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Douglas C. Tully

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STUDIES OF THE
INTELLIGENCE

BY

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OF THE

ARMY

AND

**SUBJECTIVE MEANINGS OF SELF AND TEAM CONFIDENCE FOR
INTERCOLLEGIATE ATHLETES**

by

Douglas C. Tully

A THESIS

**Submitted to
Michigan State University
in partial fulfillment of the requirements
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ABSTRACT

SUBJECTIVE MEANINGS OF SELF AND TEAM CONFIDENCE FOR INTERCOLLEGIATE ATHLETES

by

Douglas C. Tully

The purpose of this study was to determine the subjective meanings of self and team confidence for male and female athletes to better interpret confidence for this population. Subjects were recruited from nonrevenue sports at two Division I universities ($n = 178$ for Phase 1 and $n = 170$ for Phase 2). Phase 1 involved collecting perceived antecedents and consequents for self and team confidence using the Triandis (1972) approach via an open-ended questionnaire. The most frequent responses were placed into a second closed-ended questionnaire in Phase 2 according to four categories: (a) responses common to male and female athletes, (b) responses unique to male athletes, (c) responses unique to female athletes, and (d) hunch responses. Chi-squared analysis indicated few significant gender differences existed. The most frequent components associated with self-confidence were determination, belief in yourself, positive attitude, and self-esteem. For team confidence, they were positive attitude, determination, hard work, and unity.

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you both, I only hope that I can return the favor to the next generation of neophyte researchers.

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May the glorious green and white live long and prosper. Go State!

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Chapter 1

THE PROBLEM

Self-confidence is considered by athletes, coaches, and scientists to be the most influential cognitive factor in sport performance (Feltz, 1988a; Gill, 1986). Athletes can have their confidence enhanced or diminished by coaches, fans, the media, or from their own feelings and experiences. Patrick Roy, goaltender for the Montreal Canadians, commented after winning the Stanley Cup in 1992, "When everybody's telling you how great you're doing, you start to believe it" (Swift, 1993, p. 27). Further, Phoenix Suns point guard, Kevin Johnson, remarked about confidence after his hometown crowd booed him, "I can deal with what the fans say or what the media says about me as long as I know I have the confidence and respect of the other guys in this [the Suns] locker room" (Taylor, 1993, p. 23).

In addition, coaches can be important in instilling or maintaining confidence in their athletes. Paul Westphal, Head Coach of the Phoenix Suns, made a confidence instilling comment after his team lost the first two games of a five game series to the Los Angeles Lakers. He said, "We're a better team than the Lakers and

we will win the series" (Smith, 1993, p. 30). Furthermore, Jacques Demers, coach of the Montreal Canadians, talked about his confidence in his goaltender Patrick Roy, when he said, "I stood with Patrick. I was not going to let him get down on himself after he gave up a soft goal against Quebec. He was just outstanding, sensational" (Swift, 1993, p. 27). These statements illustrate that athletes and coaches believe that confidence is a vital component in athletic success.

Self-confidence has been conceived of and studied in a variety of ways by researchers (e.g., Bandura, 1977; Harter, 1978; Nicholls, 1984; Vealey, 1986). Terms such as "self-confidence," "self-efficacy," "perceived ability," and "perceived competence" have been used to describe one's perceived capability to accomplish a certain level of performance. Bandura (1977) developed the concept of self-efficacy as a common cognitive mechanism for mediating people's motivation and behavior. Self-efficacy beliefs, defined as peoples' judgments of their capabilities to execute specific tasks successfully, are hypothesized to be a product of a complex process of self-persuasion that relies on cognitive processing of diverse sources of information (Bandura, 1990). These sources of

information include one's own previous performance accomplishments, vicarious experiences of similar others, verbal persuasion by trusted others, and one's own physiological or emotional state. Self-efficacy can be considered situationally specific self-confidence.

The research literature on achievement motivation and mastery motivation have used the terms "perceived competence" and "perceived ability" to describe the perception that one has the ability to master a task resulting from cumulative interactions with the environment (Harter, 1978; Nicholls, 1984). Specifically in sport, Vealey (1986) used the term "sport confidence" to define the belief or degree of certainty that individuals possess about their ability to be successful in sport.

Each of these conceptual frameworks provide a different definition, view, and measurement of self-confidence. However, all have been used by sport psychology researchers to study the same phenomenon: the cognitive process by which an athlete regulates thoughts and actions to attain desired outcomes or to control events in his or her sport performance. Rather than trying to come to a consensus on the concept of self-confidence in sport, research and

our understanding of self-confidence in sport may be furthered by determining directly the meanings (or perceptual components) of self-confidence from the athletes themselves. Self-confidence, like a number of other concepts (e.g., happiness, Strack, Argyle, & Schwarz, 1991) carries different meanings for different individuals and groups of individuals. For instance, Martens (1987) has suggested that many athletes think self-confidence means believing they will win no matter what the chances, and that this type of conception is what often leads to diffidence or overconfidence.

In the field of psycholinguistics, meanings are considered by some researchers as internal states (Osgood, Suci, & Tannenbaum, 1957) or as a psychological process of interpretation (Ogden & Richards, 1923). The perceptual components of a term constitute the meaning of that term for that individual (Slobin, 1971) and represent the cognitive structures that exist in the mind of that individual for that term (Osgood et al., 1957). Meanings of words or concepts are learned. They are acquired through experience and from significant others (Kess, 1976). Meanings also exist in a context (Amster, 1964). The context is very important and can change the meaning of the word or concept. Thus, the social context or culture

in which an athlete develops, learns, and lives will influence how he or she develops and defines self-confidence beliefs. The meaning or cognitive structure one has for having self-confidence in one's sport may be different than the meaning for having self-confidence in general or in some other context. Similarly, the meaning that one has of self-confidence in sport may depend, in part, on one's age, ability, and/or gender. Research has supported different subjective meanings for similar concepts, such as success and failure, for different subjective cultures (Osgood, Miron, & May, 1975; Triandis, Kitty, Shanmugam, Tanaka, & Vassiliou, 1972) and different genders (Ewing, 1981).

Some psycholinguists (e.g., Osgood) believe that it is the meanings of words and concepts that control our overt external behavior. This approach to the examination of meanings is based on the assumption that meaning is tied to human action. Using this assumption then, one could propose that it is an individual's meaning of self-confidence that influences the overt motivational behaviors of achievement (or choice, effort, and persistence) in sport. By beginning to examine the subjective meanings of self-confidence which constitutes its interpretation for different individuals,

researchers may better understand the relationship between self-confidence and motivational behavior within specific social contexts (e.g., sport) and within different subjective cultures (e.g., gender, age, ability groups).

In addition to the concept of self-confidence, athletes, specifically, may hold a different subjective meaning or have a different cognitive structure for the term team confidence. Given that sport consists of many team competitions, simply researching the meaning of self-confidence in sport and then applying those results to team contexts is a methodology that lacks substance.

In collegiate sports, individuals perform as members of teams rather than as just individuals. This is true for individual sports, such as track and field and tennis as well as for team sports, such as volleyball and baseball. Thus, many of the challenges and difficulties that athletes face on teams reflect team problems and team goals requiring team efforts to produce successful performance.

Despite the intuitive importance of team confidence to successful team performance, little theoretical focus or empirical work has been directed toward examining this concept. Bandura

(1986) has proposed the concept of perceived collective efficacy as the group-level equivalent to self-efficacy. Collective efficacy refers to people's judgments of group capabilities rather than individual capabilities and influences "what people choose to do as a group, how much effort they put into it, and their staying power when group efforts fail to produce results" (Bandura, 1986, p. 449). Team efficacy beliefs are hypothesized to be influenced by sources of information that are similar to self-efficacy but at the level of a team, such as team performance, team comparisons, etc.

Zaccaro and his colleagues (Zaccaro, Blair, Perterson, & Zazanis, in press) go further in defining collective efficacy as a shared belief among group members regarding how well they can work together to execute a specific task successfully. By working together, they mean coordinating and integrating the resources of team members. Guzzo's definition of team potency (Guzzo, Yost, Campbell, & Shea, 1993) is a more generalized version of Zaccaro et al.'s definition and refers to "a shared belief about the general effectiveness across multiple tasks encountered by groups in complex environments" (p. 9).

Typically, collective efficacy and team potency, like self-

efficacy and other perceived competence measures, have been represented and measured with survey items generated by the researchers themselves and, thus, may not capture the specific subjective meanings that individual team members may hold. Therefore a method is needed that minimizes researcher influence and allows individuals to represent their own meanings of self and team confidence.

An antecedent-consequent approach, formalized by Triandis (1972), was used to gather information from athletes regarding the antecedents and consequents of self and team confidence. The antecedents and consequents obtained in the present study and used by Triandis were not thought of as “true” causal antecedents and effects in that they do not necessarily precede or follow self (or team) confidence temporally. For instance, successful performance may be an effect of preceding self-confidence, but determination may be an antecedent or consequent that does not exist temporally apart from self-confidence. Rather, the antecedents and consequents in the present study were thought of as supplying the subjective meaning of the term confidence. Triandis used this approach for investigating the influence that a culture (or

subjective culture) had on its members' ways of perceiving certain beliefs, values, and attitudes and found cultural differences in the subjective meanings of such concepts as success and failure (Triandis et al., 1972).

The antecedents and consequents in the present investigation were first attained via an open-ended questionnaire. Therefore, subjects were not limited to specific responses and were free to choose the terms that were important to their own confidence. For example the questions, 'If you have _____, then you have confidence to perform successfully in your sport'. and 'If you have confidence to perform successfully in your sport, then you have _____', requires athletes to respond with antecedents and consequents of self-confidence. The use of the open-ended questionnaire was followed by a second study using a closed-ended questionnaire that utilized the most frequent responses to the confidence questions in the open-ended questionnaire.

Purpose of the Study

The purpose of this study was to determine the subjective meanings of self and team confidence for male and female intercollegiate athletes. Secondly, this study examined the

similarities and differences that existed between the subjective meanings of self and team confidence. Finally, a third purpose of this study was to determine if high self-confidence athletes differed from low self-confidence athletes in their subjective meanings for self and team confidence.

Research Questions

The following research questions were constructed to guide this study:

1. How do male athletes compare with female athletes in their perceived antecedents of self-confidence?
2. How do male athletes compare with female athletes in their perceived consequents of self-confidence?
3. How do male athletes compare with female athletes in their perceived antecedents of team confidence?
4. How do male athletes compare with female athletes in their perceived consequents of team confidence?

If no gender differences are found in the perceived antecedents and consequents of self and team confidence, then the following research questions will be examined with the gender categories combined.

5. How do athlete's perceived antecedents for self-confidence compare with their perceived antecedents for team confidence?
6. How do athlete's perceived consequents for self-confidence compare with their perceived consequents for team confidence?
7. How do the perceived antecedents of high self-confidence athletes compare to the perceived antecedents of low self-confidence athletes for self-confidence?
8. How do the perceived consequents of high self-confidence athletes compare to the perceived consequents of low self-confidence athletes for self-confidence?
9. How do the perceived antecedents of high self-confidence athletes compare to the perceived antecedents of low self-confidence athletes for team confidence?
10. How do the perceived consequents of high self-confidence athletes compare to the perceived consequents of low self-confidence athletes for team confidence?

Delimitation

The generalizability of the results of this research is limited

to nonrevenue college athletes at Division I schools.

Basic Assumptions

In survey research there are a few assumptions that must be made. It must be assumed that subjects' responses are their own and are genuine.

Definitions of Terms

Antecedent- a singular factor or implication linked directly or indirectly to a concept. Implications can be environmental, biological, or social in nature (Triandis, 1972).

Consequent- a singular factor that is neither a necessary nor a sufficient cause of behavior, but can be considered a “contributing cause” that help to establish patterns of behavior (Triandis, 1972).

High self-confidence- as determined by subjects' responses on the Perceived Confidence portion of the Phase 2 questionnaire, placing them in the top 25% of the sample.

Low self-confidence- as determined by subjects' responses on the Perceived Confidence portion of the Phase 2 questionnaire, placing them in the bottom 25% of the sample.

Self-confidence- peoples' beliefs about their ability to be

successful.

Sources of Confidence- the self-knowledge on which one bases one's confidence judgements (Bandura, 1986).

Subjective culture- attributes of the cognitive structures of groups of people (Triandis, 1972).

Subjective Meaning- term used to describe the summed perceptions of the antecedents and consequents provided by subjects for this study.

Team-confidence- a team's belief about its ability to be successful.

Limitations

This study was limited by the following factors:

1. The study was limited to two Universities all contained in the mid Michigan area and limited to 160 subjects for each phase.
2. Subjects were volunteers.

Chapter 2

RELATED LITERATURE

Self-confidence, sometimes referred to as self-efficacy, is the most cited psychological construct in sport research literature (Feltz, 1988b). Self-confidence has been conceived of and studied in a variety of ways by researchers (e.g., Bandura, 1977; Harter, 1978; Nicholls, 1984; Vealey, 1986). Terms such as “self-confidence,” “self-efficacy,” “perceived ability,” and “perceived competence” have been used to describe one’s perceived capability to accomplish a certain level of performance. Bandura (1977) developed the concept of self-efficacy as a common cognitive mechanism for mediating people’s motivation and behavior. Self-efficacy beliefs, defined as peoples’ judgments of their capabilities to execute specific tasks successfully, are hypothesized to be a product of a complex process of self-persuasion that relies on cognitive processing of diverse sources of information (Bandura, 1990). These sources of information include one’s own previous performance accomplishments, vicarious experiences of similar others, verbal persuasion by trusted others, and one’s own physiological or emotional state. Self-efficacy can be considered situationally

specific self-confidence.

The research literature on achievement motivation and mastery motivation have used the terms “perceived competence” and “perceived ability” to describe the perception that one has the ability to master a task resulting from cumulative interactions with the environment (Harter, 1978; Nicholls, 1984). Specifically in sport, Vealey (1986) used the term “sport confidence” to define the belief or degree of certainty that individuals possess about their ability to be successful in sport.

This chapter presents an overview of Bandura’s (1977) self-efficacy theory and collective efficacy, the achievement motivation theories of Harter (1978) and Nicholls (1984), and Vealey’s (1986) theory of Sport Confidence. Along with each of these overviews is a review of the related research literature in sport. Lastly, a discussion on the study of subjective meanings is presented along with Triandis’ (1972) antecedent-consequent approach for studying subjective cultures.

Self-efficacy Theory

Most of the self-confidence research in sport is derived from Bandura’s (1977) theory of self-efficacy. Studies have shown both

correlational and causal relationships between self-efficacy perceptions and motor performance. In addition, studies have shown that self-efficacy can be fostered or diminished under several different conditions (Feltz, 1988a). Self-efficacy is also regarded as an important sport psychology construct, not only by researchers, but also by coaches and athletes.

Self-efficacy theory was developed within social cognitive theory (Bandura, 1986) and poses self-efficacy as a common cognitive mechanism for mediating people's motivation, thought patterns, and behavior. Self-efficacy or self-confidence is defined as a person's belief about his or her ability to execute a task successfully. It also determines people's motivations as demonstrated in the choices they make, the challenges they pursue, the effort they expend to accomplish the chosen challenges, and the persistence with which they continue to strive toward those challenges.

Confidence beliefs are developed from a complex process of self-persuasion that relies on the cognitive processing of diverse sources of confidence information (Bandura, 1977). Bandura has outlined four sources of efficacy information which include

performance accomplishments, vicarious experiences, persuasion from significant others including self-persuasion, and emotional arousal or physiological states. Research has also shown causal evidence that perceived self-confidence contributes significantly to athletic performance (Feltz, 1982, 1988b; Feltz & Mugno, 1983; Garland, Weinberg, Bruya, & Jackson, 1988; McAuley, 1985). The model is shown in Figure 1.

Self-efficacy Research in Motor Performance

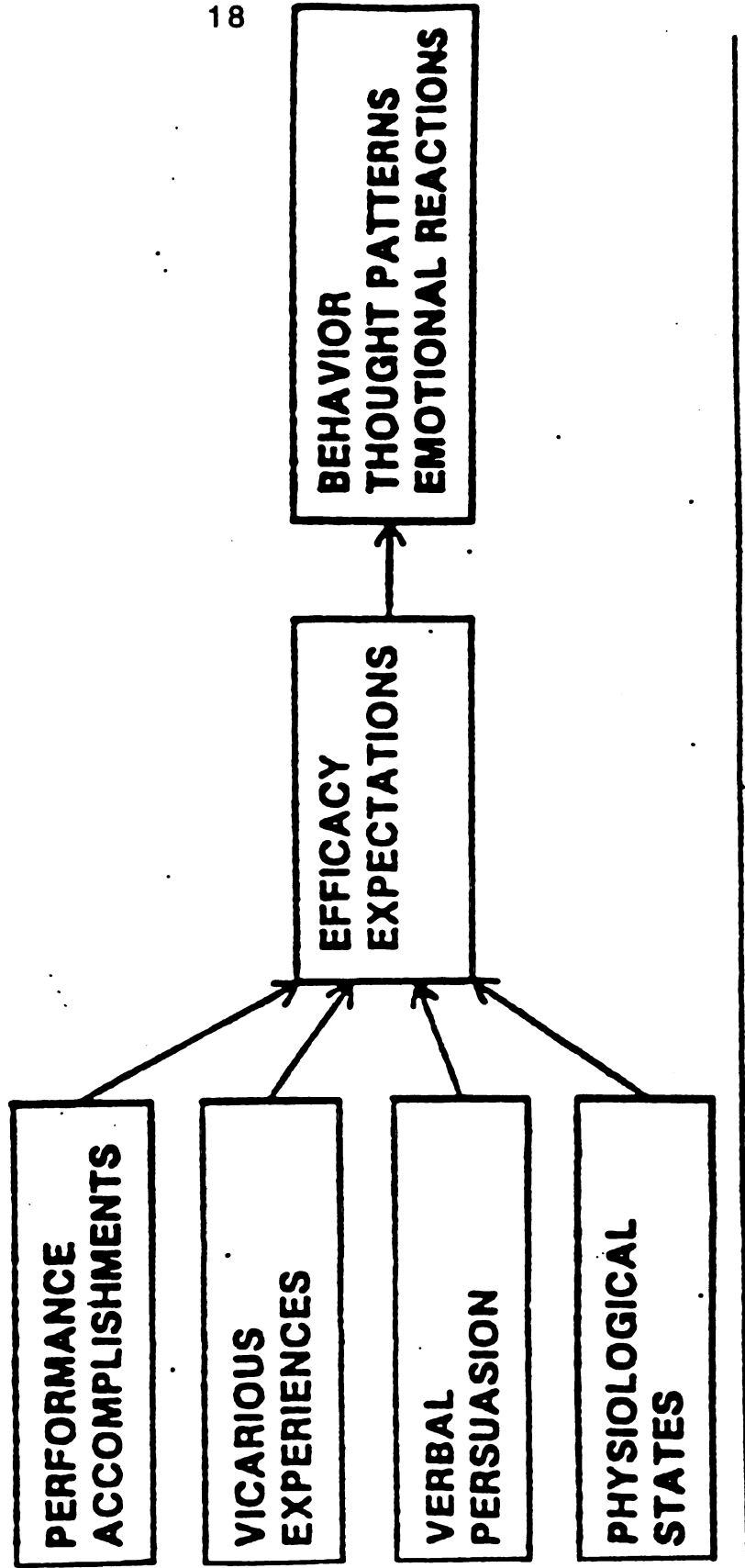
Performance Accomplishments

The strongest and most dependable source of efficacy information is past performance (Bandura, 1977). These are personal performance experiences that can be successes or failures. Experiences resulting in performance success will usually increase perceptions of self-efficacy; whereas, experiences resulting in failure will usually decrease perceptions of efficacy. Likewise, there exists a reciprocal relationship between self-efficacy and performance. Thus, higher perceptions of self-efficacy will lead to successful performance attainments, while low self-efficacy will lead to unsuccessful performances.

There are a number of additional factors that influence the

FIGURE 1

Relationship between major sources of efficacy information, efficacy expectations, and performance as predicted by Bandura's theory.



degree to which performance influences self-efficacy, such as the amount of effort exerted, the difficulty of the task, the pattern of the success or failure, and the amount of external assistance provided during the performance (Bandura, 1986). For example, the accomplishment of a simple task will not lead to heightened perceptions of self-efficacy; however, the accomplishment of a difficult task completed independently will greatly increase feelings of efficacy. In addition, studies have shown that early successes will increase perceptions of efficacy and increase persistence in the face of failure (Lyman, Prentice-Dunn, Wilson, & Bonfilio, 1984).

Research studies in motor performance regarding the effects of performance on efficacy show that perceptions of self-efficacy are generally influenced by performance accomplishments. In a study by Feltz, Landers, and Raeder (1979), support was given to Bandura's position that personal mastery experiences are the strongest source of efficacy information. In this study, subjects were assigned to one of three conditions, participant modeling, live modeling, or video taped modeling, for a high avoidance task, back diving. Results indicated that the participant modeling group, in

which subjects received physical guidance during practice of the task, performed better and had higher efficacies than subjects performing under either of the other two conditions.

In a similar experiment, McAuley (1985), gave further support to Bandura's hypothesis that performance accomplishments provide the strongest source of efficacy information. In this study, subjects were again assigned to one of three conditions: aided participant modeling in which subjects received visual and verbal feedback, as well as physical guidance through the task; unaided participant modeling where subjects received the visual and verbal feedback, but not the physical guidance; and a control condition where subjects viewed an irrelevant videotape. The task was to perform a standard yet high avoidance gymnastic stunt. Results showed that again the modeling groups performed better and had higher efficacies than the subjects under the control condition. Further, the aided modeling group performed significantly better than the unaided modeling group, but there was no difference in the efficacies of these two modeling groups.

Vicarious Experiences

Another source of efficacy information is vicarious

experiences, which involve the observation of others' mastery experiences (Bandura, 1977). Modeling is the technique or method most often examined in vicarious experience research. Research has shown that modeling improves motor performance (Carroll & Bandura, 1985; Feltz, 1982; Martens, Burwitz, & Zuckerman, 1976; McCullagh, 1986; McCullagh, 1987), and enhances self-efficacy perceptions (Feltz et al., 1979; George, Feltz, & Chase, 1992; Lirgg & Feltz, 1991; McAuley, 1985).

Modeling is especially important when observers have never performed the task. Studies have shown that both live and filmed models are effective providers of efficacy information (Feltz et al., 1979; Gould & Weiss, 1981; McAuley, 1985). In addition, model status and model competence are essential qualities of believable and effective models. Lirgg and Feltz (1991) found that subjects who observed a skilled model, regardless of model status, exhibited higher efficacies than subjects who observed an unskilled model.

Research has also shown that model similarity is an important component of effective modeling (Brown & Inouye, 1978; George et al., 1992; Gould & Weiss, 1981). Gould and Weiss (1981) examined the effects of model similarity on muscle endurance. In this

experiment, female subjects viewed either another female nonathlete (similar model), a male varsity track athlete (dissimilar model) perform a leg extension task. There was also a control group that viewed an irrelevant video tape. Results indicated that subjects who viewed similar models extended their legs significantly longer than subjects who viewed dissimilar models or control subjects.

The Gould and Weiss (1981) study raised the question of operationally defining model similarity and the ability to measure the degree to which subjects view themselves as similar to models. George and his colleagues (George et al., 1992) attempted to clarify this question. They found that model ability was the most important similarity cue among low-skilled female subjects, and that model gender was not a determinant of self-efficacy or performance. These findings suggest that the saliency of model characteristics may be dependent upon the kinds of tasks being performed, as well as the ability level of the observer.

Persuasion

Persuasory information affecting self-efficacy percepts is most often supplied through verbal persuasion from significant

others (Bandura, 1977). The credibility of the verbal information and the credibility of the person giving the information are highly important (Bandura, 1986). Therefore, it follows that an expert or other credible person giving verbal persuasion will increase the listener's self-efficacy. Bandura outlined other sources of persuasory information that included imagery, self-talk, "psyching up" strategies, and goal setting.

There has been little research that has directly measured the effect of persuasory information on motor performance. A few studies have examined "psyching up" strategies on strength performance (Shelton & Mahoney, 1978; Weinberg, Gould, & Jackson, 1979). Both of these studies found that "psyching up" enhanced strength performance, but neither study measured the subject's self-efficacy. These studies lend support to the notion that persuasory information, even if it is self-motivated such as self-talk or imagery, can have a positive influence on beliefs about motor performance, as well as the actual performance. Wilkes and Summers (1984) attempted to clarify the term "psyching-up." In this experiment, five different mental preparation conditions were used as cognitive preparation to a strength task: arousal, attention,

imagery, self-efficacy, and a control read condition. Results showed that preparatory arousal and self-efficacy produced significantly greater post-test strength performance than did the control condition.

Imagery is a strategy where individuals see themselves perform a task, thus persuading themselves that they can perform the task successfully. In vivo imagery consists of provoking thoughts in an individual's mind to produce a given emotion or other effect. Feltz and Riessinger (1990) conducted an experiment to examine the effects of in vivo imagery and performance feedback on self-efficacy and muscular endurance. Subjects were assigned to one of three conditions: mastery imagery plus feedback, feedback alone, or a control condition. Results indicated that subjects in the imagery plus feedback condition had significantly higher and stronger self-efficacy beliefs after each performance trial than the subjects in the feedback alone or control conditions. Subjects in the imagery plus feedback group also outperformed the other two groups, but only on the first performance trial. This study also asked subjects, via a post-experimental questionnaire, the basis for their self-efficacy judgments. The majority of subjects cited

performance accomplishments as the primary source of their self-efficacy beliefs, with only a small percentage that cited persuasory information. Therefore, the degree to which persuasory information is a salient source of efficacy information is still in question.

Emotional Arousal and Physiological States

Other sources of efficacy information are emotional arousal and physiological states. Bandura (1986) states that it is the person's interpretation of the arousal that leads to the efficacy expectation. The interpretation of increased arousal as beneficial to performance will most likely lead individuals to increase their self-efficacy and likewise their performance. Conversely, interpretations of increased arousal as fear or self-doubt will cause individuals to lower their self-efficacy and will deter their performance. Several factors also determine the effect of arousal upon self-efficacy and performance, such as past experience with arousal related to performance and the circumstances under which the arousal is elicited (Bandura, 1986).

The relationship between self-efficacy and arousal is hypothesized to be a reciprocal one (Bandura, 1986). Arousal is considered both a source of self-efficacy information and a co-

effect with behavior (Feltz, 1982). Therefore, arousal should influence self-efficacy beliefs, which in turn, should effect future assessments of arousal.

Research studies in the area of emotional arousal in motor performance, however, show equivocal results. Feltz (1982) found, through path analysis, that actual heart rate was not a significant indicator of self-efficacy or performance on a high avoidance task, back diving. However, Feltz and Mugno (1983) replicated and extended the previous study and again found that actual heart rate was not an indicator of self-efficacy or performance, but that perceived arousal was a significant indicator of self-efficacy on all four back dive attempts. Furthermore, the researchers found that lower levels of perceived autonomic arousal corresponded to higher efficacy beliefs.

In addition to emotional arousal, other physiological states are also posed as sources of efficacy information (Bandura, 1986). The cognitive interpretation of physiological states may influence perceptions of self-efficacy. Fatigue, fitness levels, and pain may be perceived as indicators of inefficacy (Feltz, 1988b). This may be especially relevant in strength and endurance tasks, where increased

levels of fatigue and pain lead to beliefs of diminished physical capacities, and thus lower self-efficacy beliefs (Bandura, 1986). Further, these lowered efficacy beliefs may lead to reduced effort focused on the task and a reduced persistence to complete the task. This hypothesis, however, has not yet been tested experimentally in the sport and motor performance literature.

Closely related to physiological states are mood states. Kavanagh and Bower (1985) found that positive mood states led to higher judgments of capabilities than did neutral mood states, while negative mood states were associated with lower efficacy expectations. In another study, Kavanagh and Hausfeld (1986) used a handgrip strength task to determine the effect of mood state on self-efficacy and performance. They found no consistent effect for a happy or sad mood state on subjects' efficacy beliefs. However, mood was found to have a significant relationship to handgrip strength performance.

Multiple Sources of Efficacy Information

The degree to which subjects draw their efficacy information from different sources has also been examined in sport science research. Feltz and Riessinger (1990) conducted an experiment

where subjects competed against confederates in a muscular endurance task with the benefit of performance feedback, in vivo emotive imagery, or both. Prior to the muscular endurance manipulation, subjects were asked about their initial self-efficacy and their comparative efficacy beliefs to out perform their confederates. The results indicated that 86% of the subjects based their initial self-efficacy beliefs on personal performance accomplishments. The other subjects initial efficacy beliefs were as follows: 9% were based on physiological states, 8% on persuasion, 1.5% on vicarious experiences, and 5% could not be determined. Conversely, subjects based their comparative efficacy beliefs as follows: 57% were based on past performance accomplishments, 38% on vicarious information, 3% on physiological states, 2% on persuasive information, and 2% could not be determined.

Chase, Feltz, Tully, and Lirgg (1994) conducted a study that examined athletes' sources of efficacy. Efficacy ratings were gathered from 34 female basketball players, from three different teams, prior to 12 different games. The results indicated that the different sources of efficacy varied across teams. For example,

members of Team 1 based their efficacy beliefs as follows: 41% from past performance, 35% from physiological or emotional factors, 15% from vicarious experiences, 6% from verbal persuasion, and 9% from other sources. The other teams attributed their efficacy judgments to the four sources in a slightly different manner. Past performance always produced the highest percentage of efficacy beliefs and physiological or emotional factors were always second, while vicarious experiences and verbal persuasion occasionally switched between third and fourth. Further, this study considered to what extent an athlete draws efficacy information from two or more sources at once. Multiple sources accounted for 24% of the total comments for individual efficacy and 28% of the total comments for collective efficacy. Therefore, it appears athletes draw from multiple efficacy sources approximately one fourth of the time to formulate one efficacy belief.

Causal Examination of Self-Efficacy

Research examining the sources of efficacy has demonstrated a positive influence from the four sources on individual efficacy beliefs for motor performance. This research also supports Bandura's (1977) theory of self-efficacy. However, little research

has been conducted to investigate the cause or directionality of self-efficacy theory. The studies that have been done in this area have examined the effects that selected sources of efficacy information might exert on performance and are mediated through one's perceptions of self-efficacy. This research has found support for a mediational role for self-efficacy on motor performance tasks, but not one that accounts for all behavior change in motor performance (Feltz, 1982, 1988a; Feltz & Mugno, 1983; George, 1994; McAuley, 1985).

Feltz (1982) conducted a path analysis to compare Bandura's theory of self-efficacy to an anxiety based model where anxiety was posited as the mediating construct that influenced self-efficacy and performance. No causal role for self-efficacy was included. Subjects performed a back-diving task across four trials. Results gave little support to either model. Self-efficacy was the major predictor of behavior on the first diving attempt. However; after Trial 1, performance on a previous trial was the major predictor of performance on the next trials. Furthermore, although a reciprocal relationship between self-efficacy and diving behavior was evidenced, they were not equally reciprocal. As subjects progressed

over trials, diving performance became a stronger influence on self-efficacy than self-efficacy became on diving behavior. Later, Feltz and Mugno (1983) replicated the study and added autonomic perception as a measure of physiological arousal. The results were again the same; self-efficacy was the strongest predictor of performance, but only on the first trial.

McAuley (1985) conducted a path analysis which examined the effects of modeling on self-efficacy in gymnastics. Results indicated that participant modeling and traditional modeling influenced self-efficacy which, in turn, influenced performance as predicted by Bandura's (1977) theory. In addition, however, McAuley found that treatment effects also exerted a direct effect on performance. In fact, the treatment-performance path was stronger than the efficacy-performance path.

Path analysis techniques have shown that self-efficacy is a major predictor of performance (Feltz, 1988a). The previous studies have demonstrated a causal link between self-efficacy and performance, although treatment effects and past performance effects are also linked to performance. Feltz and Mugno (1983) proposed a revised efficacy model to help account for the various

effects. The revised model included both self-efficacy and past performance as predictors of performance. The revised model was supported in terms of self-efficacy and past performance predicting performance.

Collective Efficacy

The theories and literature discussed to this point were conceived and researched as ways to study self-confidence at the individual level of behavior. Sport science has borrowed ideas, from Bandura's (1977) self-efficacy theory to study self-efficacy in sport and motor performance. However in many sports, individuals perform as members of teams rather than just as individuals. Recently, sport psychology researchers have begun to use Bandura's (1986) concept of collective or team efficacy to investigate the antecedents and effects of collective efficacy on team performance.

There has been substantially less research on the topic of collective efficacy than there has been on self-efficacy within and outside of sport. One study to investigate collective efficacy (Feltz et al., 1989) examined the effects of team performance on self-efficacy and team efficacy using six collegiate hockey teams observed over the course of a 32-game season. Results indicated a

significant difference between winners' and losers' team efficacy scores; however, individual efficacy was not effected. Team efficacy increased after a win and decreased after a loss more than did individual efficacy beliefs.

Spink (1990) conducted a collective efficacy study that examined the relationship between group cohesion and collective efficacy. Spink hypothesized that collective efficacy, assessed from team members' expectations to place in a volleyball tournament, would be associated with task components of group cohesion rather than social components. Results showed that elite high collective efficacy volleyball teams were differentiated on group cohesion measures, individual attractions to group (related to the task) and group interaction (related to the athletes), from elite low confidence teams. There was no significant relationship for recreational volleyball teams. In addition, the results indicated that high collective efficacy teams placed higher in the subsequent volleyball tournament than low collective efficacy teams.

Hodges and Carron (1992) also investigated the effects of collective efficacy. A muscular strength task where triads of subjects held a medicine ball over head for as long as possible was

used for this experiment. The authors manipulated the groups so that they would compete against confederates who were said to have performed either superiorly or inferiorly during the pretest. The experiment was fixed so that the experimental group always failed against the confederate group. Results demonstrated that high-collective efficacy groups increased performance following failure, while low-collective efficacy groups decreased in performance.

In addition, as previously mentioned, Chase et al. (1994) examined sources of individual and team efficacy information in women collegiate basketball players. Although there were some differences between individual and team efficacy sources, athletes individually and collectively based their beliefs predominantly on past performance and physiological states. For individual efficacy past performance and physiological and emotional states accounted for 48% and 35%, respectively, of the total comments. Collective efficacy accounted for 42% and 37%, respectively, of the total comments. Further, verbal persuasion accounted for the smallest percentage of efficacy beliefs, only 4% for both individual and collective efficacies.

The construct of team efficacy or team confidence is still in

its early stages in terms of understanding its antecedents and its relationship to team performance. Further study of the subjective meanings of team confidence will hopefully be helpful in designing interventions to enhance confidence among athletic teams.

Harter's and Nicholls' Perceived Ability Theories

Two other theories that attempt to explain how individuals gain perceptions of ability are Harter's (1978) perceived competence theory and Nicholls' (1984) achievement orientation theory. Harter's perceived competence theory attempts to explain achievement and mastery motivation (Harter, 1978). The theory is based in drive theory and employs socialization and affective processes to account for the development of the sense of competence and subsequent behavior. Harter defines perceived competence as the sense one has of his or her ability to master a task resulting from cumulative interactions with the environment.

Harter views perceived competence as a multidimensional motive, containing three domains: cognitive, social, and physical (Harter, 1978). The cognitive domain involves school and academic performance. The social domain is concerned with issues of popularity with one's peers. The physical domain emphasizes

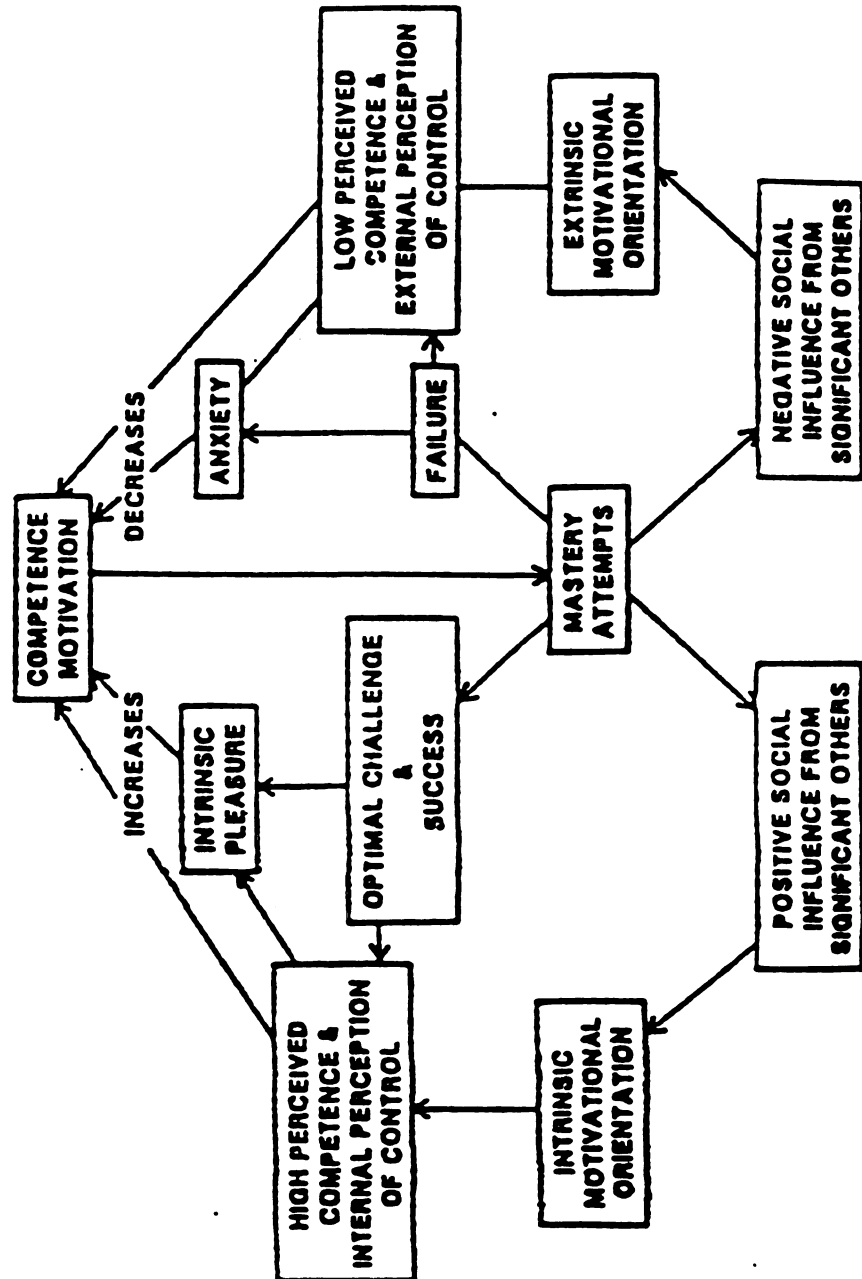
perceived ability at sports and outdoor games. In addition to the three domains, Harter's model also includes implications of failure as well as success, socializing agents, reinforcement effects, and motivational orientations on one's perceived competence. Harter's model is presented in Figure 2.

Perceived competence theory states that mastery attempts in specific domains result in success or failure and are evaluated by significant others (Harter, 1978). Success contains an element of optimal challenge which, if met, leads to perceived competence and intrinsic pleasure. Approval by significant others also leads to perceived competence; however, as a child matures the need for this approval diminishes. Conversely, failure results in a lack of perceived competence, more anxiety towards mastery situations, and decreased intrinsic motivation to pursue mastery attempts. Harter maintains that perceived competence is developed gradually through prolonged interactions with the environment and as a result of reinforcement from significant others. Further, she contends that the need for external approval and perceptions of control do not diminish as the child develops.

Nicholls' (1984) theory is based in attribution theory, using

FIGURE 2

Harter's version of White's competence motivation theory. (From Weiss, M.R. Self-esteem and achievement in children's sport and physical activity. In Gould, D., and M. Weiss [eds.]. Advances in Pediatric Sport Sciences, Vol. 2: Behavioral Issues. Champaign, Ill.: Human Kinetics, Press, 1987, pp. 87-119.)



causal judgments to explain the cognitions involved in developing a sense of competence. He contends that the primary assumption is that one is motivated by a desire to attribute a high level of ability to oneself and to avoid demonstrating a low level of ability. Thus, Nicholls' model is concerned with the meaning of ability or how ability is perceived in relation to performance and persistence in achievement situations.

Nicholls' (1984) theory conceptualizes two types of ability. First, ego-involved ability, which can be thought of in the same way as extrinsic motivation orientation from Harter's (1978) theory. Second, task ability, which can be likened to the intrinsic motivation orientation from Harter's (1978) theory.

Perceived Competence or Ability Research in Motor Performance

Most of the research conducted in the perceived competence area is concerned with the issues of participant status and youth sport dropouts. Several studies found that older youth sport participants (9 to 11 years of age) were higher in perceived physical competence than same-age nonparticipants (Feltz & Petlichkoff, 1983; Klint, 1985; Klint & Weiss, 1987; Roberts, Kleiber, & Duda, 1981; Ulrich, 1987). It was also found that younger participants (5

to 9 years of age) were just as high in perceived physical competence as the older youth sport participants (Ulrich, 1987). Further, Feltz and Petlichkoff (1983) found that interscholastic sport participants were higher in perceived physical competence than youth sport dropouts. Likewise, youth wrestlers were found to be higher in perceived physical competence than dropouts (Burton & Martens, 1986).

Perceived competence theories, proposed by Harter and Nicholls, contend that a youth sport participant faced with continual failure will become discouraged. Research has not supported this aspect of the theories. Investigators have found nonsignificant or only low relationships between years of participation and perceived physical competence (Feltz & Brown, 1984; Feltz & Petlichkoff, 1983; Roberts, Kleiber, & Duda, 1981). This seems to contradict the theories; however, a lack of relationship between experience and perceived competence may be explained by an examination of Harter's perceived competence questionnaire, which measures physical competence compared to one's peers. Thus, the reason for the low relationships may be due to the relativity of the questionnaire since one's peers would also be participating, gaining

experience, and therefore physical competence as well. Ulrich (1987) found that as children's ages increased, their perceived physical competence decreased, but their actual motor competence increased.

Several researchers have also investigated the relationship between perceived physical competence and actual skill (Feltz & Brown, 1984; Horn, 1985; Ulrich, 1987; Weiss, Breidemeier, & Shewchuk, 1986). These studies found significant relationships between perceived physical competence or sport-specific competence and skill, suggesting that skill is an integral part of perceived physical competence. The study by Feltz and Brown (1984) established significant positive relationships between perceived physical competence and soccer skill as well as perceived soccer competence and soccer skill. The authors added that the perceived sport-specific competence was only slightly better than the perceived physical competence at predicting actual soccer skill.

Research in the area of perceived ability has shown two other important informational aspects in regard to the models proposed by Harter and Nicholls. First, Horn and Hasbrook (1986) provided more information concerning sources of perceived competence than Harter

herself had originally proposed. Horn and Hasbrook showed that younger children (8-11 years old) rated feedback from significant others and performance outcome as more important than social comparison sources, which older children (12-14 years old) rated as more important. Further, feedback from coaches was shown to be an influential source of perceived physical competence. Secondly, Duda (1985) examined the goal orientations of children's perceived ability. She found that Anglo males viewed ego-involved tasks as the preferred means for success and particularly under individual circumstances. This result indicated that not only did males prefer to display their success in the form of superior ability over an opponent, but they also preferred to display that superiority as an individual rather than as a member of a team. Males want to avoid onlookers from attributing their teammates with ability and not attributing them as having ability also. Anglo females stressed task-involved environments in which to succeed, especially individually. In other words, females preferred to display their success as a result of effort in an individual task. In fact, for the domain of sport, Anglo males were the only group with a preference for ego-involved success, the three other groups; Anglo females,

Mexican-American males, and Mexican-American females, stressed task-involved success. Anglo females did rate group ego-involved means of success for sport as an important goal orientation.

Sport Confidence

Sport Confidence, proposed by Vealey (1986), attempted to operationalize self-confidence in sport situations. Sport confidence, defined as one's belief in his or her ability to be successful in sport, is an interactional, sport-specific model of self-confidence that consists of three components. The first component, is Sport Confidence-trait (SC-trait), represents people's more consistent belief about their ability to be successful in sport. Personality traits are consistent in individuals and it is believed that an individual has a consistent disposition to a certain level of self-confidence in sport. The second component of Vealey's (1986) model is Sport Confidence-state (SC-state). SC-state represents people's belief about their ability to be successful in sport at one particular moment in time. The third component is a competitive orientation construct, which is a dispositional construct that indicates one's tendency to accomplish certain types of goals in sport situations that will demonstrate competence. Two goal

orientations were established by Vealey (1986) (a) performing well and (b) winning. Feltz (1988b) likened performing well to Nicholl's (1984) task ability orientation and winning to his ego-involved ability concept. The model is presented in Figure 3.

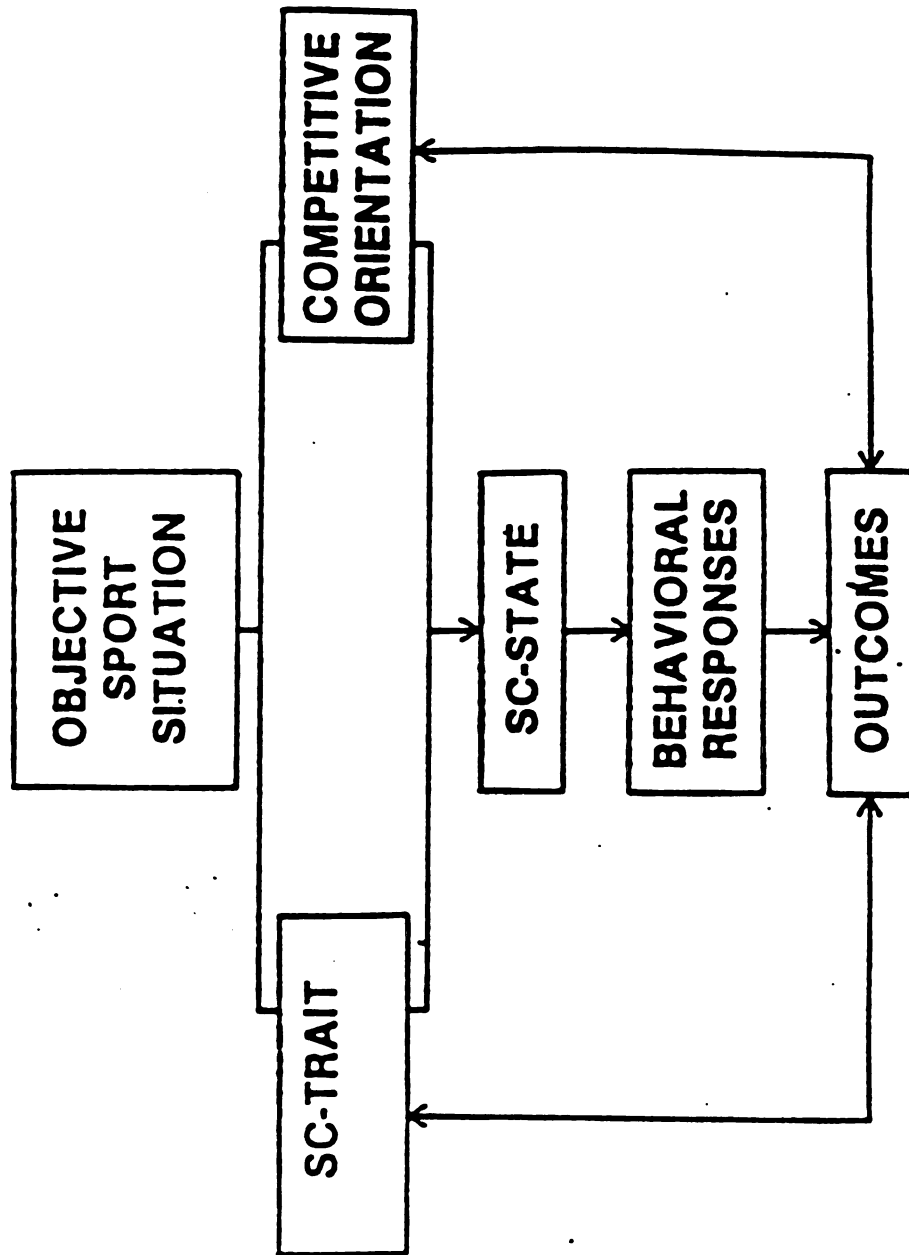
Sport Confidence Research in Motor Performance

The only published research article on the sport confidence model has been Vealey's (1986) original conceptualization and instrument validation. Her results indicated that SC-trait and competitive orientation were significant predictors of SC-state as well as several subjective outcomes, such as internal attributions, (consisting of scores for ability, effort, and readiness for competition), performance rating, performance satisfaction, and perceived success. In addition, performance did predict postcompetition SC-state. However, contrary to the model, precompetition SC-state did not predict performance, nor was there a significant correlation between performance and SC-trait.

These four theories contain several common psychological constructs. Past performance is evident in all the theories as it provides feedback to athletes regarding their ability and effort. Self-efficacy theory identifies performance accomplishments as a

FIGURE 3

Conceptual model of sport confidence. (From Vealey, R. Conceptualization of sport-confidence and competitive orientation: Preliminary investigation and instrument development. J. Sport Psychol. 8:211-246, 1986.)



source of efficacy information; sport confidence theory identifies performance satisfaction; and the perceived ability theories base the conception of competence and continued participation on personal mastery attempts. Another common psychological construct is the involvement of significant others in providing another form of feedback. Self-efficacy theory regards persuasory information as another source of efficacy information. This information provides feedback to athletes regarding their performance which can bolster their confidence. The perceived ability theories propose that one receives feedback from others following mastery attempts. This feedback can be either positive or negative. Sport confidence theory does not outline the use of feedback from significant others; however, it does ask athletes to make comparisons for which prior comparative feedback is necessary. Finally, these four theories involve intrinsic and extrinsic motivation. Self-efficacy theory establishes choice as the ingredient of motivation, which is followed by the effort and persistence to carry out that choice. The perceived ability theories propose that, from personal mastery attempts, athletes will gain or lose intrinsic or extrinsic motivation which will then relate to their

participation status. Sport confidence theory, again does not describe intrinsic and extrinsic motivational components, but uses the concepts of performing well (intrinsic) and winning (extrinsic) which have similar meanings and purposes to intrinsic and extrinsic orientations.

These four theories also contain some common components. Ability can be found in all four of the theories. Sport confidence theory contains a measure of ability; the perceived ability theories relate ability to a perception of control factor; and self-efficacy theory manifests ability in the form of performance accomplishments. Effort can be found in self-efficacy and sport confidence theories, while persistence is a component of self-efficacy and perceived ability theory. What is not well understood is what are the most salient subjective meanings of self-confidence for athletes.

The Study of Subjective Meaning

Some of the most challenging and intriguing questions our society faces are questions of meaning. "What did you mean by that?", or "But, what does that really mean?" are questions that quite often leave us searching for words to further explain

ourselves. The core to the meaning of confidence is no less difficult to answer.

Subjective meanings are the definitions that groups of people, such as age groups, gender groups, and cultural groups, give to certain words (Osgood, Miron, & May, 1975). Subjective meaning, sometimes referred to as connotative or affective meaning also involves the attitudes and emotions speakers give to words (Kess, 1976). Groups create connotative or subjective meanings naturally through the communication process. Since communication via a symbolic linguistic system is evident by every culture in the world, we must be able to overcome communication biases or lapses due to groupings and be able to understand one another. Therefore, in order to better understand different groups of people, it is imperative to understand the structure, pattern, and subjective meaning of words and language for different groups. Researchers such as Osgood and Triandis, who have focused on cross-cultural aspects of communication, believe it is necessary to evaluate subjective meanings to allow groups to better understand and communicate with all the cultures of the world.

The first technique used to differentiate subjective meanings

of words across culture was the semantic differential technique (Osgood, et al., 1975). It was believed that knowing the perceived distance between words by groups of people provided insight to the meaning of words through a creation of a context or a concept and led to a better understanding of the group as a whole. Next, a couple of studies were conducted that examined the existence and nature of an adjective structure (Osgood, et al., 1957). Adjectives were selected in a restricted word-association task. The results indicated that the total variance was accounted for by three factors that were labeled evaluation, potency, and activity. These factors were merely categories of word pairs such as good-bad and kind-cruel that characterized evaluation; hard-soft and weak-strong were examples for potency; and slow-fast and active-passive were examples for activity (Kess, 1976). These three factors accounted for approximately 50% of the total subject by concept variance (Osgood, et al., 1975).

The semantic differential and word-association techniques gave way to more open-ended response techniques, such as Triandis' (1972) antecedent-consequent approach. Open-ended response formats eliminated the initial bias assumed with linguistic methods

such as the semantic differential technique. Subjects, in an open-ended format, enjoy the freedom to express their exact meaning and thus will provide a clearer representation of meaning for the concepts or words being studied.

Subjective Meanings in Subjective Cultures

Subjective culture is a term that refers to a cultural group's characteristic way of perceiving the human-made part of its social environment (Triandis, 1972). The study of subjective culture is concerned with worldwide characteristics of people, societies, and social contexts, as well as the idiosyncracies that exist in each group. Triandis (1972) refers to consistencies between cultures as pancultural characteristics, while differences between cultures are referred to as culture-specific characteristics. When similar patterns of behavior, attitudes, and interpersonal interaction from one culture differ from similar patterns of behavior, attitudes, and interpersonal interaction from another culture, the existence of a subjective culture is inferred.

Subjective cultures exist not only in strict cultural contexts, but also in many other areas where there is human interaction and interpersonal behavior (Triandis, 1972). For example, studies have

been conducted that indicate that there exist two distinct subjective cultures between Americans and Greeks in their values. Americans value money and work and that is shown in how they work as extremely goal-oriented individuals. Greeks, on the other hand, value family and interpersonal interaction and this is evident in their behavior when they choose to neglect work in favor of family and social occasions.

Triandis (1972) formalized a method for studying group differences. An open-ended questionnaire was used to examine certain characteristics of different subjective cultures. Then the responses from the first group were used to make a second closed-ended questionnaire. This questionnaire forced a new group of subjects to choose the most appropriate response. When there was consistency between the responses of the first and second groups, it was concluded that those were pancultural characteristics. Likewise, when differences occurred, it was inferred that separate subjective cultures existed.

In Triandis' (1972) study, 100 males were recruited from each of the following four cultures: students at the University of Illinois Urbana-Champaign, students of Athens Greece, students of the

Agricultural University in Bangalore, India, and students of Gakushuin University in Tokyo, Japan. These subjects provided Triandis with a total of 6000 antecedents and 6000 consequents for 20 concepts that were posed to them in the form of an open-ended questionnaire. Next the second, closed-ended questionnaire was developed. Triandis chose five culture common words, five American-unique words, five Greek-unique words, five Indian-unique words, five Japanese-unique words, and five hunch words for each of the 20 concepts. Then the Phase 2 questionnaire was constructed with six sets of words. One word from each of the six culture categories was in each set. Phase 2 used 360 subjects from each of the four culture groups. Subjects were required to indicate the response that most accurately represented their beliefs about the concept in question. The antecedents and consequents were not thought of as “true” causal antecedents and effects in that they did not necessarily precede or follow the concept in time. Rather the antecedents and consequents were thought of as supplying the subjective meaning of the concept.

One of the concepts in question was courage. The results of the Triandis (1972) study indicated that bravery, idealism,

leadership, power of determination, *self-confidence*, strength, and willpower were frequent antecedents of COURAGE in most cultures. Further, character and dedication were American antecedents that were under chosen by other cultures. Likewise, Indians emphasized tact, a stable mind, and encouragement, while the Japanese emphasized justice and love as an internal bases for COURAGE. The consequents of COURAGE for all cultures were bravery, progress, strength, success, and victory. Similarly, as with the antecedents, each culture varied in their consequents of COURAGE. Respect, faith, and honor were American terms. Job success and bypassing difficulties were Greek terms. Fame, honor, and praise were Indian terms. Fearlessness was a Japanese term.

Another concept in question was that of SUCCESS. All cultures agreed that SUCCESS had great value and was characterized by words such as, ability, cooperation, courage, effort, patience, planning, preparation, and willpower. Individually, Americans ranked hard work and ability as most important, whereas the Greeks favored patience and willpower, the Indians, tact and leadership, and the Japanese, effort and willpower. Happiness, increased aspiration level, joy, satisfaction, and *self-confidence* are the consequents of

SUCCESS for all cultures. Again cultures tended to emphasize different terms: Americans emphasized achievement, pride, and respect; Greeks emphasized love; Indians emphasized fame, social distinction, prominence, and respect; while the Japanese emphasized social prominence and respect.

Gender as a Subjective Culture

Men and women in this country like many other countries in the world engage in similar activities, such as work and play. However, they have been socialized to do these activities differently than the opposite sex. An adolescent male who excels in an area other than athletics, such as drama, choir, or band is ridiculed by his male peers for taking on what is still considered a feminine task.

Likewise, an adolescent female who excels in math, science, or athletics is teased by her peers. Since these are areas that have been dominated by men for a long time, there is a negative stigma associated with women who are successful in these fields. For example, athletic women are often labeled as ugly, or women involved with careers in math and science are still believed to be not as competent as their respective men counterparts. Recent history has shown a number of women recipients of the Noble Prize

in math or science, as well as an increase in the number of female doctors and engineers. Thus, it becomes clear that men and women are both willing, able, and capable to perform these various duties or roles; however, due to the differences in the values, attitudes, and beliefs of the majority within our society, there exist separate sex roles. Thus, through the socialization process men and women have been conditioned to value and think differently about certain aspects of life. Therefore, gender is an inferred subjective culture.

Research has been conducted in the area of gender that provides evidence that males and females differ in several psychological constructs. Ewing (1981) conducted a study using the Triandis (1972) approach, to examine the ways in which high school children defined success and failure in general and in a sport setting. The results indicated that there did exist gender differences in the way children defined success and failure in both a general setting and a sport setting. Further, Lenny (1977) found gender differences in confidence. These gender differences were readily apparent when the task was masculine, competitive, or the feedback was ambiguous.

To further analyze gender differences in self-confidence, Lirgg

(1991) conducted a meta-analysis. She found an overall effect size of 0.40 which favored males, thus, indicating that males were more confident than females. However, this effect size was not homogeneous, meaning that the effect sizes varied greatly from one study to the next. Therefore, she could make no conclusion regarding the magnitude of gender differences in self-confidence. This result seems to support previous research that demonstrated male overconfidence. Feltz (1988a) found that males provided a varied, but sometimes bogus gender difference in self-confidence. The study used a modified back dive to measure confidence relative to performance. She found that males who avoided the task most overrated their efficacy beliefs the most.

It is possible that self-confidence has a different meaning for males than for females. Women may interpret confidence as having a “cocky” or “boastful” component to it that may make striving for it less appealing. Although women may define self-confidence differently from men, in general, women and men athletes may be more alike than different because they share a common culture of competition.

Researchers of subjective meaning attempt to understand the

structure, pattern, and perceptual components of words, concepts, and language for different groups. This research has centered primarily on work with word-associations and semantic differential techniques. Out of this research pertaining to meaning came research that examined the meanings of concepts, such as success and failure. Several of these studies used Triandis' (1972) antecedent-consequent approach to solicit open-ended responses from subjects. These open-ended responses proved vital to developing definitions of psychological concepts which were found to differ among various cultures and among males and females.

The study of subjective meaning of self and team confidence may also prove useful in understanding motivation in athletes. By examining what constitutes the subjective meaning of confidence for athletes, researchers may better understand the relationship between this concept and motivational behavior within the sport contexts of team and individual sports and within gender.

Chapter 3

METHOD

This study examined consistencies and inconsistencies that may exist between male and female athletes in their interpretations of self and team confidence. In addition, the differences that may exist in how athletes perceive self-confidence versus team confidence were examined as well as how high-confident versus low-confident athletes perceived the meaning of confidence. The methodology used to collect these data included two phases. The first phase used an open-ended questionnaire to gather antecedents and consequents of self-confidence and team confidence. The second phase consisted of a closed-ended questionnaire, that used the most frequent responses obtained in Phase 1 as forced choices in Phase 2.

Phase 1

Subjects and Design

In the first phase, 178 subjects were solicited from intercollegiate athletic teams. The author tried to obtain equal numbers of male and female athletes from individual and team sports. In Phase 1, 92 male athletes and 86 female athletes were surveyed. Further breakdown of those numbers revealed that 96

subjects participated in team sports and 82 participated in individual sports. All subjects were administered the questionnaires either before or after a normal team practice. In Phase 1, seven teams were competing in their primary season, while three teams were in their competitive off seasons. In addition, only Division I, non-revenue sports teams participated in the study. Finally, when a team was asked to participate, the entire team was included, not just certain members, such as the starting team. These factors were kept as consistent as possible from the subject sample in the first phase to the subject sample in the second phase. All subjects were volunteers.

The first phase used an open-ended, sport-specific questionnaire that asked subjects to supply three antecedents and three consequents of self-confidence and team confidence in sport.

The following four questions were asked:

(1) If you have _____, then you have confidence to perform successfully in your sport.

(2) If you have confidence to perform successfully in your sport, then you have _____.

(3) If your team has _____, then your team has confidence

in their ability to perform successfully in your sport.

(4) If your team has confidence to perform successfully in your sport, then your team has _____. A pilot study conducted on students in activity classes showed that the open-ended questionnaire was understandable and able to be completed in a short amount of time. (See Appendix A for the complete questionnaire.)

In addition to the open-ended questionnaire, subjects completed a demographic questionnaire (See Appendix B). This questionnaire was designed to add insight to the factors that may have had an influence on the athlete's self and team confidence that were mentioned in Chapter 1, such as family, hometown, and past experiences.

Procedure

The consent procedure consisted of, first, obtaining formal consent from UCHRIS (See Appendix C). Secondly, permission was obtained from the head coach to visit a practice to recruit athletes for the study. Thirdly, written consent of each individual athlete was obtained following an explanation of the purpose and the methods of the study, as well as their rights as a volunteer subject.

Athletes were given the questionnaire in a group setting. All athletes present at that group setting were asked to participate. This included walk-on athletes as well as athletes that were sidelined from competition due to injury or academic probation. In addition, athletes who were not at practice on a team's testing day were not contacted to participate in order to preserve their anonymity.

This study did not necessitate that the questionnaire be completed during the playing season of any sport. Therefore, it was given at the time most convenient for the coach and athletes on a particular team. Likewise, the author was careful to balance the number of subjects who participated during their competitive season with the number who participated during their off-season.

The instructions informed participants of their responsibility to provide three responses for each of the questions on the questionnaire. Participants were also informed that it was not a test of intelligence and that the results would only be reported as group findings. Further, each questionnaire had these instructions printed on it and the author was present to administer them.

Treatment of the Data

The data were tabulated by frequency of responses. First, the data were categorized into male versus female responses. A list of responses for each of the four questions (antecedent-self-confidence, consequent-self-confidence, antecedent-team confidence, consequent-team confidence) was completed and responses were listed in descending order from most frequent to least frequent (See Appendix D). Next, the data were categorized into responses that were unique to male athletes, unique to female athletes, and common to both male and female athletes. Unique words had to show marked importance in one group over the other. It was deemed more significant for a word to be written on an open-ended questionnaire 10 times more from one group than another, than it was for one group to write a response 3 times and the other group not mention the word at all. For this reason, words referred to as male or female unique words may not have been unique in the true sense of the word. The established rule was that if one gender group cited a term six times or more than the other gender group it could be selected as a unique term for that gender. The author then selected the three most frequent responses from each of those three

categories (unique male, unique female, and common). After those responses were selected, the author chose three hunch responses from the lists. A hunch response was a response that occurred with some regularity, but was not a word that was selected as one of the three most frequent responses in the other categories. Further, a hunch word had to fit the theoretical paradigms under which this study was conducted (e.g., self-efficacy, achievement motivation, sport confidence). This process was repeated for each of the four questions in the questionnaire (See Appendix D). Once the most frequent responses were deciphered, the new questionnaire for Phase 2 was constructed (See Appendix F).

Phase 2

Subjects and Design

The second phase of this study formally tested the differences that were hypothesized to exist between the genders regarding their definitions of self and team confidence. Subjects were drawn from the same two universities as subjects from the first phase, but different intercollegiate athletic teams were asked to participate. The author again tried to obtain equal numbers of male and female athletes, 81 and 89 respectively, as well as individual and team

sport athletes. Each of these groups contained 85 subjects. As in the first phase, only Division I non-revenue athletes were recruited for this study. The one exception to this rule was a male team sport that competed at the club level and had been very competitive for the past 6 years, placing at the National Club tournament for the past 5 years. Also, this phase contained six teams in their primary competitive seasons and five in their competitive off seasons. The procedure to administer the questionnaires was identical to the procedure used in the first phase. Also, the confidence questions were the same four questions from the questionnaire used in Phase 1. However in Phase 2, the subjects were provided with responses. As an example, for the question, "If your team has confidence to perform successfully in your sport, then your team has _____.", the choices were as follows:

A.

- | | |
|---------------------|--|
| 1) unity _____ | (most frequent response common to both male and female athletes) |
| 2) ability _____ | (most frequent response unique to male athletes) |
| 3) success _____ | (most frequent response unique to female athletes) |
| 4) work ethic _____ | (hunch response) |

B.

- | | |
|----------------|---|
| 1) pride _____ | (second most frequent response common to both male and female athletes) |
|----------------|---|

- 2) strength _____ (second most frequent response unique to male athletes)
- 3) determination _____ (second most frequent response unique to female athletes)
- 4) assurance _____ (second hunch response)

The author had three sets, an A, B, and C set, of closed-ended responses for each of the four confidence questions (See Appendix F). The subjects were asked to choose the most appropriate response to fit their beliefs about confidence. Subjects chose one response from each of the three sets of responses for each question. Further, the order of closed-ended responses and the order of the sets of responses were randomized.

In addition to the confidence questionnaire, subjects also completed the same demographic questionnaire as subjects who participated in the first phase. Additionally, subjects in the second phase provided information about their perceived confidence. They were asked how many members were on their team and their perceived confidence team rank (See Appendix G). Subjects were instructed to provide a single number to indicate their team rank, with 1 being the most confident athlete on the team. Since athletes were asked to rank their perceived self-confidence relative to their teammates, who varied in number across teams, it was necessary to

standardize the rankings in order to select the high and low confidence groups for the entire subject sample for Phase 2. A proportion using the information provided by each subject was used to create a standardized proportion for the level of confidence for each athlete. After this new variable was created, the top and bottom 25% of the entire subject sample for Phase 2 was determined.

Treatment of Data

Phase 2 employed two primary statistical methods of data analysis to make comparisons of the 10 research questions, presented in Chapter 1, that directed this study. Frequency analysis and chi-square analysis were the primary statistical methods used during data analysis. Frequency analysis was used to make comparisons between groups such as gender, high versus low confidence athletes, and to determine differences in subjects' responses to self versus team confidence. Chi-square analysis always consisted of 2 X 4 chi-squares. The four columns were always the four categories of response. The two rows consisted of the comparison groups previously mentioned, gender and level of confidence.

Chapter 4

RESULTS OF PHASE 2 DATA

This study contained 10 research questions that guided its development. The first four examined the gender differences on antecedents and consequents of athletes' beliefs about self and team confidence. Questions 5 and 6 were concerned with the differences between athletes' beliefs regarding self-confidence and team confidence. Research Questions 7 through 10 pertained to differences in the antecedents and consequents of self-confidence and team confidence for high and low confident athletes. The results were discussed in four major sections according to the aforementioned breakdown of the research questions. The first major section contains a presentation of the demographic data on the subject sample, followed by a presentation of the data concerning gender differences, differences between self and team confidence and then differences between high and low confident athletes.

Demographic Data

An analysis of the demographic questionnaire that was included in both the first and second phases of this study revealed

that the two samples were similar (See Appendix H). The average age of subjects in the first phase was, $M = 19.87$ and $SD = 0.54$, while in the second phase it was, $M = 19.50$ and $SD = 1.58$. The majority of athletes in the first and second phases were caucasian ($n = 162$ and 154 respectively) and from the midwest ($n = 116$ and 117 respectively). Each phase contained a relatively similar split of subjects from rural, urban, and suburban environments with the majority of subjects from suburban environments. As well there were similar percentages of subjects from high schools with different enrollment sizes in the first and second phase. The average number of years subjects had been collegiate athletes was 2.03 years for the first phase and 1.95 years for the second phase. Both phases contained a high number of subjects who were multiple sport athletes in high school. Finally, both phases employed subjects who indicated a high level of involvement in their athletic careers from their parents.

Gender Analysis

An examination of the frequencies for the antecedents of self-confidence, pertaining to research Question 1, revealed a similar pattern of responses for males and females (See Table 1).

Table 1

Rank Ordered Frequency and Percentage of Response for Antecedents of Self-confidence by Gender.

Response	Male self- confidence ($n = 81$)	% of Sample	Response	Female self- confidence ($n = 89$)	% of Sample
Determination	(F) 57	70.37	Determination	(F) 60	67.42
Desire	(M) 30	37.04	Self-esteem	(H) 41	46.07
Self-esteem	(H) 23	28.40	Positive attitude	(F) 29	32.58
Positive attitude	(F) 22	27.16	Desire	(M) 28	31.46
Goals	(F) 21	25.93	Goals	(F) 22	24.72
Pride	(M) 21	25.93	Pride	(M) 21	23.60
Motivation	(H) 16	19.75	Motivation	(H) 17	19.10
Ability	(C) 14	17.28	Ability	(C) 14	15.73
Talent	(C) 14	17.28	Performed well	(H) 13	14.61
Performed well	(H) 13	16.05	Skill	(C) 12	13.48
Skill	(C) 8	9.88	Talent	(C) 4	4.49
Strength	(M) 2	2.47	Strength	(M) 3	3.37

Note. The initials indicate the category the responses came from; (C) for common, (F) for female-unique, (M) for male-unique, and (H) for hunch.

Remember that each subject was instructed to choose one response in each of the three response sets (A, B, and C). Therefore, frequencies were included to display actual counts of chosen responses. In addition, percentages, calculated as a percent of the

individual sample, were included to enable the reader to make comparisons across gender for each response. Remember that the responses to chose from were the same for both male and female subjects. Therefore the list for males and females will contain the same term, however the rank order of the terms may be different.

The first six terms were the same for male and female subjects, with the most frequent response, DETERMINATION, being identical for males ($f = 57$) and for females ($f = 60$). The only term that prohibited the top six from being identical in order was DESIRE, $f = 30$ for male subjects and $f = 28$ for female subjects. Each of these top six words remained very powerful to both gender groups as even the sixth most frequent responses were chosen by over 20% of the sample. Terms chosen at least 20% of the time by athletes were deemed important because it resulted in a significant number of the athletes for any given team using that term to define confidence. Finally, the least frequent response for males and females was STRENGTH.

Further analysis of research Question 1 employed chi-square analysis to determine if gender differences existed in the antecedents of athletes' confidence beliefs. Three (one for each

response set, A, B, and C) separate 2 X 4 (gender by category of response) chi-squares were calculated for each question on the Phase 2 confidence questionnaire. In addition to the standard significance level, $p < .05$, an added criterion that the column percents had to be at least 5% different for the word to be considered a gender specific term was established. Only two gender specific words out of 12 antecedents for self-confidence were determined in this study. They were from response set C, which is the set that had the lowest frequencies from Phase 1. First, TALENT, originally cited as a common word from the first phase of this study, was found to be a male specific term for antecedents of self-confidence, $\chi^2 (3, N = 167) = 10.19, p < 0.02$ (See Table 2). Secondly, SELF-ESTEEM, a hunch word, was found to be a female specific term for antecedents of self-confidence. All other antecedents of self-confidence showed no significant gender differences.

Research Question 2 was concerned with the gender differences for consequents of self-confidence. A list of these consequents are contained in Table 3. The four most frequent responses were identical between male and female athletes. BELIEF

IN YOURSELF, $f = 63$ and 76, POSITIVE ATTITUDE, $f = 58$ and 61, DETERMINATION, $f = 42$ and 49, and DESIRE, $f = 20$ and 24 respectively, each accounted for more than 25% of subjects'

Table 2

Comparison of Male and Female Responses for Antecedents of Self-confidence on Response Set C.

Group	Response Choices			
	Talent(C)	Goals(F)	Pride(M)	Self-esteem(H)
Male ($n = 79$)				
f	14	21	21	23
%	17.7	26.6	26.6	29.1
Female ($n = 88$)				
f	4	22	21	41
%	4.5	25.0	23.9	46.6
Total ($N = 167$)				
f	18	43	42	64
%	10.8	25.7	25.1	38.3

Note. The initials indicate the category the responses came from; (C) for common, (F) for female-unique, (M) for male-unique, and (H) for hunch.

responses. Also the least frequent response, SKILL, was again identical across gender, $f = 1$ for males and $f = 2$ for females. The chi-square analysis revealed no significant gender differences for

consequents of self-confidence.

A frequency comparison of research Question 3, gender differences in antecedents of team confidence, revealed remarkably similar results to antecedents of self-confidence (See Table 4). The

Table 3

Rank Ordered Frequency and Percentage of Response for Consequents of Self-confidence by Gender.

Response	Male self- confidence (n = 81)	% of Sample	Response	Female self- confidence (n = 89)	% of Sample
Belief in yourself	(H) 6 3	77.78	Belief in yourself	(H) 7 6	85.39
Positive attitude	(F) 5 8	71.60	Positive attitude	(F) 6 1	68.54
Determination	(F) 4 2	51.85	Determination	(F) 4 9	55.06
Desire	(M) 2 0	24.69	Desire	(M) 2 4	26.97
Success	(C) 1 1	13.58	Ability	(C) 1 5	16.85
Ability	(C) 9	11.11	Success	(C) 1 2	13.48
Goals	(C) 8	9.88	Experience	(H) 8	8.99
Fun	(F) 8	9.88	Goals	(C) 7	7.87
Talent	(M) 7	8.64	Talent	(M) 4	4.49
Experience	(H) 6	7.41	Cockiness	(H) 3	3.37
Cockiness	(H) 6	7.41	Fun	(F) 3	3.37
Skill	(M) 1	1.23	Skill	(M) 2	2.25

Note. The initials indicate the category the responses came from; (C) for common, (F) for female-unique, (M) for male-unique, and (H) for hunch.

Table 4

Rank Ordered Frequency and Percentage of Response for Antecedents of Team Confidence by Gender.

Response	Male team confidence ($n = 81$)	% of Sample	Response	Female team confidence ($n = 89$)	% of Sample
Positive attitude	(F) 54	66.67	Positive attitude	(F) 64	71.91
Hard work	(F) 33	40.74	Hard work	(F) 41	46.07
Determination	(F) 27	33.33	Determination	(F) 36	40.45
Pride	(C) 27	33.33	Pride	(C) 29	32.58
Desire	(M) 23	28.40	Desire	(M) 22	24.72
Unity	(C) 17	20.99	Unity	(C) 22	24.72
Good practices	(H) 13	16.05	Success	(M) 12	13.48
Courage	(H) 13	16.05	Talent	(C) 10	11.24
Talent	(C) 11	13.58	Courage	(H) 10	11.24
Success	(M) 11	13.58	Ability	(M) 8	8.99
Ability	(M) 6	7.41	Good practices	(H) 7	7.87
Wins	(H) 4	4.94	Wins	(H) 3	3.37

Note. The initials indicate the category the responses came from; (C) for common, (F) for female-unique, (M) for male-unique, and (H) for hunch.

six most frequent antecedents of team confidence were identical for both males and females. The most frequent response, POSITIVE ATTITUDE, accounted for over 66% of the sample for each gender group. The top six responses were each responsible for over 20% of the subjects' responses. The least frequent response, WINS, was

again identical for both gender groups, $f = 4$ for males and $f = 3$ for females. Three 2 X 4 (gender by category of response) chi-square analyses were also conducted for antecedents of team confidence. No significant gender differences were found.

Research Question 4, pertaining to gender differences of consequents for team confidence, displayed similar results to those of the previous questions. A frequency analysis showed that the five most frequent responses were the same (See Table 5). However, males preferred the term POSITIVE ATTITUDE, $f = 47$ over DETERMINATION, $f = 40$, while females chose DETERMINATION, $f = 54$, over POSITIVE ATTITUDE, $f = 49$ as the most important consequents for team confidence. Again each of the top five responses accounted for over 20% of athletes' responses. The two least frequent responses were also identical. ASSURANCE, $f = 7$ for males and $f = 6$ for females, as well as WINS, $f = 4$ for both males and females, proved to be less important words for athletes as consequents of team confidence. The chi-square analysis again revealed no significant differences for consequents of team confidence across gender. Because the first four research questions revealed only one difference in gender, the remaining research questions were

collapsed across gender. A summary of all chi-square analyses conducted across gender is listed in Appendix I.

Table 5

Rank Ordered Frequency and Percentage of Response for Consequents of Team Confidence by Gender.

Response	Male team confidence (n = 81)	% of Sample	Response	Female team confidence (n = 89)	% of Sample
Positive attitude	(F) 47	58.02	Determination	(F) 54	60.67
Determination	(F) 40	49.38	Positive attitude	(F) 49	55.06
Unity	(C) 26	32.10	Unity	(C) 38	42.70
Work ethic	(H) 25	30.86	Work ethic	(H) 29	32.58
Pride	(C) 23	28.40	Pride	(C) 21	23.60
Worked together	(M) 15	18.52	Goals	(C) 19	21.35
Ability	(M) 14	17.28	Worked together	(M) 16	17.98
Success	(F) 13	16.05	Success	(F) 11	12.36
Goals	(C) 12	14.81	Ability	(M) 9	10.11
Strength	(M) 10	12.35	Strength	(M) 9	10.11
Assurance	(H) 7	8.64	Assurance	(H) 6	6.74
Wins	(H) 4	4.94	Wins	(H) 4	4.49

Note. The initials indicate the category the responses came from; (C) for common, (F) for female-unique, (M) for male-unique, and (H) for hunch.

Self versus Team Confidence Analysis

Research Question 5 pertained to differences between the

antecedents of self and team confidence for all athletes.

There were several words that were noteworthy as antecedents (See Table 6). First, DETERMINATION, as an antecedent of self-confidence, $f = 117$, and as an antecedent of team confidence, $f = 63$, was viewed as a powerful meaning of confidence. Further, it appeared that DETERMINATION was a more powerful factor as an antecedent of self-confidence than team confidence for over 40% of the subjects sampled. Secondly, POSITIVE ATTITUDE, as an antecedent of self-confidence, $f = 51$, and as an antecedent of team confidence, $f = 118$, was another important response. POSITIVE ATTITUDE was more important as an antecedent of team confidence for almost 60% of athletes surveyed. PRIDE was another term that was important as both an antecedent of self-confidence, $f = 42$, and as an antecedent of team confidence, $f = 56$. Athletes also chose DESIRE as a powerful word both as an antecedent of self-confidence, $f = 58$, and as an antecedent of team confidence, $f = 45$. The term ABILITY resulted in an interesting difference between self and team confidence (See Table 7). Athletes chose ABILITY as a component of self-confidence, $f = 28$, more than as a component of team confidence, $f = 14$. Two important words to athletes that appeared

only as antecedents of self-confidence were GOALS, $f = 43$, and

Table 6

Rank Ordered Frequency and Percentage of Response for Antecedents of Self and Team Confidence.

Response	Self- confidence ($n = 170$)	% of Sample	Response	Team confidence ($n = 170$)	% of Sample
Determination	117	68.82	Positive attitude	118	69.41
Self-esteem	64	37.65	Hard work	74	43.53
Desire	58	34.12	Determination	63	37.06
Positive attitude	51	30.00	Pride	56	32.94
Goals	43	25.29	Desire	45	26.47
Pride	42	24.71	Unity	39	22.94
Motivation	33	19.41	Courage	23	13.53
Ability	28	16.47	Success	23	13.53
Performed well	26	15.29	Talent	21	12.33
Skill	20	11.76	Good practices	20	11.76
Talent	18	10.59	Ability	14	8.24
Strength	5	2.94	Wins	7	4.12

Table 7

Rank Ordered Frequency and Percentage of Response for Antecedents of Self and Team Confidence by Category.

Category	Self- confidence (n = 170)	% of Sample	Team confidence (n = 170)	% of Sample	
Common:					
Determination	117	68.82	Positive attitude	118	89.41
Desire	58	34.12	Determination	63	27.06
Positive attitude	51	30.00	Pride	56	22.94
Pride	42	24.71	Desire	45	26.47
Ability	28	16.47	Talent	21	12.33
Talent	18	10.59	Ability	14	8.24
Unique to Self-confidence:					
Self-esteem	64	37.65			
Goals	43	25.29			
Motivation	33	19.41			
Performed well	26	15.29			
Skill	20	11.76			
Strength	5	2.94			
Unique to Team Confidence:					
			Hard work	74	43.53
			Unity	39	22.94
			Courage	23	13.53
			Success	23	13.53
			Good practices	20	11.76
			Wins	7	4.12

SELF-ESTEEM, $f = 64$. The terms MOTIVATION, $f = 33$, PERFORMED WELL IN THE PAST, $f = 26$, and SKILL, $f = 20$, also appeared as antecedents of self-confidence. Finally, an important term that appeared only as an antecedent of team confidence was HARD WORK, $f = 74$. Additionally, other terms such as UNITY, $f = 39$, COURAGE, $f = 23$, SUCCESS, $f = 23$, and GOOD PRACTICES, $f = 20$, showed their importance as antecedents of team confidence. Conversely, other words such as STRENGTH, $f = 5$, did not prove to be powerful antecedents of self-confidence. Likewise, WINS, $f = 7$ was not an important antecedent of team confidence.

Research Question 6 pertained to the differences between the consequents of self and team confidence for all athletes. There were 5 responses that were both potential consequents of self and team confidence. All 5 responses obtained roughly equal frequencies (See Table 8). POSITIVE ATTITUDE, $f = 119$ and 96, and DETERMINATION, $f = 91$ and 94, respectively for self-confidence and team confidence, were important consequents for athletes. Two terms that were practically identical as consequents of self and team confidence were ABILITY, $f = 24$ and 23 respectively, and SUCCESS, $f = 23$ and 24 respectively.

Table 8

Rank Ordered Frequency and Percentage of Response for Consequents of Self and Team Confidence.

Response	Self-confidence (n = 170)	% of Sample	Response	Team confidence (n = 170)	% of Sample
Belief in yourself	139	81.76	Positive attitude	96	56.47
Positive attitude	119	70.00	Determination	94	55.29
Determination	91	53.53	Unity	64	37.65
Desire	44	25.88	Work ethic	54	31.76
Ability	24	14.12	Pride	44	25.88
Success	23	13.53	Worked together	31	18.24
Goals	15	8.82	Goals	31	18.24
Experience	14	8.24	Success	24	14.12
Talent	11	6.47	Ability	23	13.53
Fun	11	6.47	Strength	19	11.18
Cockiness	9	5.29	Assurance	13	7.65
Skill	3	1.76	Wins	8	4.71

GOALS was a word that athletes chose more as a consequent of team confidence, $f = 31$, than as a consequent of self-confidence, $f = 15$.

There was, however, a term that was more important than all of the other consequents of self-confidence, BELIEF IN YOURSELF, $f = 139$.

This term accounted for over 80% of the responses sampled.

Additionally, DESIRE, $f = 44$, displayed itself as an important

consequent of self-confidence (See Table 9). UNITY, $f = 64$, WORK ETHIC, $f = 54$, PRIDE, $f = 44$, and WORKED TOGETHER, $f = 31$ proved to be powerful consequents of team confidence.

Several terms were deemed unimportant by athletes.

EXPERIENCE, $f = 14$, TALENT, $f = 11$, FUN, $f = 11$, COCKINESS, $f = 9$, and SKILL, $f = 3$, were chosen infrequently as consequents of self-confidence. Likewise, STRENGTH, $f = 19$, ASSURANCE, $f = 13$, and WINS, $f = 8$, appeared to be the least important consequents of team confidence for athletes.

Level of Confidence Analysis

Research Question 7 asked about differences between the responses of high versus low confidence athletes. High confidence was operationally defined as the top 25% of athletes in the sample, while low confidence was defined as the bottom 25% of the sample. A proportion was calculated from information the subjects provided during testing. The third and final portion of the Phase 2 questionnaire instructed subjects to first determine how many athletes were on their team and second to rank themselves in terms of their perceived self-confidence compared to their teammates. The high confidence group contained 37 subjects, while the low

Table 9

Rank Ordered Frequency and Percentage of Response for Consequents of Self and Team Confidence by Category.

Category	Self- confidence (n = 170)	% of Sample	Team confidence (n = 170)	% of Sample	
Common:					
Positive attitude	119	70.00	Positive attitude	96	56.47
Determination	91	53.53	Determination	94	55.29
Ability	24	14.12	Goals	31	18.24
Success	23	13.53	Success	24	14.12
Goals	15	8.82	Ability	23	13.53
Unique to Self-confidence:					
Belief in yourself	139	81.76			
Desire	44	25.88			
Experience	14	8.24			
Talent	11	6.47			
Fun	11	6.47			
Cockiness	9	5.29			
Skill	3	1.76			
Unique to Team Confidence :					
			Unity	64	37.65
			Work ethic	54	31.76
			Pride	44	25.88
			Worked together	31	18.24
			Strength	19	11.18
			Assurance	13	7.65
			Wins	8	4.71

confidence group contained 44. Frequencies were calculated on the demographic data for these two groups. Of interest, were the findings that there were more males (65%) than females (35%) in the high confidence group. Also the high confidence group was older ($M = 20.4$ years) than the low confidence group ($M = 19$ years) and they had more years of collegiate playing experience ($M = 2.6$ years) than the low confidence group ($M = 1.5$ years). The demographic data for the high and low confidence groups are located in Appendix J.

The results from the two confidence groups were remarkably similar to each other and to the results discussed previously regarding the gender groupings. Thus, the two groups were collapsed together for reporting of the data. The five most frequent antecedents of self-confidence were again, DETERMINATION, $f = 54$, SELF-ESTEEM, $f = 36$, DESIRE, $f = 25$, POSITIVE ATTITUDE, $f = 25$, and PRIDE, $f = 20$. Each of these words accounted for more than 25% of the athletes' responses. Three (one for each set of responses A, B, and C) 2×4 (level of confidence by category of response) chi-squares were calculated. No significant differences were found between the high and low confidence groups in their responses to antecedents of self-confidence. A summary of all chi-square

analyses conducted on level of confidence is listed in Appendix K.

A frequency analysis of the consequents of self-confidence, (Question 8), revealed that DETERMINATION, $f = 44$, POSITIVE ATTITUDE, $f = 57$, and BELIEF IN YOURSELF, $f = 65$ were the most important terms for high and low confidence athletes. Again three 2×4 (level of confidence by category of response) chi-squares were run. The analysis revealed that there were no significant differences between the level of confidence for consequents of self-confidence.

The last two research questions pertained to differences between athletes of high and low confidence for team confidence. Research Question 9 posed the issue of the effects of level of confidence on the perceived antecedents of team confidence. The six most frequent responses were again the same responses discussed for the gender analysis, POSITIVE ATTITUDE, $f = 60$, HARD WORK, $f = 35$, PRIDE, $f = 28$, DETERMINATION, $f = 27$, UNITY, $f = 21$, and DESIRE, $f = 21$. The chi-square analysis revealed no significant differences between high and low confidence athletes for antecedents of team confidence.

Finally, research Question 10 examined differences in the level

of confidence for consequents of team confidence. The results showed that POSITIVE ATTITUDE, $f = 46$, DETERMINATION, $f = 40$, UNITY, $f = 30$, PRIDE, $f = 25$, and WORK ETHIC, $f = 24$, were the most powerful consequents of team confidence for athletes of high and low levels of confidence. A chi-square analysis revealed no significant differences between athletes of high confidence versus athletes of low confidence for consequents of team confidence.

Chapter 5

DISCUSSION

The purpose of this study was to determine the subjective meanings of self and team confidence for male and female athletes in order to better understand the interpretation of confidence for this population. This study used nonrevenue sport athletes from two Division I universities to serve as subjects. The first phase of the study involved collecting perceived antecedents and consequents for self and team confidence using the Triandis (1972) approach via an open-ended questionnaire. The second phase employed a forced choice questionnaire comprised of the most frequent responses from the first phase. The most frequent meanings associated with individual confidence were DETERMINATION, BELIEF IN YOURSELF, POSITIVE ATTITUDE, SELF-ESTEEM, and DESIRE. For team confidence, the most frequent meanings selected were POSITIVE ATTITUDE, DETERMINATION, HARD WORK, and UNITY.

Most terms discovered as subjective meanings of athletic confidence in this study (85%) represent internal, changeable, and effort-oriented categories of attributions. Only two antecedents were ability-oriented, ABILITY and TALENT. They occurred as

antecedents of self and team confidence. ABILITY was also a consequent for both self and team confidence, while TALENT was only a consequent for self-confidence.

When athletes define their sense of self-confidence in terms of internal, changeable, and effort-oriented components, such as hard work and determination, they expect that ordinary performances can be surpassed through sustained high effort (Bandura, 1986). This concept of self-confidence allows athletes to attribute their failures to changeable factors which helps them maintain their confidence. In addition, having a positive attitude within the context of one's confidence in sport may mean having an optimistic attitude about success, about winning or about reaching one's potential. This attitude would help sustain high efforts.

The subjective meanings of self-confidence in sport found in the present study were very similar to questionnaire items that were developed from global self-efficacy scales such as the Generalized Self-Efficacy (GSE) scale (Tipton & Worthington, 1984) and the Self-Efficacy Scale (SES - Sherer, Maddox, Mercandante, Prentice-Dunn, Jacobs, & Rodgers, 1982). For instance, the general theme of the GSE items concerned, one's willingness (similar to

DESIRE) and determination to “initiate and tenaciously stay with an undertaking in the face of physical and/or emotional adversity.”

(Tipton & Worthington, p. 546). The GSE also has a number of “faith-in-self” items which are similar to the BELIEF IN YOURSELF meaning found in the present study.

The term, DESIRE, may relate to the incentive component of Bandura’s self-efficacy theory. Bandura (1977) proposed that self-efficacy judgments will be functionally related to actions only if the proper incentives exist to perform the activities. One has to have the desire to perform well, as well as the self-confidence to be successful in sport according to Bandura and as indicated from the athletes in the present study.

Bandura’s self-efficacy theory and the global self-efficacy scales (GSE and SES) did not include any of the affective meanings in their conceptualizations of self-confidence that were found in the present study. SELF-ESTEEM and PRIDE were terms that the athletes perceived as meanings of self-confidence in sport. All that Bandura (1986) suggests regarding self-esteem is that people cultivate self-efficacies in the activities that give them a sense of self-worth. Whether this is true or whether people derive a sense of self-

esteem from activities in which they are highly confident is beyond the realm of the present investigation. However, future studies of self-confidence or self-efficacy may be more informative and more predictive of performance by including assessments of affect, such as self-esteem, pride, and satisfaction.

Other studies conducted using the present methodology have concluded that Americans also conceptualize success in sport with internal, changeable, and effort-oriented factors (Ewing, 1981; Kawano, 1992; Lee, 1995). How success is conceptualized by these studies is related to how confidence was conceptualized in the present study because antecedents and consequents were solicited from athletes as meanings of confidence that allowed them to perform successfully in their sport. Lee (1995) found that American adolescents defined success in sport with almost twice as many, "dedication" factors as "innate ability" factors. Kawano (1992) also found that American college students defined success in sport with primarily internal, changeable, and effort-oriented meanings, such as self-confidence, drive, good physical condition, and a good attitude. Ewing (1981) found that school age children defined success in sport with many more internal and changeable factors

than extrinsic and unchangeable factors. However, she also concluded that some of the external meanings were very important to this population. The inability to attain these external meanings, coupled with motivation for external rewards resulted in many of these children dropping out of sport. Intercollegiate athletes, such as those in the present study, have probably either entered sport at a young age with an internal-oriented meaning of self-confidence or redefined the meaning of self-confidence (and success) along the way to comprise internal and changeable factors. Otherwise they probably would have dropped out of sport long ago.

The present investigation suggested some differences between the subjective meanings of self and team confidence. There were six terms that were unique to self-confidence and six unique to team confidence. All 12 were categorized as internal, changeable, and effort-oriented. The unique antecedents of self-confidence, SELF-ESTEEM, GOALS, MOTIVATION, PERFORMED WELL IN THE PAST, SKILL, and STRENGTH, accounted for 38% of the samples' responses, while the unique antecedents of team confidence, HARD WORK, UNITY, COURAGE, SUCCESS, GOOD PRACTICES, and WINS, accounted for 34% of the samples' responses. There were seven consequents

unique to self and team confidence. Six of the 7 consequents for self-confidence were internal, changeable, and effort-oriented, while all seven of the consequents for team confidence were internal, changeable, and effort-oriented. The unique consequents of self-confidence were BELIEF IN YOURSELF, DESIRE, EXPERIENCE, TALENT, FUN, COCKINESS, and SKILL. The unique consequents of team confidence were UNITY, WORK ETHIC, PRIDE, WORKED TOGETHER, STRENGTH, ASSURANCE, and WINS. Both of the unique sets of responses accounted for over 45% of the responses sampled for consequents of self and team confidence.

It should not be surprising that the meanings of self and team confidence differ. The rules, social norms, and goals that make up individual and team performance are different. For instance, teams attain performance success as a result of the interactions of team members' skills. Likewise, teams set goals for the group rather than for each individual of the group. Therefore, terms such as HARD WORK, UNITY, and WORKED TOGETHER would be especially meaningful to an athlete's meaning of team confidence. These terms have also been measured as components of team cohesion.

Carron, Widmeyer, and Brawley (1985) developed the Group

Environment Questionnaire (GEQ) to assess cohesion in sport teams. The GEQ consists of four scales: group interaction-task, group interaction-social, individual attractions to group-task, and individual attractions to group-social. Spink (1990) found a significant relationship between a measure of team confidence (collective efficacy) and group cohesion. Coaching sport teams have also shown that cohesion measures predict performance and group motivation assessments by a commitment to team goals (Williams & Widmeyer, 1991).

The second manner in which the present meanings displayed their differences between self and team confidence occurred when the same meaning was selected in differing degrees.

DETERMINATION and POSITIVE ATTITUDE were both selected as important antecedents of self and team confidence; however, it was interesting that DETERMINATION was far more important as an antecedent of self-confidence than as an antecedent of team confidence. DETERMINATION accounted for over 68% of the responses chosen as antecedents of self-confidence, but for only 27% of the responses for team confidence. The opposite was true for POSITIVE ATTITUDE, where it accounted for only 30% of the antecedents

chosen for self-confidence, but for a staggering 89% for team confidence. This means that there do exist distinct differences in the subjective meanings of confidence between self and team confidence. The finding that POSITIVE ATTITUDE is a more important meaning of team confidence than individual confidence is particularly important. Since in team sports one individual cannot always control all the factors that effect a team, maintaining a positive attitude helps to produce a positive atmosphere. A team feeds off of a positive or negative attitude or atmosphere. A negative attitude tends to lead to disputes between teammates, apathy, distrust, and a lack of desire to accomplish team goals. A positive attitude allows team members to maintain their focus on important tasks thus enabling everyone to work hard in practice, develop skills, improve one's self-confidence, improve the team's confidence, foster team unity, and ultimately lead to more performance success.

Gender differences in the subjective meanings of self and team confidence were not strongly apparent for intercollegiate athletes. The only exception was one pair of antecedents of self-confidence where males preferred the term TALENT and females preferred the

term SELF-ESTEEM. The importance of self-esteem to the female athlete is supported by other research (Grove, Hanrahan, & Stewart, 1990; Jones, Swain, & Cale, 1991). Self-confidence for female athletes has been shown to be predicted by two factors: perceived readiness and individual importance or self-esteem (Jones et al., 1991). Self-esteem has also been shown to be more important to injury recovery for female athletes than for male athletes (Grove et al., 1990). Indeed, Anson Dorrance, who was at one time the head coach of both the men's and women's soccer teams at the University of North Carolina, based his coaching on his experiential knowledge of talent and self-esteem differences in men and women athletes (Diaz, 1987). He believes that after a loss female athletes need to be reassured that things are O.K., that they can work to improve their skills and become better. Most importantly he believes that female athletes are very concerned with the coach's tone and whether the coach is upset with the team. They must feel that their coach still has faith in them as people and as athletes. The female athlete can then take shelter in the fact that someone very important believes in them, feel good about themselves, and then return to practice the next day and work harder than ever before.

Regarding male athletes, Dorrance believes they have to be driven. The tendency of the male athlete to emphasize talent over self-esteem is what allows Dorrance to blame them for losses, and verbally chastise them when they perform poorly. These endeavors are all made in the effort to motivate or drive the male athlete to overcome opponents with seemingly superior talent.

Except for this gender difference between TALENT and SELF-ESTEEM, male and female intercollegiate athletes are in agreement on the subjective meanings of athletic confidence, possibly due to the effort-orientation required for athletes (male and female) to achieve at this competitive level. This effort-orientation motivates the athlete to develop new skills, perfect existing skills, and strive to perfect their overall performance in their sport.

The future direction of this research is critical to further our understanding of athletic confidence. The subjective meanings of confidence found in the present study must be conferred. A modified open-ended methodology will be of further help. The Triandis (1972) antecedent-consequent approach limits responses in that it requires that subjects provide noun-anchored phrases as antecedents and consequents. It is desirable to employ a methodology that allows

subjects to answer anything they believe to be relevant (nouns, verbs, adjectives, etc.) since subjective meanings may take many forms. One proposed methodology by Lee (1995) that would provide subjects with this freedom would be to ask subjects to list everything they can think of about themselves which causes them to feel that they have the confidence to perform successfully in their sport. Next, the second phase of the new methodology would be to manipulate the subjective meanings into a modified semantic differential, where the bipolar end-points would be “most important” to “least important.” This modification from the traditional semantic differential end-points of “good” and “bad” would eliminate subjects responding to the subjective meanings solely in the positive. After the subjective meanings are conferred, researchers could assess the strength of the self-confidence of athletes in terms of these subjective meanings. This approach may demonstrate a stronger relationship between confidence beliefs and achievement behavior in sport.

Implications for Coaches

The gender difference where males preferred the term TALENT and females preferred the term SELF-ESTEEM holds important

implications for coaches. If self-esteem is generally tied to a female athlete's sense of confidence, then feedback that affects her self-esteem could very well also affect her self-confidence in her performance. A coach who berates female athletes for their poor performance or effort may undercut their self-confidence as well. Likewise, if talent is generally tied to a male's sense of confidence, feedback that implies a lack of talent may negatively affect his self-confidence.

The second noteworthy implication for coaches was the finding that the term DETERMINATION was more important as an antecedent of self-confidence than as an antecedent of team confidence, while the term POSITIVE ATTITUDE was more important as an antecedent of team confidence than as an antecedent of self-confidence. A successful coach must motivate the athlete as an individual as well as motivate the group as a whole (Carron, 1984). The identification of these two terms, DETERMINATION and POSITIVE ATTITUDE, by athletes reflect their understanding of this concept. Athletes also believe they must maintain their focus and persistence in their sport at an individual level in order to help their team accomplish its goals. In turn, they must continue to have faith or a positive

attitude that their teammates are doing the same.

Conclusion

The present investigation added important insight to the issue of athletic confidence. It was determined that the subjective culture of competitive athletics is the important distinguishing culture for this study's research questions and not gender. Primary subjective meanings for self and team confidence for intercollegiate athletes were gathered in this investigation. Furthermore the most salient meanings were pitted against each other to gain a further insight to the most salient meanings of self and team confidence for athletes. Finally, this study indicated that there were separate factors that needed to be considered for self-confidence as opposed to team confidence. This indicates that there may actually be separate considerations for team sports as opposed to individual sports. Likewise, there may be sport-specific meanings of confidence.

APPENDIX A

Appendix A
Phase 1 Questionnaire

Self and Team Confidence Questionnaire

- A. Please provide 3 one word or short phrase answers to each of the following questions.**
B. Your answers do not need to be in order of importance.
C. This is not a test of intelligence and there are no right or wrong answers.
D. There is no time limit. Take all the time you need and give us answers that are important to you as an athlete.
E. Your answers are anonymous. Do not put your name on this questionnaire.

_____ is the sport in which I participate.

- 1. If you have _____, then you have confidence to perform successfully in your sport.**

a) _____
b) _____
c) _____

- 2. If your team has _____, then your team has confidence in their ability to perform successfully in your sport.**

a) _____
b) _____
c) _____

- 3. If you have confidence to perform successfully in your sport, then you have**

_____ .

a) _____
b) _____
c) _____

- 4. If your team has confidence to perform successfully in your sport, then your team has** _____ .

a) _____
b) _____
c) _____

APPENDIX B

Appendix B
Demographic Questionnaire

Instructions: Please check the appropriate answer or fill in the required information.

- 1) Gender: Male Female _____
- 2) Age: _____ Date of Birth _____
- 3) Ethnicity: Caucasian _____ Asian _____
 African-American _____ Native American _____
 Hispanic _____ Other _____
- 4) Number of Brothers: _____ Number that are older _____
 Number of Sisters: _____ Number that are older _____
 Your place in the birth order (1st born, 3rd born, etc) _____
- 5) Region of the country in which you grew up:
 West Coast _____ Northeast _____
 Pacific North West _____ Southeast _____
 Southwest _____ Canada _____(please specify: _____)
 Midwest _____ Other _____
- 6) Characterization of the region in which you grew up:
 Rural (country) _____
 Urban (city) _____
 Suburban _____
- 7) Enrollment of your high school:
 0 - 500 students _____ 2001 - 3000 students _____
 501 - 1000 students _____ 3001 and higher _____
 1001 - 2000 students _____
- 8) Collegiate Varsity Sport(s)

 Number of years _____
 Number of years as starter _____ Important Sub _____ Bench _____
 Position in your sport _____
 Scholarship status: Full _____ Partial _____ None _____
- 9) High School Sport(s) [list # of years; varsity or JV; starter or non-starter]
Sport # of yrs. participated varsity JV # of yrs. starter/nonstarter

Appendix B (cont'd)

10) Rate the degree to which the following persons have been interested in or encouraged your sports involvement: (circle the corresponding number that describes each person)

	<u>Highly</u>	<u>Moderately</u>	<u>Slightly</u>	<u>Uninterested</u>	<u>No such person</u>
Mother	4	3	2	1	0
Father	4	3	2	1	0
Others(list relation to you; for example brother, aunt, grandmother, etc.)					
_____	4	3	2	1	0
_____	4	3	2	1	0
_____	4	3	2	1	0

11) Most successful moment of your high school athletic career?

Least successful moment of your high school athletic career?

Most successful moment of your collegiate athletic career?

Least successful moment of your collegiate athletic career?

APPENDIX C

Appendix C
UCHRIS Approval Letter

MICHIGAN STATE
UNIVERSITY

January 25, 1994

TO: Doug Tully
105 IM Sports Circle

RE: IRB #: 93-577
TITLE: ANTECEDENTS AND CONSEQUENCES OF CONFIDENCE FOR
INDIVIDUAL AND TEAM SPORT ATHLETES
REVISION REQUESTED: N/A
CATEGORY: 1-C
APPROVAL DATE: January 19, 1994

The University Committee on Research Involving Human Subjects' (UCRIHS) review of this project is complete. I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the UCRIHS approved this project including any revision listed above.

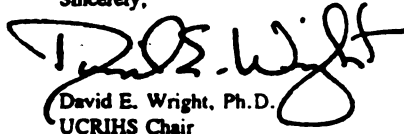
Renewal: UCRIHS approval is valid for one calendar year, beginning with the approval date shown above. Investigators planning to continue a project beyond one year must use the green renewal form (enclosed with the original approval letter or when a project is renewed) to seek updated certification. There is a maximum of four such expedited renewals possible. Investigators wishing to continue a project beyond that time need to submit it again for complete review.

Revisions: UCRIHS must review any changes in procedures involving human subjects, prior to initiation of the change. If this is done at the time of renewal, please use the green renewal form. To revise an approved protocol at any other time during the year, send your written request to the UCRIHS Chair, requesting revised approval and referencing the project's IRB # and title. Include in your request a description of the change and any revised instruments, consent forms or advertisements that are applicable.

Problems/Changes: Should either of the following arise during the course of the work, investigators must notify UCRIHS promptly: (1) problems (unexpected side effects, complaints, etc.) involving human subjects or (2) changes in the research environment or new information indicating greater risk to the human subjects than existed when the protocol was previously reviewed and approved.

If we can be of any future help, please do not hesitate to contact us at (517) 355-2180 or FAX (517) 336-1171.

Sincerely,


David E. Wright, Ph.D.
UCRIHS Chair

DEW:pjm

cc: Dr. Deborah L. Feltz



OFFICE OF
**RESEARCH
AND
GRADUATE
STUDIES**

University Committee on
Research Involving
Human Subjects
(UCRIHS)

Michigan State University
225 Administration Building
East Lansing, Michigan
48824-1046
517/355-2180
FAX: 517/336-1171

MSU is an affirmative-action,
equal-opportunity institution

APPENDIX D1

Appendix D1
Phase 1 Gender Data

Female

Antecedents of Self-confidence

positive attitude (21)
determination (16)
ability (14)
skill (11)
self-esteem (11)
goals (9)
talent (8)
support (8)
desire (7)
belief in yourself (6)
experience (6)
worked hard (5)
motivation (5)
faith (5)
dedication (5)
confidence (5)
cockiness (4)
strength (4)
pride (4)

drive (3)
performed well in past (3)
discipline (3)
intensity (3)
optimism (3)
knowledge of your sport (2)
proper training (2)
good practices (2)
energy (2)
success (2)
courage (2)

Singular responses:

strong will, agility, ambition, done everything right, support from your team, knowledge of athletes performing, warmed up to your potential, pressure, trained hard, excelled, focus, concentration, preparation, knowledge of your competition, practiced, commitment, diligence, belief, dreams, will, objectives, health, unity, self-discipline, caring, improved, thoughtfulness, kept positive thoughts, coordination, endurance, assertiveness, speed, happiness, glory, communication, belief, self-motivation, natural talent, smarts, support from teammates, positivity, inner strength, trust in teammates, positive feedback, no mistakes, mental control, wins, fun, attitude, intimidation, understanding the game, optimism, love for sport, killer instinct, good previous performance, others confident in me, clear mind, encouragement, positive self-regard, been thru it successfully, a good leader, willingness, mental toughness, focus, consistency, support from your coach

APPENDIX D2

Appendix D2
Phase 1 Gender Data

Female

Consequents of Self-confidence

determination (20)	focus (2)
positive attitude (19)	faith (2)
success (18)	a winning attitude (2)
ability (12)	cockiness (2)
self-esteem (11)	understanding the game (2)
goals (7)	leadership (2)
desire (7)	proper training (2)
fun (6)	worked/trained hard (2)
motivation (5)	belief in yourself (2)
pride (4)	self-discipline (2)
skills (4)	support from others (2)
confidence (4)	aggressiveness (2)
self-assurance (4)	talent (2)
drive (3)	ability to be the best (to succeed) (2)
attitude (3)	good work ethic (2)
experience (3)	discipline (2)
good game (performance) (3)	strength(2)
intensity (3)	

singular responses:

fulfillment, satisfaction, ability to win, mental toughness, desire to keep working hard, pressure, luck, good character, self-confidence, good odds, preparation, PMA about racing, relaxed attitude about racing, fun doing it, knowledge of your sport, knowledge of your competition, support, no mental blocks, advantage over others, potential, better performance, exceed in performance, better sportsmanship, better knowledge, endurance, gold medals, personal records being broken, belief, will, crossed the first hurdle, courage, belief in God, willingness, felt good, focus, dedication, accomplished yourself, discipline, hope to be good whether your team is winning or losing, power, assurance, wins, a chance to be great, satisfaction, glory, courage, self-pride, self-assurance, inner strength, motivation, belief that you will do your job, smarts, drive, assertiveness, everything you need to win, positive thinking, eagerness, an advantage, mental control, identity, intimidation, capabilities, mental preparedness, team work, mental toughness, belief, feeling of playing equal to others, energy, dedication, good season, more scholarships, a better chance to win, reliance

APPENDIX D3

Appendix D3
Phase 1 Gender Data

Male

Antecedents of Self-confidence

desire (18)	courage (3)
ability (17)	motivation (3)
skills (14)	goals (3)
strength (12)	sound-mindedness (3)
talent (11)	friendship (3)
pride (10)	arrogance (3)
trained well (8)	cockiness (3)
discipline (8)	unity (3)
positive attitude (7)	spirit (2)
success (6)	the will (to win) (2)
determination (6)	willingness (2)
self-esteem (6)	hard work (2)
intelligence (5)	trust in your teammates (2)
support (5)	self-confidence (2)
belief in yourself (5)	mental ability (2)
dedication (4)	endurance (2)
worked hard (4)	prepared well (2)
good work ethic (4)	performed well in past (2)
heart (4)	focus (2)
	experience (2)

singular responses:

self-control, fans, balls, shoes, players, coach's reinforcement, belongingness, experience, familiarity, concentration, will power, wins, team cohesion, team play, mentally sound, attitude, positivity, trained, history, chemistry, respect, results, happiness, good feedback, winning attitude, love, peers confidence, competed, trust, emotional stability, camaraderie, mental preparation, excellence, potential, will, teammates, good coaches, encouragement, good self-image, put in the work, desire to win, eaten correctly, faith in your coach, self-worth, done everything possible, standards, attitude, confidence, respect, guts, a better chance of winning, physically prepared, mentally prepared, psyched up, good looks, power, wisdom, fun, a strong mind, incentive, concentration, run well, practiced well, perseverance, speed, faith, high expectations, happy soul, self-identity

APPENDIX D4

Appendix D4
Phase 1 Gender Data

Male

Consequents of Self-confidence

ability (19)	faith (3)
desire (15)	discipline (3)
talent (14)	courage (3)
success (13)	camaraderie (3)
skill (12)	intelligence (3)
pride (11)	hard work (3)
determination (9)	an edge (2)
positive mental attitude (8)	cockiness (2)
strength (8)	security (2)
confidence (7)	willingness (2)
goals (6)	performed well in the past (2)
self-esteem (6)	a better chance of winning (2)
unity (6)	mentally prepared (2)
heart (5)	devoted time to your sport (2)
trained well (5)	will to win (2)
dedication (4)	motivation (2)
arrogance (4)	
an advantage (4)	

singular responses:

self-control, a scholarship, attitude, mental strength, physical strength, experience, belongingness, concentration, sense of team play, endurance, friends, good habits, positivity, sound-mindedness, positive reinforcement, trained, history, continuity, coaching, willingness to compete, respect, feedback from coaches/peers, winning attitude, grit, disappointment, drive, results, progress, strong will, fun, common goal, trust from your teammates, reassurance, athleticism, already won, practiced, ambition, practiced correctly, achieved your goals as an athlete, team togetherness, high standards, respect, attitude, set goals, ability to succeed, everything has clicked, felt good about yourself, urge to win, luck, God smiling on you, focus, poise, experience, good coach, leadership, quality, no injuries, competitive nature, reason, winning mind, put the work in, almost won the race already, objectives, aspirations, power, incentive, concentration, self-identity, good self-image

APPENDIX D5

Appendix D5
Phase 1 Gender Data

Female

Antecedents of Team Confidence

unity (25)	drive (3)
determination (14)	ability (3)
positive attitude (13)	team spirit (3)
talent (11)	belief in your team (3)
goals (9)	support (3)
pride (8)	confidence in each other (3)
worked hard (7)	good work ethic (3)
dedication (6)	success (3)
motivation (6)	cohesion (2)
desire (6)	strength (2)
togetherness (6)	leaders (2)
skill (6)	mental/physical toughness (2)
experience (5)	never say die attitude (2)
trust (4)	worked together (2)
belief in each others ability (4)	a winning record (2)
communication (4)	good practice (2)
focus (4)	wins (2)
spirit (4)	confidence (2)

singular responses:

patience, commitment, performed well in past, enthusiasm, knowledge of competitors, closeness, proper training, knowledge of your sport, practiced, diligence, fun, better performance, discipline to achieve goals, good sportsmanship, friendship, encouraging people, 'spunk', altruistic behaviors, discipline, faith, support from coaches, belief, exceeded, confidence, bonded, will, power, cooperation, good previous performance, pep talk, worked well together, psyched up, energy, good pre-game warm-up, assertiveness, speed, good coach, self-discipline, positive role models, fun, gets along well, winning attitude, confidence from others, chemistry, trust, composure, the right mental state, team work, a place to, practice, 2 hours of full practice, a confident coach, self-esteem, courage, intensity, friendship, attitude, trust in teammates, intimidation, spirit, companionship, love for sport, not accepting anything less than a win, faith

APPENDIX D6

Appendix D6
Phase 1 Gender Data

Female

Consequents of Team Confidence

unity (16)	aggressiveness (3)
success (16)	spirit (3)
determination (13)	dedication (3)
positive attitude (13)	skill (3)
pride (13)	attitude (3)
togetherness (12)	winning record (3)
goals (9)	intensity (3)
fun (8)	belief in each other (3)
desire (7)	discipline (2)
ability (6)	communication (2)
motivation (5)	an advantage (2)
drive (5)	strength (2)
work ethic (4)	proper training (2)
	better performances (2)
	belief (2)

singular responses:

endurance, strength, ability to win, enthusiasm, ability to work hard, optimism, fun doing it, become close knit, confidence in each other, knowledge of your sport, athletic ability, goals to be achieved, barriers to be crossed, ability to overcome obstacles, team goals, a leader, advantage over others, potential, knowledge, skillful, better attitudes, team work, high sensory ability, commitment, faith, will, assurance, courage, a winning spirit, pride in each other, a confident attitude, opportunity, trained hard, team spirit, focus, accomplished a goal, done well, gotten the work done attitude, support from others, charisma, endurance, assurance, wins, glory, dedication, quality, closeness, the ability to be the best, chemistry, motivation, potential to be the best team in the country, cohesiveness, talent, mental maturity, physical capability, intimidation, prepared, mental/physical toughness, team work, love for sport, winning season, mentally prepared, courage, no fear, attitude of Big Ten Champs, team camaraderie, good game, good season, more money available, mental toughness, trust, confidence, positive atmosphere, experience, ability to believe, we know we can, a better chance to win, winning attitude, hope to be winners, a chance to be great together

APPENDIX D7

Appendix D7
Phase 1 Gender Data

Male

Antecedents of Team Confidence

unity (24)	cohesion (4)
talent (12)	friendship (4)
desire (12)	confidence in each other (4)
success (10)	good teamwork (4)
pride (10)	positive attitude (3)
skill (9)	cockiness (3)
ability (9)	camaraderie (3)
work ethic (7)	team spirit (3)
desire (7)	endurance (2)
discipline (6)	depth (2)
heart (5)	put the work in (2)
faith (5)	concentration (2)
proper training (5)	positivity (2)
motivation (5)	courage (2)
dedication (5)	wins (2)
togetherness (5)	arrogance (2)
determination (5)	confidence(2)
goals (5)	
strength (5)	

singular responses:

know your roll, potential, coach's reinforcement, belief in themselves, experience with each other, knowledge of each other, conditioning, good practices, good players, ability to work together, sound-mindedness, trained, drive, respect for each other, chemistry, competitive spirit, get along well, continuity, self-esteem, intelligence, good coaching, trust, emotional stability, makes progress, a bond, positive emotion, intensity, good record, hard work, stability, will, teammates, seasoning, experience, gels, respect, a winning attitude, desire to win, self-worth, will to win, respect, attitude, friendship, confidence in coach, trust, a better chance of winning, poise, work well together, communication, fellowship, fun, mental ability, focus, good athletes, good coaching, wealth, a leader, speed, rewards, prepared, strong minds, high expectations, happy soul, incentive, self-identity, power, aspirations, greatness, good self-image

APPENDIX D8

Appendix D8
Phase 1 Gender Data

Male

Consequents of Team Confidence

unity (17)	an edge (2)
ability (12)	will(2)
desire (12)	courage (2)
pride (11)	fun(2)
talent (10)	respect(2)
strength (8)	a better chance of winning (2)
success (7)	focus (2)
goals (6)	worked well (2)
worked together (6)	prepared well (2)
determination (5)	belief (2)
positive mental attitude (5)	good attitude (2)
cohesion (5)	wins (2)
friendship (5)	good work ethic (2)
confidence (5)	concentration (2)
trust in each other (4)	faith (2)
team spirit (4)	results (2)
hard work (4)	practiced correctly (2)
motivation (4)	cockiness (2)
dedication (4)	trust (2)
discipline (4)	preparation (2)
arrogance (4)	experience (3)
an advantage (3)	mental strength (3)
good team work (3)	good coach (3)

singular responses:

willingness to try, good self-image, self-control, money, physical strength, familiarity with all players, winning season, fans, mentally prepared, positivity, quality, sound-mindedness, athleticism, trained, come together, gelled, continuity, talent to compete, practiced, integrity, seasoning, positive outlook, togetherness, learning, winning attitude, greatness, support, effort, excellence, self-esteem, progress, security, intensity, enthusiasm, competitiveness, winning record, trust in teammates, closeness, self-assurance, well coached, endurance, honor, training, greatness, competence, confidence in teammates, confidence in coach, ability to succeed, overcome odds, communicated, poise, performed well, leadership, tradition, depth, competitive nature, heart, devotion, happiness, winning mind, winning skills, balls, charisma, power

APPENDIX E

Appendix E
Most Frequent Responses by Category

Antecedents of Self-confidence

1. Common Responses

ability
skill
talent

2. Female Unique Responses

positive attitude
determination
goals

3. Male Unique Responses

desire
strength
pride

4. Hunch Responses

motivation
performed well in the past
self-esteem

Consequents of Self-confidence

1. Common Responses

ability
success
goals

2. Female Unique Responses

positive attitude
determination
fun

3. Male Unique Responses

desire
talent
skill

4. Hunch Responses

cockiness
experience
belief in yourself

Antecedents of Team Confidence

1. Common Responses

unity
talent
pride

2. Female Unique Responses

determination
positive attitude
hard work

3. Male Unique Responses

desire
success
ability

4. Hunch Responses

good practice
wins
courage

Consequents of Team Confidence

1. Common Responses

unity
pride
goals

2. Female Unique Responses

determination
positive attitude
success

3. Male Unique Responses

ability
strength
worked together

4. Hunch Responses

work ethic
assurance
wins

APPENDIX F

Appendix F
Phase 2 Questionnaire

Self and Team Confidence Questionnaire

Please place an **X** next to the answer that most appropriately describes the way you, as an athlete, think about confidence for each of the following questions.

Chose **one** response for each of the 3 sets (A, B, and C).

This is not a test of intelligence and there are no right or wrong answers.

There is no time limit. Take all the time you need and give us answers that are important to you as an athlete.

Your answers are anonymous. Do not put your name on this questionnaire.

_____ is the sport in which I participate.

1. If you have _____, then you have confidence to perform successfully in your sport.

- | A | B | C |
|-------------------------|----------------------|-------------------|
| _____ Ability | _____ Skill | _____ Talent |
| _____ Desire | _____ Strength | _____ Pride |
| _____ Positive attitude | _____ Determination | _____ Goals |
| _____ Motivation | _____ Performed well | _____ Self-esteem |
| | in the past | |

2. If your team has _____, then your team has confidence in their ability to perform successfully in your sport.

- | A | B | C |
|----------------------|-------------------------|-----------------|
| _____ Unity | _____ Talent | _____ Pride |
| _____ Desire | _____ Success | _____ Ability |
| _____ Determination | _____ Positive attitude | _____ Hard work |
| _____ Good Practices | _____ Wins | _____ Courage |

3. If you have confidence to perform successfully in your sport, then you have _____.

- | A | B | C |
|---------------------|-------------------------|--------------------------|
| _____ Success | _____ Ability | _____ Goals |
| _____ Desire | _____ Talent | _____ Skill |
| _____ Determination | _____ Positive attitude | _____ Fun |
| _____ Cockiness | _____ Experience | _____ Belief in yourself |

4. If your team has confidence to perform successfully in your sport, then your team has _____.

- | A | B | C |
|------------------|---------------------|-------------------------|
| _____ Unity | _____ Pride | _____ Goals |
| _____ Ability | _____ Strength | _____ Worked together |
| _____ Success | _____ Determination | _____ Positive attitude |
| _____ Work ethic | _____ Assurance | _____ Wins |

APPENDIX G

Appendix G
Third Portion of the Phase 2 Questionnaire

Preceived Confidence

- 1) How many athletes are on your team? _____
- 2) Where do you RANK yourself among your teammates in terms of self-confidence? _____

APPENDIX H

Appendix H

Demographic Questionnaire Data

Category	Phase 1	Phase 2
1. Gender		
Males	$\underline{n} = 98$	$\underline{n} = 81$
Females	$\underline{n} = 82$	$\underline{n} = 89$
2. Age		
<u>M</u>	19.87	19.50
<u>SD</u>	0.542	1.577
3. Ethnicity		
Caucasian	90.00%	90.59%
African-American	3.89%	1.18%
Hispanic	1.67%	4.12%
Asian	1.11%	0.59%
Native American	0.00%	1.18%
Other	2.22%	2.35%
5. Region of up-bringing		
West Coast	5.56%	6.47%
Pacific Northwest	1.67%	0.59%
Southwest	1.67%	1.18%
Midwest	64.44%	68.82%
Northeast	17.22%	10.00%
Southeast	3.89%	3.53%
Canada	0.56%	4.71%
Other	3.89%	4.71%

Appendix H (cont'd)

Category	Phase 1	Phase 2
6. Characterization of region		
Rural	18.89%	15.88%
Urban	17.78%	20.59%
Suburban	65.29%	63.53%
7. High School Enrollment Size		
0-500 students	15.00%	13.53%
501-1000 students	25.00%	23.53%
1001-2000 students	34.44%	42.35%
2001-3000 students	21.11%	12.94%
3001-and more students	3.89%	7.06%
8. years as a collegiate athlete		
<u>M</u>	2.03	1.95
9. Multiple Sport Athlete (HS)		
yes	66.11%	63.53%
10. Interest of Mother		
No such person	0.00%	0.00%
Uninterested	3.33%	1.78%
Slightly	6.66%	12.35%
Moderately	20.00%	28.82%
Highly	69.44%	57.06%
<u>M</u>	3.564	3.426
<u>SD</u>	0.764	0.753

Appendix H (cont'd)

Category		Phase 1	Phase 2
11.	Interest of Father		
	No such person	0.00%	1.18%
	Uninterested	3.33%	2.94%
	Slightly	6.66%	8.24%
	Moderately	15.00%	17.06%
	Highly	72.22%	69.41%
	<u>M</u>	3.606	3.524
	<u>SD</u>	0.765	0.861
12.	Number of Significant Others Listed		
	2	19.44%	25.29%
	3	25.56%	37.65%
	4	31.67%	20.00%
	5	20.00%	16.47%
	<u>M</u>	3.540	3.278
	<u>SD</u>	1.035	1.023

APPENDIX I-1

.

Appendix I-1

Comparison of Male and Female Responses for Antecedents of Self-confidence on Response Set A, B and C.

Set A: ($X^2 = .83$)

Response Choices

Group	Ability(C)	Pos Attitude(F)	Desire(M)	Motivation(H)
Male ($n = 80$)				
f	12	22	30	16
%	15.0	27.5	37.5	20.0
Female ($n = 88$)				
f	14	29	28	17
%	15.9	33.0	31.8	19.3
Total ($N = 168$)				
f	25	51	58	33
%	15.5	30.4	34.5	19.6

Set B: ($X^2 = .70$)

Response Choices

Group	Skill(C)	Determination(F)	Strength(M)	Performed Well(H)
Male ($n = 80$)				
f	8	57	2	13
%	10.0	71.3	2.5	16.3
Female ($n = 88$)				
f	12	60	3	13
%	13.6	68.2	3.4	14.8
Total ($N = 168$)				
f	20	117	5	26
%	11.9	69.6	3.0	15.5

Set C: ($X^2 = 10.19$)

Response Choices

Group	Talent(C)	Goals(F)	Pride(M)	Self-esteem(H)
Male ($n = 79$)				
f	14	21	21	23
%	17.7	26.6	26.6	29.1
Female ($n = 88$)				
f	4	22	21	41
%	4.5	25.0	23.9	46.6
Total ($N = 167$)				
f	18	43	42	64
%	10.8	25.7	25.1	38.3

Note. The initials indicate the category the responses came from; (C) for common, (F) for female-unique, (M) for male-unique, and (H) for hunch.

APPENDIX I-2

Appendix I-2

Comparison of Male and Female Responses for Consequents of Self-confidence on Response Set A, B and C.

Set A: ($X^2 = 1.46$)		Response Choices			
Group		Success(C)	Determination(F)	Desire(M)	Cockiness(H)
Male ($n = 79$)					
	f	11	42	20	6
	%	13.9	53.2	25.3	7.6
Female ($n = 88$)					
	f	12	49	24	3
	%	13.6	55.7	27.3	3.4
Total ($N = 167$)					
	f	23	91	44	9
	%	13.8	54.5	26.3	5.4

Set B: ($X^2 = 2.30$)		Response Choices			
Group		Ability(C)	Pos Attitude(F)	Talent(M)	Experience(H)
Male ($n = 80$)					
	f	9	58	7	6
	%	11.3	72.5	8.8	7.5
Female ($n = 88$)					
	f	15	61	2	8
	%	17.0	69.3	4.5	9.1
Total ($N = 168$)					
	f	24	119	11	14
	%	14.3	70.8	6.5	8.3

Set C: ($X^2 = 3.52$)		Response Choices			
Group		Goals(C)	Fun(F)	Skill(M)	Belief in Yourself(H)
Male ($n = 80$)					
	f	8	8	1	63
	%	10.0	10.0	1.3	78.8
Female ($n = 88$)					
	f	7	3	2	76
	%	8.0	3.4	1.6	86.4
Total ($N = 168$)					
	f	15	11	3	139
	%	8.9	6.5	1.8	82.7

Note. The initials indicate the category the responses came from; (C) for common, (F) for female-unique, (M) for male-unique, and (H) for hunch.

APPENDIX I-3

Appendix I-3

Comparison of Male and Female Responses for Antecedents of Team Confidence on Response Set A, B and C.

Set A: ($X^2 = 3.46$)		Response Choices			
Group		Unity(C)	Determination(F)	Desire(M)	Good Practices(H)
Male ($n = 80$)					
	f	17	27	23	13
	%	21.3	33.8	28.8	16.3
Female ($n = 87$)					
	f	22	36	22	7
	%	25.3	41.4	25.3	8.0
Total ($N = 167$)					
	f	39	63	45	20
	%	23.4	37.7	26.9	12.0
Set B: ($X^2 = .60$)		Response Choices			
Group		Talent(C)	Pos Attitude(F)	Success(M)	Wins(H)
Male ($n = 80$)					
	f	11	54	11	4
	%	13.8	67.5	13.8	5.0
Female ($n = 89$)					
	f	10	64	12	3
	%	11.2	71.9	13.5	3.4
Total ($N = 169$)					
	f	21	118	23	7
	%	12.4	69.8	13.6	4.1
Set C: ($X^2 = 1.13$)		Response Choices			
Group		Pride(C)	Hard Work(F)	Ability(M)	Courage(H)
Male ($n = 79$)					
	f	27	33	6	13
	%	34.2	41.8	7.6	16.5
Female ($n = 88$)					
	f	29	41	8	10
	%	33.0	46.6	9.1	11.4
Total ($N = 167$)					
	f	56	74	14	23
	%	33.5	44.3	8.4	13.8

Note. The initials indicate the category the responses came from; (C) for common, (F) for female-unique, (M) for male-unique, and (H) for hunch.

APPENDIX I-4

Appendix I-4

Comparison of Male and Female Responses for Consequents of Team Confidence on Response Set A, B and C.

Set A: ($X^2 = 3.32$)		Response Choices			
Group		Unity(C)	Success(F)	Ability(M)	Work Ethic(H)
Male ($n = 78$)					
	f	26	13	14	25
	%	33.3	16.7	17.9	32.1
Female ($n = 87$)					
	f	38	11	9	29
	%	43.7	12.6	10.3	33.3
Total ($N = 165$)					
	f	64	24	23	54
	%	38.8	14.5	13.9	32.7
Set B: ($X^2 = 1.95$)		Response Choices			
Group		Pride(C)	Determination(F)	Strength(M)	Assurance(H)
Male ($n = 80$)					
	f	23	40	10	7
	%	28.8	50.0	12.5	8.8
Female ($n = 89$)					
	f	20	54	9	6
	%	22.5	60.7	10.1	6.7
Total ($N = 169$)					
	f	43	94	19	13
	%	25.4	55.6	11.2	7.7
Set C: ($X^2 = 1.06$)		Response Choices			
Group		Goals(C)	Pos Attitude(F)	Worked Together(M)	Wins(H)
Male ($n = 80$)					
	f	12	47	15	4
	%	15.4	60.3	19.2	5.1
Female ($n = 89$)					
	f	19	49	16	4
	%	21.6	55.7	18.2	4.5
Total ($N = 169$)					
	f	31	96	31	8
	%	18.7	57.8	18.7	4.8

Note. The initials indicate the category the responses came from; (C) for common, (F) for female-unique, (M) for male-unique, and (H) for hunch.

APPENDIX J

Appendix J
Demographic Questionnaire Data for High and Low Confidence Groups

Category	High	Low
1. Gender		
Males	<u>n</u> = 24	<u>n</u> = 14
Females	<u>n</u> = 13	<u>n</u> = 30
2. Age		
<u>M</u>	20.38	19.02
<u>SD</u>	1.689	1.089
3. Ethnicity		
Caucasian	91.90%	88.60%
African-American	0.00%	2.30%
Hispanic	5.40%	2.30%
Asian	0.00%	0.00%
Native American	0.00%	2.30%
Other	2.70%	4.50%
5. Region of up-bringing		
West Coast	5.40%	2.30%
Pacific Northwest	0.00%	2.30%
Southwest	0.00%	2.30%
Midwest	62.20%	72.70%
Northeast	13.50%	13.60%
Southeast	2.70%	2.30%
Canada	8.10%	0.00%
Other	8.10%	4.50%

Appendix J (cont'd)

Category	High	Low
6. Characterization of region		
Rural	8.10%	13.60%
Urban	27.00%	9.10%
Suburban	64.90%	77.30%
7. High School Enrollment Size		
0-500 students	13.50%	20.50%
501-1000 students	24.30%	25.00%
1001-2000 students	35.10%	36.40%
2001-3000 students	21.60%	9.10%
3001-and more students	5.40%	9.10%
8. years as a collegiate athlete		
<u>M</u>	2.56	1.52
9. Multiple Sport Athlete (HS)		
yes	56.80%	65.90%
10. Interest of Mother		
No such person	0.00%	0.00%
Uninterested	0.00%	0.00%
Slightly	21.60%	6.80%
Moderately	18.90%	31.80%
Highly	59.50%	61.40%
<u>M</u>	3.378	3.545
<u>SD</u>	0.828	0.627

Appendix J (cont'd)

Category		High	Low
11.	Interest of Father		
	No such person	5.40%	0.00%
	Uninterested	2.70%	4.50%
	Slightly	0.00%	18.20%
	Moderately	16.20%	18.20%
	Highly	75.70%	59.10%
	<u>M</u>	3.541	3.318
	<u>SD</u>	1.043	0.934
12.	Number of Significant Others Listed		
	2	27.00%	25.00%
	3	35.10%	34.10%
	4	18.90%	22.70%
	5	18.90%	18.20%
	<u>M</u>	3.297	3.341
	<u>SD</u>	1.077	1.055

APPENDIX K-1

Appendix K-1

Comparison of High Versus Low Confidence Athletes for Antecedents of Self-confidence on Response Set A, B and C.

Set A: ($X^2 = 1.14$)

Response Choices

Group	Ability(C)	Pos Attitude(F)	Desire(M)	Motivation(H)
High ($n = 37$)				
f	6	10	11	10
%	16.2	27.0	29.7	27.0
Low ($n = 43$)				
f	6	15	14	8
%	14.0	34.9	32.6	18.6
Total ($N = 80$)				
f	12	25	25	18
%	15.0	31.3	31.3	22.5

Set B: ($X^2 = 2.67$)

Response Choices

Group	Skill(C)	Determination(F)	Strength(M)	Performed Well(H)
High ($n = 37$)				
f	4	25	3	5
%	10.8	67.6	8.1	13.5
Low ($n = 43$)				
f	3	29	1	10
%	7.0	67.4	2.3	23.3
Total ($N = 80$)				
f	7	54	4	15
%	8.8	67.5	5.0	18.8

Set C: ($X^2 = 2.43$)

Response Choices

Group	Talent(C)	Goals(F)	Pride(M)	Self-esteem(H)
High ($n = 37$)				
f	4	8	11	14
%	10.8	21.6	29.7	37.8
Low ($n = 43$)				
f	2	10	9	22
%	4.7	23.3	20.9	51.2
Total ($N = 80$)				
f	6	18	20	36
%	7.5	22.5	25.0	45.0

Note. The initials indicate the category the responses came from; (C) for common, (F) for female-unique, (M) for male-unique, and (H) for hunch.

APPENDIX K-2

Appendix K-2

Comparison of High Versus Low Confidence Athletes for Consequents of Self-confidence on Response Set A, B and C.

Set A: ($X^2 = 2.32$)

Response Choices

Group	Success(C)	Determination(F)	Desire(M)	Cockiness(H)
High ($n = 37$)				
f	2	20	7	3
%	18.9	54.1	18.9	8.1
Low ($n = 43$)				
f	6	24	12	1
%	14.0	55.8	27.9	2.3
Total ($N = 80$)				
f	13	44	19	4
%	16.3	55.0	23.8	5.0

Set B: ($X^2 = 6.37$)

Response Choices

Group	Ability(C)	Pos Attitude(F)	Talent(M)	Experience(H)
High ($n = 37$)				
f	5	24	4	4
%	13.5	64.9	10.8	10.8
Low ($n = 43$)				
f	8	33	0	2
%	18.6	76.7	0.0	4.7
Total ($N = 80$)				
f	13	57	4	6
%	16.3	71.3	5.0	7.5

Set C: ($X^2 = 2.61$)

Response Choices

Group	Goals(C)	Fun(F)	Skill(M)	Belief in Yourself(H)
High ($n = 37$)				
f	7	2	0	28
%	18.9	5.4	0.0	75.7
Low ($n = 43$)				
f	3	3	0	37
%	7.0	7.0	0.0	86.0
Total ($N = 80$)				
f	10	5	0	65
%	12.5	6.3	0.0	81.0

Note. The initials indicate the category the responses came from; (C) for common, (F) for female-unique, (M) for male-unique, and (H) for hunch.

APPENDIX K-3

Appendix K-3

Comparison of High Versus Low Confidence Athletes for Antecedents of Team Confidence on Response Set A, B and C.

Set A: ($X^2 = 1.28$)

Response Choices

Group	Unity(C)	Determination(F)	Desire(M)	Good Practices(H)
High ($n = 37$)				
f	9	15	9	4
%	24.3	40.5	24.3	10.8
Low ($n = 42$)				
f	12	12	12	6
%	28.6	28.6	28.6	14.3
Total ($N = 79$)				
f	21	27	21	10
%	26.6	34.2	26.6	12.7

Set B: ($X^2 = 5.64$)

Response Choices

Group	Talent(C)	Pos Attitude(F)	Success(M)	Wins(H)
High ($n = 37$)				
f	4	23	8	2
%	10.8	62.2	21.6	5.4
Low ($n = 44$)				
f	2	37	3	2
%	4.5	84.1	6.8	4.5
Total ($N = 81$)				
f	6	60	11	4
%	7.4	74.1	13.6	4.9

Set C: ($X^2 = 1.70$)

Response Choices

Group	Pride(C)	Hard Work(F)	Ability(M)	Courage(H)
High ($n = 37$)				
f	15	15	2	5
%	40.5	40.5	5.4	13.5
Low ($n = 43$)				
f	13	20	5	5
%	30.2	46.5	11.6	11.6
Total ($N = 80$)				
f	28	35	7	10
%	35.0	43.8	8.8	12.5

Note. The initials indicate the category the responses came from; (C) for common, (F) for female-unique, (M) for male-unique, and (H) for hunch.

APPENDIX K-4

Appendix K-4

Comparison of High Versus Low Confidence Athletes for Consequents of Team Confidence on Response Set A, B and C.

Set A: ($X^2 = 1.60$)		Response Choices			
Group		Unity(C)	Success(F)	Ability(M)	Work Ethic(H)
High ($n = 37$)					
f		16	6	6	9
%		43.2	16.2	16.2	24.3
Low ($n = 41$)					
f		14	7	5	15
%		34.1	17.1	12.2	36.6
Total ($N = 78$)					
f		30	13	11	24
%		38.5	16.7	14.1	30.8
Set B: ($X^2 = 3.67$)		Response Choices			
Group		Pride(C)	Determination(F)	Strength(M)	Assurance(H)
High ($n = 37$)					
f		9	18	4	6
%		24.3	48.6	10.8	16.2
Low ($n = 44$)					
f		16	22	1	5
%		36.4	50.0	2.3	11.4
Total ($N = 81$)					
f		25	40	5	11
%		30.9	49.4	6.2	13.6
Set C: ($X^2 = 1.15$)		Response Choices			
Group		Goals(C)	Pos Attitude(F)	Worked Together(M)	Wins(H)
High ($n = 37$)					
f		7	20	6	4
%		18.9	54.1	16.2	10.8
Low ($n = 43$)					
f		8	26	7	2
%		18.6	60.5	16.3	4.7
Total ($N = 80$)					
f		15	46	13	6
%		18.8	57.5	16.3	7.5

Note. The initials indicate the category the responses came from; (C) for common, (F) for female-unique, (M) for male-unique, and (H) for hunch.

APPENDIX L

Appendix L
Data Directory

<u>Variable</u>	<u>Columns</u>
First Line of Data:	
Identification Number	1 - 3
School (University)	4
Sport	5 - 6
Individual or Team Sport	7
Antecedents of Self-confidence:	
Ability	8
Desire	9
Motivation	10
Positive Attitude	11
Determination	12
Performed Well in the Past	13
Skill	14
Strength	15
Goals	16
Pride	17
Self-esteem	18
Talent	19
Antecedents of Team Confidence	
Desire	20
Determination	21
Good Practices	22
Unity	23
Positive Attitude	24
Success	25
Talent	26
Wins	27
Ability	28
Courage	29
Hard Work	30
Pride	31
Consequents of Self-confidence	
Cockiness	32
Desire	33
Determination	34
Success	35
Ability	36
Experience	37

Appendix K (cont'd)

<u>Variable</u>	<u>Columns</u>
Positive Attitude	3 8
Talent	3 9
Belief in Yourself	4 0
Fun	4 1
Goals	4 2
Skill	4 3
 Consequents of Team Confidence	
Ability	4 4
Success	4 5
Work Ethic	4 6
Unity	4 7
Assurance	4 8
Determination	4 9
Pride	5 0
Strength	5 1
Goals	5 2
Positive Attitude	5 3
Wins	5 4
Worked Together	5 5
 Second Line of Data	
Gender	1
Age	2 - 3
Ethnicity	4
Number of Brother	5
Number of Older Brothers	6
Number of Sisters	7
Number of Older Sisters	8
Place in Birth Order of Siblings	9
Region of the Country Raised	1 0
Demographic Characterization of that Region	1 1
High School Enrollment	1 2
Number of Years as a Collegiate Athlete	1 3
High School Multiple Sport Athlete	1 4
Involvement of Mother in Athletic Career	1 5
Involvement of Father in Athletic Career	1 6
Significant Others Involved in Athletic Career(# of)	1 7
Number of Teammates	1 8 - 1 9
Perceived Confidence Rank Among Teammates	20-21

APPENDIX M

.

Appendix M
Phase 2 SPSS Raw Data

0012012000110000010010000100010001000011000001001000100
218111002131123341704
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