traits and states in sport and exercise contexts, and sport specific measures of personality predict behavior in sport settings better than general personality tests (Weinberg & Gould, 2003).

Different versions of a scale measuring a personality construct may be designed for specific groups based on age, gender, language spoken, etc. (Lounsbury, Gibson, & Saudargas, 2006). An example of this contextualization was the development of the Youth Life Orientation Test, which involved creating a scale based on the Life Orientation Test that was constructed in such a way that increased accuracy of responses in younger children (Ey, Hadley, Allen, Palmer, Klosky, Deptula, Thomas, & Cohen, 2000). Context-specific responses provide respondents with a common frame-of-reference unlike the general personality inventories (Bing, 2004). The common frame-of-reference provided by context-specific items helps to standardize item interpretation, and has been shown to reduce measurement error while increasing validity in comparison to non-contextual items (Schmit, Ryan, Stierwalt, & Powell, 1995). Bing (2004) found that

context-specific personality items do indeed obtain incremental validity above and beyond non-contextual items.

Take for example the global construct of conscientiousness. It has been generally shown to contribute significantly to the prediction of performance, the prediction of job performance is often modest (see Hurtz & Donovan, 2000). Piedmont et. al., (1999) found this to be the case in the sport setting with conscientiousness predicting only 8% of the variance in actual game statistics. One reason for this limitation may be the measurement of personality traits in a general, non-contextual manner. Most personality measures attempt to assess global personality constructs that are cross-situationally consistent rather than situationally specific (Schmit, et al., 1995). The theory of conditional dispositions proposed by Wright and Mischel (1987) suggests that the manifestation of personality traits (i.e., dispositions) is conditional upon certain situations, meaning that individuals may respond in one way in one situation and in a very different manner under a different situation. For example, an individual may be very self-disciplined and organized when it comes to their sporting life, but not so in other areas of their life such as school or work.

Non-contextual items are open to interpretation by respondents in comparison to context-specific items (Bing, 2004). When answering test items, one respondent may consider the way he or she behaves at work, and another may consider the way he or she behaves in social situations, and thus these respondents are in essence not responding to the same item when taking into account their differences in item interpretation (Bing, 2004). Such differences in item interpretation across respondents lead to increases in measurement error and a subsequent reduction in item validity (Bing, 2004). Thus, one

possibility for improving the validity of personality tests may lie in providing individuals with a common frame-of-reference for personality items (Bing, 2004). Schmit, Ryan, Stierwalt, and Powell (1995) examined this possibility by rewriting non-contextual self-report personality items into school-specific contexts. These researchers demonstrated that incremental validity could be gained from contextualizing the individual items of the NEO-PIR (Schmit et. al., 1995).

From a theoretical perspective, Schmit, et. al., (1995) pitted a combination of the self presentation theory of item responding (Leary & Kowalski, 1990) and the theory of conditional dispositions (Wright & Michel, 1987) against socially desirable responding theory (Ones, Viswesvaran, & Reiss, 1996). Self-presentation theory suggests that when individuals respond to personality test items they are guided by abstract self-concepts and that their responses will be consistent with both how they see themselves and how they wish others to see them (Bing, 2004). The integration of self-presentation theory with the theory of conditional dispositions suggests that providing a specific context for personality test items will increase respondents' ability to present themselves in a manner that is consistent with their behavior in specific situations (Bing, 2004). Thus, self-presentation theory and the theory of conditional dispositions together argue that providing a common frame-of-reference for personality items should increase item validity by allowing greater accuracy in item responses and thus better measurement of the relevant personality trait (Bing, 2004).

Explanatory Style and Sport

Explanatory style has been linked to athletic performance (Rettew & Reivich, 1995). Research has shown that basketball teams whose members gave more optimistic

reasons for losses were more likely to rebound and win the following game than teams with a more pessimistic explanatory style (Rettew & Reivich, 1995). A study by Seligman, et al. (1990) investigated explanatory styles in collegiate swimmers. The swimmers were given false feedback after they performed their best event by hearing times that were slightly longer than their actual time. The investigators found that an optimistic explanatory style was associated with greater resilience and predicted greater performance following the negative feedback.

Seligman (2006) investigated optimism and pessimism in sport from the explanatory side. On the individual level, athletes who had a more optimistic explanatory style should go on to win (Seligman, 2006). These types of athletes tend to try harder, especially under hard challenge or after a defeat (Seligman, et al., 1990). The same holds true on the team level, those with a more optimistic explanatory style have greater chance of winning against a team with similar talent but with a more pessimistic explanatory style (Seligman, 2006).

Dispositional Optimism and Sport

Using the LOT-R in a sample of athletes Gaudreau and Blondin (2004) found optimism to be positively correlated with task oriented coping r=.21, $p<.05$. Within this study they reported the optimism and pessimism subscales having low internal consistency with alpha levels below .60.

In an investigation of athletes and non-athletes Venne, Laguna, Walk, and Ravizza (2006) found final-year athletes to have significantly higher scores of optimism using the LOT-R than their first-year athlete counterparts. There was no significant difference between optimism scores for final year non-athletes and first year non-athletes.

Additionally no significant difference was reported for first year athletes and non-athletes. Final year athletes scored significantly higher on the LOT-R than final year non-athletes. Results from this study also showed that there was no significant difference between first-year non-athletes and final-year non-athletes. However, results indicated final-year athletes scored significantly higher than first-year athletes.

Additional analysis from the Venne, et al. (2006) study investigated the relationship between sport played and LOT-R scores. Critical differences were found between women's basketball and men's tennis; softball, baseball, football, and women's tennis; and between baseball, football, and hockey.

Venne, et al. (2006) suggest one possible reason for their findings is that the final year athletes have performed in their sport for a number of years providing a source of self-efficacy possible resulting in higher confidence. First year athletes may be dealing with uncertainty in respect to their role on the team or expectations in respect to performance (Venne, et al., 2006).

Contextualization to Sport in the Motivation Literature

Sport researchers have indicated the importance of have contextually appropriate measures for behavior in sport settings. To address need to create a sport version of a coping scale, Crocker and Graham (1995) developed a sport-specific version (MCOPE) of the Coping Operations Preferences Enquiry (COPE; Carver, Scheier & Weintraub, 1989). Modifications were made to the scale to make it more sport specific. These researchers kept the factor structure of the original, but added three other scales (Crocker & Graham, 1995).

Hierarchical Model

Because Scheier and Carver conceptualize their idea of optimism and pessimism within the expectancy – value model of motivation, connections can be made between how optimism and pessimism function with other constructs in the motivation literature. A conceptual organization that could be placed in terms of the optimism is one presented by Vallerand (2001). It is important to note that Vallerand (2001) never mentions optimism, rather a framework that could explain how optimism could manifest on different levels. Vallerand (2001) suggests that motivation exists in a hierarchical arrangement of three levels of generality. The lowest level of this organization is the situational or state level. Motivation at this level is experience when a person is engaged in an activity (Vallerand, 2001). These are not stable and vary from moment to moment, very similar to state personality characteristics. The next higher level is the contextual or life domain level. This has been referred to as "a distinct sphere of human activity" (Emmons, 1995). Vallerand (2001) points out that this is a very important level within the hierarchy because and individual's motivation could vary greatly across these domains. An individual's motivation at work could contrast greatly with his or her motivation within sport. The third and highest level is the global or personality level. Within this level motivation is seen as an enduring individual difference in human behavior. That is behavior related to this level is how a person usually acts.

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APPENDIX C

INSTRUMENTATION

Life Orientation Test - Revised

Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect" answers. Answer according to your own feelings, rather than how you think "most people" would answer.

A = I agree a lot
B = I agree a little
C = I neither agree nor disagree
D = I DISagree a little
E = I DISagree a lot

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'm always optimistic about my future.
[5. I enjoy my friends a lot.]
[6. It's important for me to keep busy.]
7. I hardly ever expect things to go my way.
[8. I don't get upset too easily.]
9. I rarely count on good things happening to me.
10. Overall, I expect more good things to happen to me than bad.

Note:

Items 2, 5, 6, and 8 are fillers. Responses to "scored" items are to be coded so that high values imply optimism. Researchers interested in testing the potential difference between affirmation of optimism and disaffirmation of pessimism should compute separate subtotals of the relevant items

Adult Dispositional 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 worry about something.
12. I meet the goals that I set for myself.

Scoring:
Items 3, 5, 7, and 11 are distracters and are not used for scoring. The pathways subscale score is the sum of items 1, 4, 6, and 8. The agency subscale is the sum of items 2, 9, 10, 12. Hope is the sum of the four pathways and four agency items.

Rosenberg Self-Esteem Scale

3 – Strongly Agree
2 – Agree
1 – Disagree
0 – Strongly Disagree

1. I feel that I am person of worth, at least on an equal plane with others.
2. I feel that I have a number of good qualities.
3. All in all, I am inclined to fell that I am a failure.
4. I am able to do things as well as most people.
5. I feel I do not have much to be proud of.
6. I take a positive attitude toward myself.
7. On the whole, I am satisfied with myself.
8. I wish I could have more respect for myself.
9. I certainly fell useless at times.
10. At times I think that I am no good at all.

Scoring:
For items 3, 5, 8,9,10 reverse the scoring (0=3, 1=2, 2=1, 3=0). For items 1, 2, 4, 6, 7, simply add the score. Add the scores.

Trait Sport-Confidence Inventory

Think about how self-confident you are when you compete in sport.
Answer the questions below based on how confident you *generally feel* when you compete in your sport. Compare your self-confidence to the *most self-confident athlete* you know.
Please answer as you *really* feel, not how you would like to feel. Your answers will be kept completely confidential.

Rating Scale:

Low				Medium				High
1	2	3	4	5	6	7	8	9

1. Compare your confidence in *your ability to execute the skills necessary to be* to the most confident athlete you know.
2. Compare your confidence in *your ability to make critical decisions during competition* to the most confident athlete you know.
3. Compare your confidence in *you ability to perform under pressure* to the most confident athlete you know.
4. Compare your confidence in *your ability to make execute successful strategy* to the most confident athlete you know.
5. Compare your confidence in *your ability to make concentrate well enough to be successful* to the most confident athlete you know.
6. Compare your confidence in *your ability to adapt to different game situations and still be successful* to the most confident athlete you know.
7. Compare your confidence in *your ability to achieve your competitive goals* to the most confident athlete you know.
8. Compare your confidence in *your ability to be successful* to the most confident athlete you know.
9. Compare your confidence in *your ability to consistently be successful* to the most confident athlete you know.
10. Compare your confidence in *your ability to think and respond successfully during competition* to the most confident athlete you know.
11. Compare your confidence in *your ability to meet the challenge of competition* to the most confident athlete you know.
12. Compare your confidence in *your ability to be successful even when the odds are against you* to the most confident athlete you know.
13. Compare your confidence in *your ability to bounce back from performing poorly and be successful* to the most confident athlete you know.

Athletic Coping Skills Inventory – 28

Directions: A number of statements that athletes have used to describe their experiences are given below. Please read each statement carefully and then recall as accurately as possible how often you experience the same thing. There are no right or wrong answers. Do not spend too much time on any one statement.

Almost never Sometimes Often Almost always

1. On a daily basis, I set very specific goals for myself that guide what I do.
2. I get the most out of my talent and skills.
3. When a coach or manager tells me how to correct a mistake I've made, I tend to take it personally and feel upset.
4. When I'm playing sports, I can focus my attention and block out distractions.
5. I remain positive and enthusiastic during competition, no matter how badly things are going.
6. I tend to play better under pressure because I think more clearly.
7. I worry quite a bit about what others think of my performance.
8. I tend to do lots of planning about how to reach my goals.
9. I feel confident that I will play well.
10. When a coach or manager criticizes me, I become upset rather than helped.
11. It is easy for me to keep distracting thoughts from interfering with something I am watching or listening to.
12. I put a lot of pressure on myself by worrying about how I will perform.
13. I set my own performance goals for each practice.
14. I don't have to be pushed to practice or play hard; I give 100%.
15. If a coach criticizes or yells at me, I correct the mistakes without getting upset about it.
16. I handle unexpected situations in my sport very well.
17. When things are going badly, I tell myself to keep calm, and this works for me.
18. The more pressure there is during a game, the more I enjoy it.
19. While competing, I worry about making mistakes of failing to come through.
20. I have my own game plan worked out in my head long before the game begins.
21. When I feel myself getting too tense, I can quickly relax my body and calm myself.
22. To me, pressure situations are challenges that I welcome.
23. I think about and imagine what will happen if I fail or screw up.
24. I maintain emotional control regardless of how things are going for me.
25. It is easy for me to direct my attention and focus on a single object or person.
26. When I fail to reach my goals, it makes me try even harder.
27. I improve my skills by listening carefully to advice and instruction form coaches and managers.
28. I make fewer mistakes when the pressure is on because I concentrate better.

Performance Failure Appraisal Inventory

Response Scale

-2	-1	0	+1	+2
Do Not Believe At All		**Believe 50% of the Time**		**Believe 100% of the Time**

1. When I am failing, it is often because I am not smart enough to perform successfully.
2. When I am failing, my future seems uncertain.
3. When I am failing, it upsets important others.
4. When I am failing, I blame my lack of talent..
5. When I am failing, I believe that my future plans will change.
6. When I am failing, I expect to be criticized by important others.
7. When I am failing, I am afraid that I might not have enough talent.
8. When I am failing, it upsets my "plan" for the future.
9. When I am failing, I lose the trust of people who are important to me.
10. When I am not succeeding, I am less valuable that when I succeed.
11. When I am not succeeding, people are less interested in me.
12. When I am failing, I am not worried about it affecting my future plans.
13. When I am not succeeding, people seem to want to help me less.
14. When I am failing, important others are not happy.
15. When I am not succeeding, I get down on myself easily.
16. When I am failing, I hate the fact that I am not in control of the outcome.
17. When I am not succeeding, people tend to leave me alone.
18. When I am failing, it is embarrassing if others are there to see it.
19. When I am failing, important others are disappointed.
20. When I am failing, I believe that everybody knows I am failing.
21. When I am not succeeding, some people are not interested in me anymore.
22. When I am failing, I believe that my doubters feel that they were right about me.
23. When I am not succeeding, my value decreases for some people.
24. When I am failing, I worry about what others think about me.
25. When I am failing, I worry that others may think I am not trying.

Scoring:
Fear of Experiencing Shame & Embarrassment (FSE)
Add items 10, 15, 18, 20, 22, 24, 25, then divide by 7 = FSE

Fear of Devaluing One's Self-Estimate (FDSE)
Add items 1, 4, 7, 16, then divide by 4 = FDSE

Fear of Having an Uncertain Future (FUF)
Add items 2, 5, 8, 12, then divide by 4 = FUF

Fear of Important Others Losing Interest (FIOLI)
Add items 11, 13, 17, 21, 23, then divide by 5 = FIOLI

Fear of Upsetting Important Others (FUIO)
Add items 3, 6, 9, 14, 19, then divide by 5 = FUIO

General Fear of Failure
Add FSE + FDSE + FUF + FIOLI + FUIO = General Fear of Failure

Sport Optimism Scale

The blanks in this scale are to be filled with the athlete's primary sport. For example an athlete who reports baseball as their primary sport would have the word "baseball" added in the blanks.

A = I agree a lot
B = I agree a little
C = I neither agree nor disagree
D = I DISagree a little
E = I DISagree a lot

1. In uncertain times, I usually expect the best in _____ .
2. In _____ if something can go wrong for me, it will.
3. I'm always optimistic about my future in _____.
4. I hardly ever expect things to go my way in _____.
5. I rarely count on good things happening to me in _____.
6. Overall, I expect more good things to happen to me than bad in _____.

Scoring

Responses to "scored" items are to be coded so that high values imply optimism. Researchers interested in testing the potential difference between affirmation of optimism and disaffirmation of pessimism should compute separate subtotals of the relevant items

Sport Anxiety Scale

A number of statements that athletes have used to describe their thoughts and feelings before or during competition are listed below. Read each statement and, using the rating scale below, determine how much each applies to you prior to or during competition. Write your response next to each item. Some athletes feel they should not admit to feelings of nervousness or worry, but such reactions are actually quite common, even among professional athletes. To help us better understand reactions to competition, we ask you to share your true reactions with us. There are, therefore, no right or wrong answers. Do not spend too much time on any one statement, but choose the answer which describes how you commonly react.

Rating Scale			
1	**2**	**3**	**4**
Not At All	**Somewhat**	**Moderately So**	**Very Much So**

_____ **D1**. I feel nervous.
_____ **D2**. During competition, I find myself thinking about unrelated things.
_____ **D3**. I have self-doubts.
_____ **D4**. My body feels tense.
_____ **D5**. I am concerned that I may not do as well in competition as I could.
_____ **D6**. My mind wanders during sport competition.
_____ **D7**. While performing, I often do not pay attention to what's going on.
_____ **D8**. I feel tense in my stomach.
_____ **D9**. Thoughts of doing poorly interfere with my concentration during competition.
_____ **D10**. I'm concerned about choking under pressure.
_____ **D11**. My heart races.
_____ **D12**. I feel my stomach sinking.
_____ **D13**. I'm concerned about performing poorly.
_____ **D14**. I have lapses of concentration during competition because of nervousness.
_____ **D15**. I sometimes find myself trembling before or during a competitive event.
_____ **D16**. I'm worried about reaching my goal.
_____ **D17**. My body feels tight.
_____ **D18**. I'm concerned that others will be disappointed in my performance.
_____ **D19**. My stomach gets upset before or during a competitive event.
_____ **D20**. I'm concerned I won't be able to concentrate.
_____ **D21**. My heart pounds before competition.

Appendix D

WEBSITE MATERIALS

Hi NAME,

My name is Sam Whalen and I am a masters student in sport psychology at the Georgia Southern University. I am currently working on my thesis and I am examining sport optimism and its relationship to sport related outcomes. To complete this project I need as many student-athletes as possible to complete a short, 20-minute survey. I would really appreciate it if you could help me out by sending a short email and the link to the online survey to the student-athletes enrolled in your school. If you are willing to help me, please delete this portion of the email (through "SUBJECT LINE: Complete this survey…"), change the subject of the email line (the new subject line is included below), and send this email to your student-athletes. Upon completion of the survey, participants will receive a feedback page where they will find out their scores and information for interpreting their scores. The scales measure such things as anxiety, self-esteem, and optimism. If the student-athlete has in depth questions about their results and you do not feel comfortable answering the questions please instruct them contact the Mental Edge Training Facility at Georgia Southern University (sppsylab@georgiasouthern.edu), Dr. Daniel R. Czech (drczech@georgiasouthern.edu), or Dr. Jonathan N. Metzler (jmetzler@georgiasouthern.edu). Thank you in advance for your assistance. I really appreciate any help you can give me. Please let me know if you have any questions.

Sincerely,
Sam Whalen

SUBJECT LINE: Please help! Complete a short research survey!

Hi,

My name is Sam Whalen and I am a graduate student in sport psychology at the Georgia Southern University. I want to learn more about optimism and its relationship to sport related outcomes.

You will fill out an online set of surveys. Upon completion of these surveys you will receive feedback of your scores and how you might interpret them.

Any information you provide will be completely anonymous and your email address will not be linked to anything. This is completely voluntary and you may stop at any time. Also if you choose to participate you are giving your consent that you did so voluntarily.

If you are interested please click the link below.
Sincerely,

Sam Whalen

Georgia Southern Sport Psychology Survey

You are being invited to take part in a research study about optimism in sport. You are being invited because you are an adult 18 years or older and compete in a sport at the intercollegiate level.

WHO IS DOING THE STUDY?

The study is being conducted by a research team out of the Mental Edge Training Facility (hyperlink to lab's website) at Georgia Southern University. The researchers include Mr. Samuel J. Whalen (sppsylab@georgiasouthern.edu), Mr. Jonathan N. Metzler (jmetzler@georgiasouthern.edu), and Dr. Daniel R. Czech (drczech@georgiasouthern.edu).

WHAT WILL YOU BE ASKED TO DO? HOW LONG WILL IT LAST?

You will be asked a series of questions about your attitudes and perceptions in general and in your sport. You will answer a total of 125 questions. This should take 10-15 minutes.

ARE THERE REASONS WHY YOU SHOULD NOT TAKE PART IN THIS STUDY? WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

There are no known reasons why you should not take part in this study. To the best of our knowledge, providing responses to these questions poses no more risk of harm than you would experience in everyday life.

WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?

You will not get any personal benefit from taking part in this study. You will receive feedback about your scores on the questionnaires.

DO YOU HAVE TO TAKE PART IN THE STUDY?

Your participation in this study is voluntary. You may discontinue the survey at any point. You will not be treated differently if you decide to stop taking part in the study, particularly given that you will not provide any information that would identify you. Your answers will be completely anonymous. We will not be able to identify the responses that came from you.

WHAT WILL IT COST YOU TO PARTICIPATE? WILL YOU RECEIVE ANY REWARDS?

There are no costs associated with taking part in the study. However, you will receive your scores and information on how to interpret them. This feedback will help you be aware of your psychological characteristics.

WHO WILL SEE THE INFORMATION THAT YOU GIVE?

Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered. We may publish the results of this study.

This study is anonymous. That means that no one, not even members of the research team, will know that the information you gave came from you.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, CONCERNS, OR COMPLAINTS?

If you have questions, suggestions, concerns, or complaints about the study, you can contact a member of the research team based out of the Mental Edge Training Facility; Samuel J. Whalen, via email, or (912) 871-1994, Jonathan N. Metzler, via email (jmetzler@georgiasouthern.edu), or (912) 681-5378, and Daniel R. Czech, via email (drczech@georgiasouthern.edu), or (912) 681-5267. If you have any questions about your rights as a volunteer in this research, contact the staff in the Office of Research Services and Sponsored Programs, (912) 681-5465, ovrsight@georgiasouthern.edu . This study has been approved by the Institutional Review Board at Georgia Southern University.

To participate in the study, click here (link to next page, rest of study)

Demographics Page

1. Please indicate your age.
2. Please indicate your gender.
3. Please indicate your ethnicity.
    A. African American
    B. Caucasian
    C. Hispanic
    D. Asian
    E. American Indian
    F. Multiple racial/ethnic background
    G. Other
4. Please indicate your year in school.
    A. Freshman
    B. Red shirt Freshman
    C. Sophomore
    D. Red shirt Sophomore
    E. Junior
    F. Red shirt Junior
    G. Senior
    H. Red shirt Senior
    I. 5^{th} Year Senior
5. Please report your primary sport which you participate in at the collegiate level.
    A. Cross Country
    B. Field Hockey
    C. Football
    D. Soccer
    E. Volleyball
    F. Water Polo
    G. Basketball
    H. Bowling
    I. Fencing
    J. Gymnastics
    K. Ice Hockey
    L. Rifle
    M. Skiing
    N. Swimming
    O. Diving
    P. Wrestling
    Q. Baseball
    R. Golf
    S. Lacrosse
    T. Rowing
    U. Softball
    V. Tennis
    W. Track & Field

Instructions:

Instructions for Set B
Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect" answers. Answer according to your **own feelings**, rather than how you think "most people" would answer.

Instructions for Set C
Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect" answers. Answer according to your **own feelings**, rather than how you think "most people" would answer.

Instructions for Set D
Below is a list of statements dealing with your general feelings about yourself. Please indicate your agreement with each item using the response scale below.

Instructions for Set E
Read each item carefully. Using the scale below, please select the response that best describes **YOU**.

Instructions for Set H
Think about how self-confident you are when you compete in sport. Answer the questions below based on how confident **you generally feel** when you compete in your sport. Compare your self-confidence to the most self-confident athlete you know. Please answer as **you really feel**, not how you would like to feel.

Instructions for Set G
A number of statements that athletes have used to describe their experiences are given below. Please read each statement carefully and then recall as accurately as possible how often you experience the same thing. There are no right or wrong answers. Do not spend too much time on any one statement.

Instructions for Set F
Read each statement below and think of **how often you believe each is true**. Use the rating scale below to indicate how much you believe each statement applies to you.

Instructions for Set I
A number of statements that athletes have used to describe their thoughts and feelings before or during competition are listed below. Read each statement and, using the rating scale below, determine how much each applies to you prior to or during competition. Write your response next to each item. Some athletes feel they should not admit to feelings of nervousness or worry, but such reactions are actually quite common, even among professional athletes. To help us better understand reactions to competition, we ask you to share your true reactions with us. There are, therefore, no right or wrong

answers. Do not spend too much time on any one statement, but choose the answer which describes how you commonly react.

Thank you for completing our survey. The following section is designed to help you interpret your score from the answers you provided. If you have any questions or concerns please feel free to contact a member of the research team.

Your **general optimism** score is [B score]
Optimism and pessimism refer to one's expectations for what the future holds. Both dimensions can influence not only a person's emotions, but also a person's decision about striving for success or giving up. Optimistic individuals are characterized as having positive expectations and perceptions on life in that the future holds desirable outcomes. In contrast, pessimistic individuals tend to represent a negative bias towards life. Pessimists view the future as undesirable. Scores can range from 6-30. The higher your score the higher your dispositional optimism, the lower the score the lower the dispositional optimism. Although there are no discrete cut-off points to delineate high and low dispositional optimism the average score for men is 21.03 (SD=4.56), the average score for women is 21.41 (SD=5.22).

Your **sport optimism** score is [C score]
Sport optimism can be thought of as expecting positive or good outcomes while participating in your sport, whether it is practice or actual competition. Having positive expectations about your experiences within your sport has been linked to improved performance. Scores range from 6 to 30. Lower scores represent the tendency to expect negative outcomes in your sport.

Your **self-esteem** score is [D score]
This scale measures global feelings of self-worth or self-acceptance. You can score between 0-30, with 30 indicating the highest score possible, high self-esteem. Although there are no discrete cut-off points to delineate high and low self-esteem, the norm for the average college student is 24.12.

Your **hope** score is [E score]
This scale determines in general how hopeful you are. Hope is the emotion that urges you to keep going despite being faced with adversity. Highly hopeful people tend to see the positive in most situations and view set-backs as welcome challenges for self-improvement. Scores can range from a low of 8 to a high of 32.

Your **fear of failure** score is [F score]
Fear of failure is a relatively stable type of anxiety that can affect an athlete's motivation and performance. Athletes who fear failure are also motivated to avoid failure and therefore may miss opportunities to achieve. Several negative consequences of failure are combined to produce a general evaluation of fear of failure. Scores range from -2 to 2 with lower scores indicating low fear of failure. College aged men and women average -0.17 on this scale.

You **coping with adversity** score is [G_cop score]
Low scores here indicate you may not cope well with tough situations in your sport. High scores indicate you are very good at coping with tough situations in your sport.

Your **peaking under pressure** score is [G_pup score]
Low scores here indicate that your performance tends to decrease under pressure. High scores indicate that you are able to perform well under pressure.

Your **goal setting/mental preparation** score is [G_goal score]
Low scores indicate that you don't prepare much before a practice or game. High scores indicate that you make a point to set goals and be mentally prepared for competition.

Your **concentration** score is [G_con score]
Low scores indicate you have trouble maintaining focus during competition. High scores indicate you are able to maintain a high level of focus during competition.

Your **freedom from worry** score is [G_free score]
Low scores indicate that you are highly anxious which can lead to not performing at your best. High scores indicate you are able to stay calm and relaxed during competition.

Your **confidence and achievement motivation** score is [G_cam score]
Low scores indicate a low level of confidence. High scores indicate confident and motivated people.

Your **coachability** score is [G_coach score]
Low scores indicate you may not understand directions your coach gives you and may be resistant to his or her instruction. High scores indicate you understand your coach and trust his or her instruction is only trying to improve you and your team's performance.

Your **trait sport confidence** score is [H score]
We also assessed your level of confidence as it pertains to the parts of your life that involves sport. The tool used in this is designed to assess characteristics on a trait level, which means they should be characteristics that are stable across situations. This isn't to say that these characteristics can't be enhanced or modified with some work. There is a direct relationship between self-confidence and performance. People such as Tiger Woods and Michael Jordan are examples of athletes with very high self-confidence. They know they are going to perform well and this confidence leads to high performance. Confidence isn't something that you either have or you don't, it can be improved upon.

Lastly, we assessed you sport anxiety including three types of anxiety that can occur for athletes in competition.
Your **somatic anxiety** score is [I_sa score]
Somatic anxiety refers to anxiety that shows up in your body in various forms, for example, increased heart beat, sweaty palms, and tight muscles.

Your **worry** score is [I_w]
Worry refers to the thoughts that run through your mind when you are highly anxious. You may worry about such things as choking under pressure.

You **concentration disruption** score is [I_cd]
Concentration disruption refers to how well you are able to maintain focus during competition. Highly anxious individuals will have problems maintaining focused.

The good news about these scores is they represent things you can work on. With time and effort you could improve your coping skills. If you are interested in improving in some areas please feel free to contact your nearest AASP Certified Consultant. A directory of listings can be found at http://www.aaasponline.org/cc/ccfinder.php.

Appendix E

IRB DOCUMENTATION

IRB Documentation

Georgia Southern University
Office of Research Services & Sponsored Programs

Institutional Review Board (IRB)

Phone: 912-681-5465
Fax: 912-681-0719
Ovrsight@GeorgiaSouthern.edu
Administrative Annex
P.O. Box 8005
Statesboro, GA 30460

To: Samuel Whalen
903 Teepee Way
Statesboro, GA, 30461

cc: Jon Metzler, Faculty Advisor
P. O. Box 8076

From: Office of Research Services and Sponsored Programs
Administrative Support Office for Research Oversight Committees
(IACUC/IBC/IRB)

Date: February 2, 2006

Subject: Status of Application for Approval to Utilize Human Subjects in Research

After a review of your proposed research project numbered: **H07142**, and titled **"Georgia Southern Sport Psychology Survey"**, it appears that your research involves activities that do not require approval by the Institutional Review Board according to federal guidelines.

According to the Code of Federal Regulations Title 45 Part 46, your research protocol is determined to be exempt under the following exemption category(s):

☐ Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (I) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (II) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Therefore, as authorized in the Federal Policy for the Protection of Human Subjects, I am pleased to notify you that your research is exempt from IRB approval. **You may proceed with the proposed research.**

Sincerely,

Julie Cole (ah)

Julie B. Cole
Director of Research Services and Sponsored Programs

GEORGIA SOUTHERN UNIVERSITY IRB
EXEMPT STATUS QUESTIONNAIRE

P.O. Box 8005912-681-5465 Statesboro, GA 30460
http://academics.georgiasouthern.edu/research/

For electronic submission: Complete Exempt Status Questionnaire and "Save As" a word document to your computer or disk named "exemptapp_yourlastname, First initial.doc". Then, complete the Cover Page and follow its instructions for saving the document. After both the Exempt Status Questionnaire and Cover Page are completed and saved, return to the Forms webpage to submit them to the IRB.

This questionnaire should be completed if you feel that your research satisfies the federal guidelines that would make it exempt from full or expedited IRB review. Please note that you must also complete the IRB Cover Sheet, and provide a summary of the research protocol. If the IRB decides that the investigation is exempt from full or expedited review, it will not be necessary for you to complete the IRB's Proposal Narrative and Informed Consent Checklist.

Please attach an IRB Cover Sheet to the top of this form and submit to the IRB Office. Also be sure to write brief summary of the research protocol in one page or less in the space below.

I will be __X__ collecting, ____receiving these samples OR, ____sending these samples or data outside of GSU. (Check all that apply)

Title of Study:

_____

Does the study meet the following criteria?

	NO	Does the research involve the collection or study of *existing data*, documents, records, pathological specimens, or diagnostic specimens? *Existing Data: means that all the data, documents, records, or specimens are in existence prior to IRB Review. Specimens obtained prospectively from future discarded clinical samples do not qualify for exempt review.(1)*
	NO	Data sources are publicly available; if not, the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects (i.e. social security #'s, account #'s, history #'s, pathology accession #'s, initials, date of birth). *(2) If both 1&2 checked: 45CFR46.101(b)(4)*
YES		Does the research involve the use of educational tests, survey procedures, interview procedures or observation of public behavior and is the data/information recorded in a manner so that human subjects cannot be identified, directly or through identifiers linked to the subjects such that any disclosure of the human subjects' responses outside the research could not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability or reputation

		45CFR46.101(b)(2)
	NO	Is the research intended to assess the effectiveness of mandated educational or instructional procedures or otherwise used for program evaluation.
YES		Are the samples or data being collected for the sole purposes of this study?
YES		Are the samples or data collected by a third party and stored in a facility that will not break the code, even upon the request of a family member/ or medical emergency?

Please answer the following two questions to the best of your ability.

	NO	Is the probability of the harm or discomfort anticipated in the proposed research greater than that encountered ordinarily in daily life or during the performance of routine physical or psychological examinations or tests?
	NO	Is the magnitude of the harm or discomfort greater than that encountered ordinarily in daily life, or during the performance of routine physical or psychological examinations or tests?

Does this study involve any of the following?

	NO	Non-hereditary genetic research in which samples are linked/coded or identifiable
	NO	Hereditary genetic research
	NO	Prisoners, Fetuses, Pregnant Women, Cognitively/Mentally Impaired, Students/Employees/ Under 18 years of age (Circle all that apply)
	NO	Human in-vitro fertilization (any fertilization of human ova which occurs outside the body of a female)
	NO	Surveys or interviews given to minors
	NO	Any procedures that may cause a subject either physical or psychological discomfort or is perceived as harassment above and beyond what the person would experience in daily life
	NO	Deception
	NO	Observation of minors if the investigator participates in the activities being observed unless there is a federal statute covering the activity
	NO	The study of a rare trait/disorder such that there is some risk of exposing the identity of sample donors or the research poses risk of community or cultural harm

1. How do you plan to access the targeted subject population?

The target population for this investigation is intercollegiate athletes. The athletes will be recruited with the assistance of CHAMPS/ Life Skills program directors at various institutions across the country. An email will be sent to the directors explaining the purpose of the investigation and request their assistance (see attached). The directors will be asked to forward a portion of the email to the athletes with whom they have access. The athletes will receive the email which will include a link to the data collection website. The link will take them to the first page of the website, which contains the informed consent information.

2. Please provide a brief summary of the study and a description of the research protocol (chronologically progressed).

The purpose of this investigation is to evaluate the predictive validity of the Life Orientation Test – Revised (Scheier, Carver, & Bridges, 1994) modified to represent the sport context. The modified version will be made specific to each participant's sport based on information on the demographics page. Inter-item contextualization will happen by adding the phrase "in _____" where the blank is the preferred sport. For example, the item "I always expect the best" will be changed to "I always expect the best in baseball." Data for this will be collected via a website.

An email will be sent to the CHAMPS directors. A portion of this email will be forwarded to the athletes. The athletes will be directed to the Informed Consent page of the website which will include a button designated "click to agree and proceed" that assures the researchers the participant has read the purpose of the investigation, certifies they are in fact an intercollegiate athlete, and determines that the athlete is at least 18.

The next pages of the website will consist of a demographics page and a series of eight questionnaires including: (1) the 10-item Life Orientation Test – Revised (LOT-R; Scheier, Carver, & Bridges, 1994), (2) a modified version of the LOT-R based on participant's preferred sport, (3) the 10-item Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965), (4) the 25-item Performance Failure Appraisal Inventory (PFAI; Conroy, Willow, & Metzler, 2002), (5) the 12-item Adult Trait Hope Scale will be used to assess trait levels of hope (Snyder et al., 1991), (6) the 21-item Sport Anxiety Scale (SAS; Smith, Smoll, & Schutz, 1990), (7) the 13-item Trait Sport-Confidence Inventory (TSCI; Vealey, 1986), and (8) the 28-item Athletic Coping Skills Inventory (ACSI-28; Smith, Shutz, Smoll, & Ptacek, 1995). The website will randomize the order in which the questionnaires appear. Following completion of the 125 questions the participants will be provided with their score on each questionnaire and information to assist them in interpreting their score.

Data collected from the website will be stored as a data file with restricted access to only members of the research team and the webmaster for this project. Would like to conduct a paper and pencil pilot study using athletes from Georgia Southern.

3. What kind of human samples (e.g. tissue, blood) or data will be obtained? None
4. Informed Consent

Exempt research is not subject to federal regulations contained in 45 CFR 46, which include requirements for informed consent. Therefore, if the research is eligible for exemption, then "technically" informed consent is not required. It is up to the investigator to decide whether or not consent should be obtained and documented. Often the investigator will provide a letter of explanation or even a consent form. Again, this is not required, but may be the appropriate thing to do to ensure the rights and welfare of the subjects.

If you plan to provide a Consent Form or letter, please submit it along with this form.

If a questionnaire or interview will be done, please attach a copy of the questions.

___Samuel J. Whalen_____
_____

Principal Investigator (printed) Principal Investigator (Signature) Date

For Use by IRB Office Only

Exempt Status Approved Yes No IRB Chair/Vice Chair_____ Date_____

Research Compliance Consolidated Cover Page

Georgia Southern University

<u>For electronic submission</u>: Your proposal narrative should already be completed and saved. Next complete cover page and "Save As" a word document to your computer or disk named "Coverpage_Year_Month_Date_lastname, First initial.doc". Then open and complete Informed Consent Checklist.

Application for Research Approval

Investigator Information:		
Name of Principal Investigator: Samuel Joseph Whalen	Email: Samuel_j_whalen@georgiasouthern.edu	**For Office Use Only:** Protocol ID: _____ Date Received:
Phone: 865-659-7803	Address: 903 Teepee Way Statesboro, GA 30461	
Department: Health & Kinesiology		
Name(s) of Co-Investigators: Mr. Jonathan N. Metzler	Title of Co-Investigator(s): Assistant Professor	
Personnel and/or Institutions Outside of Georgia Southern University involved in this research:		

Project Information:
Title: Georgia Southern Sport Psychology Survey.
Brief (less than 50 words) Project Summary: The purpose of this investigation is to examine the incremental predictive validity of the Life Orientation Test – Revised (Scheier & Carver, 1994) contextualized to preferred sport. Dispositional optimism should account for more variance in global measures, while the modified version of the LOT-R should account for more variance in sport related measures. The contextualization is an attempt to investigate whether the LOT-R can be modified to operate on the same level as other sport measures.

Compliance Information:
Please indicate which of the following will be used in your research:
☒ Human Subjects (Complete *Section A: Human Subjects* below) ☐ Care and Use of Vertebrate Animals (Complete *Section B: Care and Use of Vertebrate Animals* below) ☐ Biohazards (Complete *Section C: Biohazards* below)

Section A: Human Subjects	
Number of Subjects: 300	Project Start Date: On approval Project End Date: 12/1/2007 (no more than 1 year)
*Date of IRB education completion:	**(attach copy of completion certificate)**
Purpose of Research:	*Please indicate if the following are included in the study***:**

☒ For use in thesis/dissertation ☐ Completion of a class project ☐ Publication (journal, book, etc.) ☐ Poster/presentation to a scientific audience ☐ Results will **not** be published ☐ Other	☒ Informed Consent Document ☐ Greater than minimal risk ☐ Research Involving Minors ☐ Deception ☒ Generalizable knowledge (results are intended to be published) ☒ Survey Research ☐ At Risk Populations (prisoners, children, pregnant women, etc) ☐ Video or Audio Tapes ☐ Medical Procedures, including exercise, administering drugs/dietary supplements, and other procedures

Check one: ☒Student ☐Faculty/Staff ***If student project please complete advisor's information below:***

Advisor's Name: Mr. Jonathan N. Metzler	Advisor's E-mail: jmetzler@georgiasouthern.edu
Advisor's Phone: 912-681-5378	Advisor's Department: Health and Kinesiology P.O. Box: 8076
Signature of Applicant: X	Date: 1/21/07
Signature of Advisor (if student): X	Date: 1/21/07

Section B: Care and Use of Vertebrate Animals

Project Start Date: Project End Date: (no more than 1 year)

Purpose of use/care of animals:	*Please indicate if the following are included in the study***:**
☐ Research ☐ Teaching ☐ Exhibition ☐ Display	☐ Physical intervention with vertebrate animals ☐ Housing of vertebrate animals ☐ Euthanasia of vertebrate animals ☐ Use of sedation, analgesia, or anesthesia ☐ Surgery ☐ Farm animals for biomedical research (e.g., diseases, organs, etc.) ☐ Farm animals for agricultural research (e.g., food/fiber production, etc.) ☐ Observation of vertebrate animals in their natural setting

Check one: ☐Student ☐Faculty/Staff ***If student project please complete advisor's information below*:**

Advisor's Name:	Advisor's E-mail:
Advisor's Phone:	Advisor's Department: P.O. Box:
Signature of Applicant: X	Date:
Signature of Advisor(if student)/Dept. Chair(if faculty): X	Date:

Section C: Biohazards

Project Start Date: Project End Date: (no more than 3 years)

Biosafety Level:	*Please indicate if the following are included in the study***:**

☐ Exempt ☐ BSL 1 ☐ BSL 2	☐ Use of rDNA
Signature of Applicant ***(Faculty ONLY)****:* X	Date:

Please submit this protocol electronically to the Georgia Southern University Compliance Office, c/o The Office of Research Services & Sponsored Programs, P.O. Box 8005. The application should contain all required documents specific to the committee to which you are applying. Questions or comments can be directed to (912)681-0843 or ovrsight@georgiasouthern.edu

APPENDIX F

BIOGRAPHICAL SKETCH

Sam is originally from Knoxville, TN where he earned his undergraduate degree in psychology from the University of Tennessee. Having competed at a high level in baseball for the majority of his life Sam has long been interested in optimizing performance. Sam combined his interest in psychology and sport into a new passion for sport psychology. This led him to pursuing a Masters degree in sport psychology from Georgia Southern University. For the past year Sam has served as the associate director of the Mental Edge Training Facility, the sport psychology laboratory at Georgia Southern. While at GSU Sam has experienced many opportunities that have shaped his consulting style. Recently Sam was able to provide consulting services to individuals preparing for the NFL draft. Sam believes strongly in an active, integrative approach to teaching and applying sport psychology concepts. Sam is always interested in learning new sports and meeting new people. Sam is an active member of GAHPERD and AASP (the Association for Applied Sport Psychology).

Sam plans on attending the University of Tennessee in the fall of 2007 to pursue a PhD in sport psychology. Upon completion of this degree Sam plans on seeking a professorship teaching sport psychology and related courses.