

Differences in Goal Orientation
Between Athletes in Individual Sports Versus Team Sports

by

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Abstract

The purpose of this study was to discover whether differences in goal orientations (task-involved or ego-involved) exist between athletes who participate in team sports (e.g., basketball, hockey, volleyball) versus athletes who compete in individual sports (e.g., track and field, gymnastics, swimming) using the Perception of Success Questionnaire (POSQ). In addition to the 12 items on the questionnaire, the participants recorded their sex, class standing, and age. The participants' task-involvement and ego-involvement scores were then analyzed using a Mann-Whitney test. It was found that males have higher ego-involvement scores than females, and team sport athletes had higher ego-involvement scores than individual sport athletes. There were no significant results pertaining to task-involvement scores based on sex or type of sport. The results of this study could provide insight toward how athletes' individual psychologies affect their training and performance in competitions.

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TABLE OF CONTENTS

	PAGE
ABSTRACT.....	ii
ACKNOWLEDGEMENTS.....	iii
CHAPTER	
1. INTRODUCTION	1
Background	1
Statement of Problem.....	1
Purpose of the Study	2
Research Hypotheses	2
Delimitations.....	2
Limitations	3
Assumptions.....	3
Definition of Terms.....	3
Significance of the Study	4
2. REVIEW OF LITERATURE	6
Introduction.....	6
Goals	6
Goal Orientation: Task and Ego Involvement	8
Measurements of Goal Orientation.....	10
Setting Goals Effectively	13
The Impact of Coaches and Parents on Goal Setting.....	14
Motivation and Goal Setting.....	15
Motivational Climates.....	16
Summary	18
3. METHODOLOGY	19
Introduction.....	19
Participants.....	19
Instruments.....	20
Design & Procedures	21
Data Analysis	21
Pilot Study.....	22
Participants.....	22

	Design & Procedures	22
	Results.....	22
	Discussion.....	23
4.	RESULTS AND DISCUSSION.....	24
	Results.....	24
	Discussion.....	28
	Implications of Research.....	30
	Limitations of Research	30
	Summary.....	31
5.	SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS.....	32
	Summary.....	32
	Conclusions.....	32
	Recommendations.....	33
	REFERENCES	35
	APPENDICES	
A.	PERCEPTIONS OF SUCCESS QUESTIONNAIRE	40
B.	IRB APPROVAL.....	41

List of Tables

TABLE	TITLE	PAGE
1.	Number of Participants	20
2.	Mean Task-Involvement and Ego-Involvement Scores.....	26

List of Figures

FIGURE	TITLE	PAGE
1.	Effect of sport type on ego-involvement	24
2.	Effect of sport type on task-involvement.....	25
3.	Effect of sex on ego-involvement	27
4.	Effect of sex on task-involvement	28

Chapter 1

Introduction

Background

Sports psychology is an aspect of athletics that is often overlooked, but when used properly it can benefit athletic performance (Baum, 1999). The coach or trainer who understands and implements key techniques of sports psychology will likely be rewarded with better athlete-coach relationships and better performances (Baum). Athletes all have different personalities, work ethics, and styles of motivation; the coaches who can figure out how to get the most out of their athletes have an advantage over the competition (Baum).

Having athletes set goals is important because goals motivate athletes by giving them something to strive for (Duda & Treasure, 2010). Goals also act as landmarks for evaluating progress and allow coaches to see how athletes view their own potential, talent, and abilities (Duda & Treasure). The type of goal an athlete sets reflects back on how that athlete combines their physical game with their mental game (Duda & Treasure). Males tend to be more ego-involved than females, but there is no significant difference between the sexes in regard to task-involvement (Petherick & Markland, 2008). If a coach is aware of what goal orientations their athletes have, they will know how to most effectively coach those athletes (Duda & Treasure).

Statement of Problem

There is a lack of research pertaining to differences in goal orientations between athletes who compete in team sports and in individual sports. This study will make

comparisons between the goal orientations of team-sport athletes and those of individual-sport athletes by using the Perception of Success Questionnaire.

Purpose of the Study

This study was designed to examine the goal orientations of team sport athletes and individual sport athletes. More specifically, the researcher aimed to uncover similarities and/or differences amongst team sport athletes versus individual sport athletes. The results of this study have the potential to illustrate whether team-sport and/or individual-sport athletes are prone to having a particular goal orientation. These findings may suggest ways for coaches to best handle athletes with a particular goal orientation.

Research Hypotheses

It was hypothesized that team sport athletes will have higher ego-involved goal orientations than individual sport athletes. It was further hypothesized that individual sport athletes will have higher task-involved goal orientations than team sport athletes. These hypotheses were based on the nature of individual sports and team sports: in individual sports an athlete can lose but still make a great personal improvement and the performance will be seen as a success whereas in team sports if the athlete loses it is generally looked upon as a failure even if the athlete performs well.

Delimitations

The following factors delimited this study:

1. Only one questionnaire, the Perceptions of Success Questionnaire, was administered to participants.

2. Participants all attend the same college.
3. Only participants whose sports were offered by this college were included.

Limitations

This study was limited in the following ways:

1. The survey was administered either directly before practice began or directly after it ended, so the participants may have been distracted and rushed through it without seriously evaluating each survey item.
2. The participants took the survey in a large group of their peers and in the presence of their coaches, and as such, they may have felt pressure to finish the questionnaire at the same time as the rest of the group, to answer the questionnaire in a certain way, or to rush through the questionnaire in order to start practice as soon as possible.
3. The population sizes of each sex were not equal.

Assumptions

For this study, it was assumed that:

1. The participants thoroughly read the questionnaire and answered each item honestly.
2. The Perception of Success Questionnaire was an accurate tool for assessing goal orientations.

Definition of Terms

Ego-involvement: goal orientation that describes an athlete who is most concerned with how they appear in comparison to their peers (Duda & Treasure, 2010).

Goal: a standard of performance that an athlete and/or coach sets for the athlete to achieve (Duda & Treasure, 2010).

Goal orientation: the personal standards used by an individual to define their version of success (Duda & Treasure, 2010).

Individual sports: sports that involve one athlete competing against one or more individual athletes (i.e., track and field, fencing, figure skating, swimming and diving, gymnastics, and golf) (Martin & Hall, 1997).

Perception of Success Questionnaire: a survey developed to determine a person's goal orientation (Roberts, Treasure, & Balague, 1998).

Task-involvement: goal orientation that describes an athlete who is most concerned with improving and performing their best (Duda & Treasure, 2010).

Team sports: sports that involve a team of two or more athletes competing against another team of two or more athletes (i.e., basketball, soccer, hockey, lacrosse, softball, and rugby) (Martin & Hall, 1997).

Significance of the Study

This study hopes to shed light on applied research that can be used by coaches, strength and conditioning specialists, nutritionists, and trainers of all sports to better understand the athletes with whom they work. Being aware of ego-involved tendencies will help a coach to prevent issues dealing with anxiety, showboating, and general discord before they become unmanageable (Duda & Treasure, 2010). Similarly, it will be easier to spot task-involvement characteristics and focus the athlete in such a way as to make these traits beneficial (Duda & Treasure). If a coach is able to predict and identify

goal orientations, they will be more efficient at encouraging or discouraging those behaviors as necessary (Duda & Treasure).

Chapter 2

Review of Literature

Introduction

Coaches who are well versed in sports psychology may be able to give their athletes advantages not only over the competition, but also in their personal development as athletes (Baum, 1999). The purpose of this study was to uncover potential differences and/or similarities between the goal orientations of team-sport and individual-sport athletes. This literature review begins with an overview of the benefits of goals and the different types of goals. The second section discusses the two types of goal orientations and progresses into the third section, which introduces some of the tools that are used to measure goal orientation. The fourth section details the main elements involved in effectively setting goals. The fifth section explains the role that coaches and parents play in the athletes' goal setting processes. The final two sections introduce the concepts of motivation and motivational climates and how they psychologically affect athletes and their performances.

Goals

Goals help athletic performance in a variety of ways, the most important of which is giving the athlete something to focus on during training and then using that focus to mark their progress (Borders, 2009; Duda & Treasure, 2010). Goals also act as landmarks for evaluating progress, and they allow coaches to see how athletes view their own potential, talent, and abilities (Duda & Treasure).

According to Wade (2009), goals consist of two parts: a destination that the goal-

setter desires to reach, and the process by which the goal-setter gets to that destination. Setting goals forces athletes to look at what steps need to be taken in order to reach a desired destination (Bovend'Eerd, Botell, & Wade, 2009). Additionally, it allows the athlete to make a plan of action to reach the goal (Bovend'Eerd et al., 2009; Wade, 2009). Goal-setting helps motivate athletes by breaking down a process into manageable steps that will lead the athlete toward accomplishing a certain outcome (Bovend'Eerd et al., 2009; Wade, 2009).

Athletes should be aware that not all goals are equal (Wade, 2009). According to Wade (2009), it is beneficial for athletes to set short-term goals, long-term goals, and goals that fall somewhere in the middle. Weinberg and Gould (2003) describe the levels of short- and long-term goals as a staircase with a series of steps representing a set of progressing short-term goals that lead up to the long-term goal at the top of the stairs. While the long-term goal is probably the most important, the short-term goals give the athlete something to accomplish and help keep them motivated over the course of the season (Wade).

Goals also can be divided into subjective and objective categories (Weinberg & Gould, 2003). Objective goals are focused on reaching standards and are specific (Weinberg & Gould). An example of an objective goal is “I want to run under five minutes in the mile race this season,” or “We want to improve our win-loss record to at least 75% wins this year.” On the other hand, subjective goals are not as measurable as objective goals and are less specific (Weinberg & Gould). Examples of subjective goals include “I want to be the best player on the team,” and “We want to have fun and improve our skills.”

Goal setting has been shown to positively influence athletes' levels of anxiety, confidence, and motivation (Burton, Naylor, & Holliday, 2001). It has been used extensively in a variety of settings outside of athletics (e.g., the workplace, personal life, and at home) and has the potential to yield positive results whenever implemented correctly (Mesmer-Magnus & Viswesvaran, 2007). While many coaches see the importance of having their athletes set goals, they also need to realize that actually setting a goal is only half the process—setting the right kind of goal and making sure the goal is a good fit for an individual athlete is just as important (Mesmer-Magnus & Viswesvaran, 2007).

Goal Orientation: Task- and Ego-Involvement

Ego-involvement and task-involvement are the two recognized divisions of goal orientation (Petherick & Markland, 2008; Lochbaum, Bixby, & Wang, 2007; Li, Solmon, Lee, Purvis, & Chu, 2007). An athlete with a task orientation views success as the mastery of a certain task, but also feels competent when showing improvements or progressing and giving a good effort (Petherick & Markland, 2008; Lochbaum et al., 2007; Li et al., 2007; Zizzi, Keeler, & Watson II, 2006). Task-oriented goals tend to be the most effective type of goals because they make athletes decide what they want to get out of the season and realize what they have to do to get there (Cote & Sedgwick, 2003; Mesmer-Magnus & Viswesvaran, 2007). In addition, they support and encourage athlete autonomy (Petherick & Markland, 2008; Mesmer-Magnus & Viswesvaran, 2007). Task-involved athletes also tend to be intrinsically motivated (Petherick & Markland, 2008; Lochbaum et al., 2007). Due to their focus on personal improvements, task-involved athletes also tend to have less aggression and more sportsmanship (Wells, Ellis, Arthur-

Banning, & Roark, 2006). Other benefits of a task involved orientation include encouraging high self esteem, developing a willingness to follow rules, valuing hard work, working well with others, and recognizing opportunities for improvement (Roberts, Treasure, & Conroy, 2007). Task-involvement may help an athlete to develop a strong work ethic and an ability to reach their peak performance in the long term (Weinberg & Gould, 2003). It also can help athletes to better deal with frustration and disappointment when they do not like an outcome (Weinberg & Gould).

An athlete with high ego-involvement sees success as being better than everyone else and constantly compares themselves to teammates and to the competition (Petherick & Markland, 2008; Li et al., 2007; Zizzi et al., 2006). Highly ego-involved athletes also see putting forth a high effort as a sign of low ability, whereas giving minimal effort is seen as a predictor of high ability and will lead to increased confidence after winning (Petherick & Markland, 2008; Roberts et al., 2007). Ego-oriented goals lack autonomy due to their subjective nature (Petherick & Markland, 2008; Mesmer-Magnus & Viswesvaran, 2007). Ego-involved athletes, who feel their reputations are at stake with every competition, will generally put forth the least amount of effort possible en route to winning in order to show off their superior ability (Wells et al., 2006; Roberts et al., 2007). An ego-involved goal orientation has also been shown to increase a person's wealth and social status, enhance one's career or position, and teach one to be competitive and to act superior to others (Robert et al., 2007).

Mallett and Hanrahan (2004) found that elite athletes are motivated by both task and ego goals. In their interviewing of 10 elite track and field athletes from Australia, Mallett and Hanrahan determined that the athletes were focused dually on perfecting their

event and on beating their opponents, although some athletes leaned more toward one goal orientation than the other. These athletes also learned early in their careers that they had to work very hard in order to reach their full potential despite acknowledging their high levels of natural talent (Mallett & Hanrahan, 2004). However, it is the ego-involvement that often carries elite athletes to the top of their sport, as the need to prove themselves and a desire for social recognition of being the best drives many elites to continue training and competing at such a high level (Mallett & Hanrahan, 2004). Additionally, Treasure and Roberts (1994) have found that as young athletes get older, ego-involvement tends to increase as the athletes find that success and positive comparisons to their peers matters more to them.

In a study of 100 male and female Division I collegiate athletes, Gill and Dziewaltowski (1988) found that males placed a higher value on outcomes (e.g., winning or losing) while females placed a higher value on performance (e.g., improving). The study suggested that males are more competitive than females, who seem to care more about reaching goals than winning contests (Gill & Dziewaltowski, 1988).

Measurements of Goal Orientation

The Task- and Ego- Orientation in Sport Questionnaire (TEOSQ) has been determined to be a consistent measuring tool for evaluating one's levels of ego and task involvements as they pertain to goal orientation (Kilpatrick, Bartholomew, & Riemer, 2003). The TEOSQ has two subscales (seven items for ego-involvement and six items for task-involvement), and each subscale gives a total score for task-involvement and ego-involvement (Kilpatrick et al., 2003; Petherick & Markland, 2008). However, it has been criticized because "the task score confounds the definition of a task orientation (self-

referenced perceptions of competence) with its correlates (e.g., effort, learning, enjoyment)” (Petherick & Markland, 2008, p. 57). Additionally, the study that developed the TEOSQ had incomplete data (Li, Duncan, Duncan, Harmer, & Acock, 1998).

The Goal Orientation in Exercise Scale (GOES) was developed using the TEOSQ as a baseline (Kilpatrick et al., 2003). The GOES, however, is geared more toward general exercise than toward sport (Kilpatrick et al.). It was intended to bring the study of exercise motivation up to the level that sport motivation has reached in recent years, as research and literature were not equal for sport and exercise (Kilpatrick et al., 2003). According to Kilpatrick et al., the GOES was found to be a reliable measure of goal orientation. However, Petherick and Markland (2008) found that there were inconsistencies in the reporting of the analyses performed on the study that developed the GOES. Also, the stem of the GOES (“I feel most successful in sport when...,” which was taken from the TEOSQ) was not specifically stated within the GOES; it was only implied that this stem was modified to fit exercise instead of sport (Petherick & Markland).

The Goal Orientation in Exercise Measure (GOEM) was created several years after the GOES and aimed to improve upon the GOES (Petherick & Markland, 2008). The GOEM was developed by Petherick and Markland (2008) as a means to determine whether an individual is more prone to setting task-oriented or ego-oriented goals. The GOEM was created using Achievement Goal Theory, which says that the way people define success influences what motivates them (Petherick & Markland, 2008). The GOEM had the same purpose as the GOES, but without the limitations that Petherick and Markland (2008) found within the study associated with the GOES. It also included adaptations directly from the TEOSQ (Petherick & Markland, 2008). The GOEM, like

the TEOSQ, produces two scores—one for task-involvement and one for ego-involvement, and its results were shown to be valid and reliable (Petherick & Markland).

The Perceptions of Success Questionnaire (POSQ) was developed by Roberts et al. (1998) as a measure to evaluate a person's ego-involved goal orientations and task-involved goal orientations pertaining specifically to sport. The POSQ has demonstrated reliability and was shown to be a valid instrument for measuring goal orientations in sport (Roberts et al., 1998). The POSQ is a list of 12 statements pertaining to the survey-taker in first-person point of view with a Likert scale (Roberts et al., 1998; Roberts, Spink, & Pemberton, 1999). The scale ratings that a person chooses for each of the statements will give that person an ego involvement score and a task involvement score (Roberts et al., 1998).

The POSQ was first administered to 147 male and female athletes (participating in high school and/or in college) from a large university in the Midwest (Roberts et al., 1998). The alpha coefficients were strong: 0.92 for task-involvement and 0.90 for ego-involvement (Roberts et al., 1998). This new edited version was given to 338 students in a physical activity class enrolled at a large Midwest university, yielding Cronbach alphas of 0.89 for task and 0.91 for ego (Roberts et al.). The POSQ was then edited again and given to 243 males and females from a large Midwestern university who participated in sports, edited further and then given again to the same participants to determine test-retest reliability (Roberts et al.). The correlations between the short form and the longer form were 0.98 for task and 0.97 for ego (Roberts et al.). The test-retest reliabilities were 0.80 for task and 0.78 for ego (Roberts et al.). The researchers later used younger participants instead of adults so they could create a version of the POSQ for children (Roberts et al.).

Setting Goals Effectively

Weinberg and Gould (2003) recommend the SMARTS approach to setting goals, which was designed by Smith (1994). The acronym, which stands for Specific, Measurable, Action-oriented, Realistic, Timely, and Self-determined, guides athletes to write goals that are most likely to help them succeed (Smith, 1994; Weinberg & Gould, 2003). To elaborate, SMARTS goals are goals that (a) are concrete and not vague, (b) have a way of being quantified to show they have been achieved, (c) indicate something needs to be done, (d) able to be achieved, (e) have a deadline to keep the athlete from dismissing or putting the goal off, (f) and were created with input from the participant (Smith, 1994; Weinberg & Gould, 2003). Mallett and Hanrahan (2004) recommend for coaches to help athletes set goals that both focus on improvement and on outcome.

When creating a goal, it is also important to consider the activity being performed, the support the athlete will need to reach the goal, how the athlete will be evaluated en route to their goal, and how much time will be given to reach the goal before it is finalized (Bovend'Eerd et al., 2009). Also, writing down goals helps athletes stay committed as well as reminds them to stay on task if they get discouraged (Wade, 2009). Locke and Latham (2002) found that directing effort, an energizing function, enhancing persistence, and acquiring task-relevant knowledge are the primary factors influencing goal attainment. Their research findings have suggested that athletes will put more effort toward difficult but specific goals than toward less-specific easier goals (Locke & Latham).

Cote and Sedgwick (2003) interviewed ten expert-level Canadian rowing coaches and ten of those coaches' athletes to find which coaching strategies and behaviors were

used most effectively. During these interviews it was found that the coaches believed that effective goals were objective and acted as benchmarks; they were not vague goals or goals that the athletes could not control themselves (Cote & Sedgwick). One coach stated, “As a coach, you have to have a plan to structure the goals for your athlete. I think you have to have a clear vision of what your athlete is trying to achieve” (p.70).

Similarly, one of the athletes was quoted as saying “My coach helped me by giving me an end goal, like putting everything into perspective. It helps you to stay focused when you know what we are all going for and how we are going to get there” (p. 70). The coaches and athletes who were interviewed agreed that before goals are set, athletes should figure out what motivates them because identifying the athlete's main goal is what sets up the process of making stepping-stone goals that lead to the main goal (Cote & Sedgwick).

The Impact of Coaches and Parents on Goal Setting

It is important for coaches to be involved in the goal setting process so they are aware of what their athletes are working toward so they can help and encourage them. Additionally, they can make sure that the athletes are being realistic and not blindly working toward unforeseen disappointment (Wade, 2009). If coaches help athletes to set goals, they can also help them reevaluate any goals that may take longer than the athlete predicted or are too difficult for the athlete to reach at the present time (Wade). Furthermore, they can also adjust the goals of athletes who did not realize that they should be aiming for higher goals and help them to challenge themselves (Wade).

Waldron and Krane (2005) examined adolescent female softball players and found that the goal orientations of children reflected the goal orientation that the children

perceived their parents to have. Even if a parent actually has a task-involved goal orientation, if the child perceives their parent to be ego-involved, then that child is more likely to have an ego-involved goal orientation than a task-involved orientation (Waldron & Krane, 2005; Horn & Horn, 2007). These findings reiterate how important it is for parents to be aware of how they may impact their children in regards to self-efficacy (Waldron & Krane; Horn & Horn). Parents can be just as effective as coaches in helping children (especially younger children) to model their goal orientations (Waldron & Krane; Horn & Horn).

Motivation and Goal Setting

Motivation plays a large role in how and why athletes set goals for themselves (Heimerdinger & Hinsz, 2008). The two main kinds of motivation are approach motivation and avoidance motivation (Heimerdinger & Hinsz). Approach motivation is based upon a positive outcome, whereas avoidance motivation is directed toward negative outcomes (Heimerdinger & Hinsz, 2008). Avoidance motivation comes into play when athletes with a high performance-goal orientation become afraid of failure and begin avoiding anything that could lead to failure, which in performance motivation (i.e., being ego-involved) is anything that may make them “look bad” to others (Heimerdinger & Hinsz). Therefore, athletes who have higher levels of avoidance motivation tend to perform at lower levels than peers who have lower avoidance motivation levels (Heimerdinger & Hinsz). When athletes are only motivated to avoid failure, they will not be performing at their optimal levels; thus, it is best to steer the athlete toward a more task-involved orientation (Heimerdinger & Hinsz).

Self-efficacy is defined as how well a person believes they can accomplish

something (Heimerdinger & Hinsz, 2008). Since athletes with higher levels of failure avoidance are preoccupied with how they will perform, it is likely that these athletes have low self-efficacy (Heimerdinger & Hinsz). Heimerdinger and Hinsz (2008) performed a study on college students that showed self-efficacy and personal goals to be the best predictors of the participants' success, indicating that the confidence of the participants played a large role in how well they were able to perform. The results also showed that performance was strongly correlated with how committed the participants were to reaching their goals, and that the participants with the highest levels of failure avoidance also had the lowest levels of self-efficacy, the least amount of goal commitment, and the poorest task performances (Heimerdinger & Hinsz). Athletes who use mental skills (e.g., goal setting, self-talk, and visualization) tend to feel greater self-efficacy and control over their performances (Frey, Laguna, & Ravizza, 2003). Confidence can be a powerful tool in how it pertains to performance, and when an athlete sets a goal and accomplishes it, the gains in confidence can be significant (Frey et al.). This increased confidence may be due to the athlete feeling as though they have an advantage over the competition or it may be due to self-empowerment (Frey et al.).

Motivational Climates

Anxiety in sport generally is created by personal issues (i.e., goals), environmental issues (i.e., training and the competition), and team issues (i.e., coaching style) (Vosloo, Ostrow, & Watson, 2009). The motivational climate, which can be created by any combination of the coach, athletes, and parents, is generally either a mastery climate or a performance climate (Vosloo et al., 2009). Mastery climates focus on the process and are task-involved, while performance climates are ego-involved and

focus on the outcome (Vosloo et al.). Generally, athletes in performance climates tend to set subjective goals and have higher levels of anxiety (Cote & Sedgwick, 2003). These athletes often have a harder time reaching their goals due to their vague nature, which can lead to frustration and a lack of feelings of accomplishment (Cote & Sedgwick).

Motivational climates have been shown to impact athletic performance (Vosloo et al., 2009). Athletes in mastery climates generally put forth higher efforts and are more persistent in working toward their goals, while athletes in performance climates tend to show less persistence and a lack of dedication (Vosloo et al.). When outcome is emphasized over improvement, athletes often get discouraged quickly, whereas athletes who are praised for showing improvements often become more motivated due to feeling that their efforts are being rewarded (Vosloo et al.). The importance of the motivational climate set by the coach cannot be overlooked because research has shown that athletes will change their goal orientation based on the motivational climate they find themselves in (Vosloo et al.). For example, a highly focused task-involved athlete on a team surrounded by a performance climate may gradually transition to a more ego-involved orientation due to the influences around them (Vosloo et al.). Since this motivational climate is not in their best interest naturally, this athlete will not likely reach their full potential as long as they are still in this situation (Vosloo et al.).

Athletes in mastery climates tend to have better sportsmanship and show less aggression than athletes who are in performance climates (Wells, Ellis, Arthur-Banning, & Roark, 2006). Coaches must keep in mind that the influences of the type of environment they foster can set the tone of an athlete's goal orientation, particularly if they are working with younger athletes (Wells et al., 2006). It is important, particularly at

a young age, for athletes to be praised for their individual progress and not be compared with their peers (Wells et al.). Furthermore, athletes tend to enjoy their sport more when they play in mastery climates as opposed to performance climates (Zizzi et al., 2006).

Summary

Setting goals should be an important part of every athlete's training regimen because it allows them to have a better chance of performing to their potential (Bovend'Eerdts et al., 2009). While athletes should be actively involved in setting and working to achieve their goals, many aspects of this process, including setting up the proper motivational climate, are up to the coach (Vosloo et al., 2009; Cote & Sedgwick, 2003).

It is important for a coach to recognize the differences between ego-involved and task-involved athletes, particularly in regards to motivation (Duda & Treasure, 2010; Petherick & Markland, 2008; Baum, 1999). Ego involved athletes tend to be extrinsically motivated while task involved athletes are usually more intrinsically motivated, and a coach will work better with their athletes when they know what gets the athletes psychologically ready to compete (Duda & Treasure, 2010; Petherick & Markland, 2008; Baum, 1999). However, there is a noticeable lack of research comparing the goal orientations of athletes from different sports. If research were to be conducted on goal orientation differences based on sport differences, it could provide coaches with more insight into how their athletes are motivated.

Chapter 3

Methodology

Introduction

The design of this study intended to find any similarities and/or differences that exist between the goal orientations of team sport athletes and individual sport athletes. This chapter includes descriptions of the participants, the instruments used, the design and procedures, and analysis of the data. It also includes descriptions of the participants, instruments, design and procedures, and results of the pilot study conducted prior to this study.

Participants

The participants were male and female varsity athletes at a National Collegiate Athletic Association (NCAA) Division III college in the Northeastern United States (refer to Table 1 below). Each participant was at least 18 years of age. The participating teams were men's baseball, women's softball, men's basketball, women's basketball, men's ice hockey, women's ice hockey, men's lacrosse, women's lacrosse, men's swimming and diving, women's swimming and diving, men's track and field, and women's track and field. All of these teams were either in season or in preseason at the time of data collection.

Table 1.

<i>Number of Participants</i>	Males	Females	Total
Team Sports			
Basketball	12	11	23
Baseball/softball	30	16	46
Ice hockey	22	25	47
Lacrosse	<u>41</u>	<u>24</u>	<u>65</u>
Total Team Sport Participants	105	76	181
Individual Sports			
Swimming and diving	18	19	37
Track and field	<u>58</u>	<u>46</u>	<u>104</u>
Total Individual Sport Participants	76	65	141
Total Participants	181	141	322

Instruments

The Perception of Success Questionnaire (POSQ) was administered in paper form to all participants (see Appendix A). The POSQ was developed by Roberts, Treasure, and Balague (1998) as a measure to evaluate a person's ego-involved goal orientations and task-involved goal orientations pertaining specifically to sport. The POSQ has demonstrated reliability and has been shown to be a valid instrument for measuring goal orientations in sport (Roberts et al., 1998).

The POSQ is a list of 12 statements pertaining to the survey-taker in first-person point of view (Roberts et al., 1998; Roberts, Spink, & Pemberton, 1999). Next to these statements is a row of choices labeled A, B, C, D, and E. Above these letters is a Likert scale indicating that "A" is chosen when the participant "strongly agrees" with the statement, "C" is chosen if the participant feel "neutral" toward the statement, and "E" is chosen if the participant "strongly disagrees" with the statement. "B" and "D" refer to whether the participant "agrees" or "disagrees," respectively, with the statement (Roberts

et al.). To score the POSQ, five points are given for “A,” four points are given for “B,” three points are given for “C,” two points are given for “D,” and one point is given for “E” (Roberts, Spink, & Pemberton, 1999). The points for the first, second, third, sixth, tenth, and eleventh statements are added up to get the ego-involvement score, and the points for the fourth, fifth, seventh, eighth, ninth, and twelfth statements give the task-involvement score (Roberts et al., 1999).

Design & Procedures

The Perceptions of Success Questionnaire was administered in paper format with a writing utensil to the participants prior to or following one of their organized team practices or weightlifting sessions. The data collection sessions were arranged ahead of time with the coach of each team. After explaining that the questionnaire would ask for information pertaining to the type of goal orientation of the participants, a copy of the POSQ was passed out to each participant over the age of 18 years. IRB approval and approval from the school’s athletic director were attained prior to data collection. The questionnaires were scored and the data was tallied after all data collecting sessions were completed.

Data Analysis

Analysis of the data was performed using a Mann-Whitney test due to the need for a test that looks for differences between two independent samples and that does not assume data is normally distributed. The Mann-Whitney was chosen because this was a cross-sectional study comparing groups, and a visual analysis showed the data to be negatively skewed and therefore nonparametric. The parametric version of the Mann-

Whitney test is the independent *t*-test. SPSS software version 17 was used for data analysis.

Pilot Study

During the spring of 2010, a pilot study was conducted as a precursor to this study. The only difference between this study and the pilot study is that the pilot study used a smaller sample size ($n = 37$) with only two different sports.

Participants

The participants in the pilot study were all varsity athletes at a Division III college in the Northeast. The individual-sport athletes were members of the men's and women's track and field team ($n = 20$), and the team-sport athletes were members of the men's soccer team ($n = 17$).

Design & Procedures

The POSQ was handed out to the participants at their team practices before the practice began. In addition to choosing answers for the 12 items on the questionnaire, the participants also recorded their sex and age on the paper.

Results

According to the findings of this pilot study, the type of sport an athlete participated in did not influence their goal orientation. There was not a statistically significant difference between the ego-involvement and task-involvement scores of the soccer players and the track-and-field athletes. However, there was statistical significance in the difference between the ego-involvement scores of the males and females when accounting for age and team, showing that males are considerably more ego-involved than females. There was no significant difference between the task-involvement scores of

the males and females, indicating that task-involvement between males and females is relatively equal.

Discussion

The results of this pilot study were consistent with the results of several other related studies. There was little difference between the task-involvement scores of the male and female participants, but the males had significantly higher scores of ego-involvement while female ego-involvement scores were lower (Petherick & Markland, 2008; Petherick & Weigand, 2002; Waldron & Krane, 2005; Harwood, Cumming, & Fletcher, 2004). Since all of the athletes surveyed had task-involvement scores that were equal to or higher than their ego-involvement scores, this study indicates that the participants have high levels of self-efficacy, which is consistent with their status as varsity collegiate athletes (Heimerdinger & Hinsz, 2008; Frey, Laguna, & Ravizza, 2003).

Chapter 4

Results and Discussion

Results

There was a statistically significant difference between the ego-involvement scores of individual sport athletes (mean = 22.64) and team sport athletes (mean = 25.72) ($U = 8180.000$, $N_{individual} = 141$, $N_{team} = 181$, $p < .0005$, two-tailed) as shown in Figure 1. Regardless of sex, team sport participants had higher ego-involvement scores than the individual sport participants.

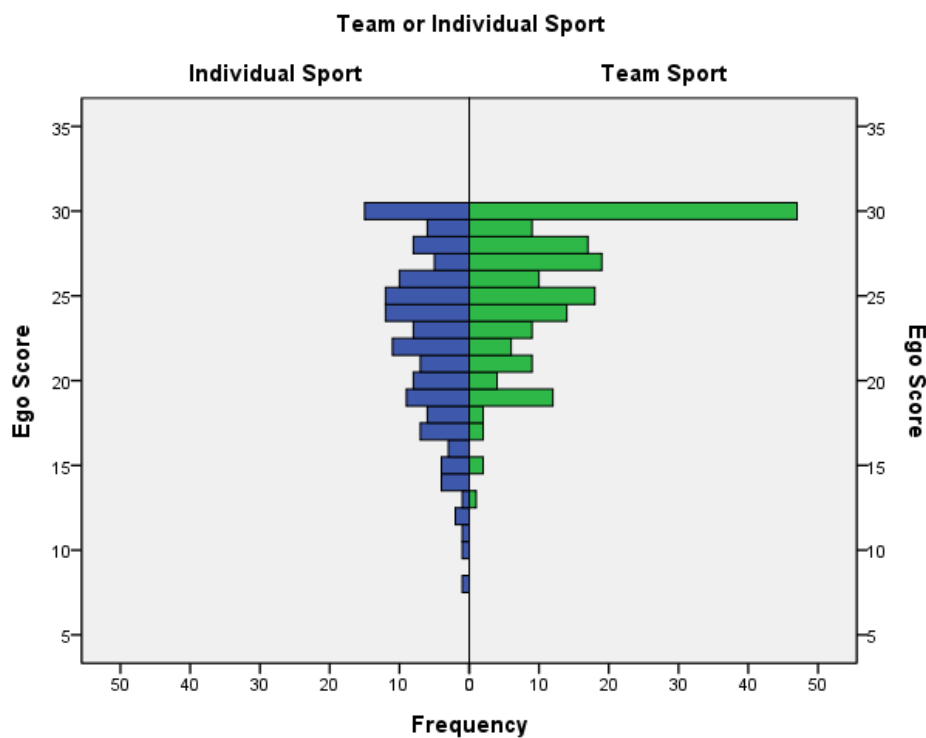


Figure 1. Effect of sport type on ego-involvement.

However, there was not a statistically significant difference between the task-involvement scores of individual sport athletes (mean = 28.62) and team sport athletes

(mean = 28.44) ($U = 12079.000$, $N_{individual} = 141$, $N_{team} = 181$, $p = .372$, two-tailed), as shown in Figure 2.

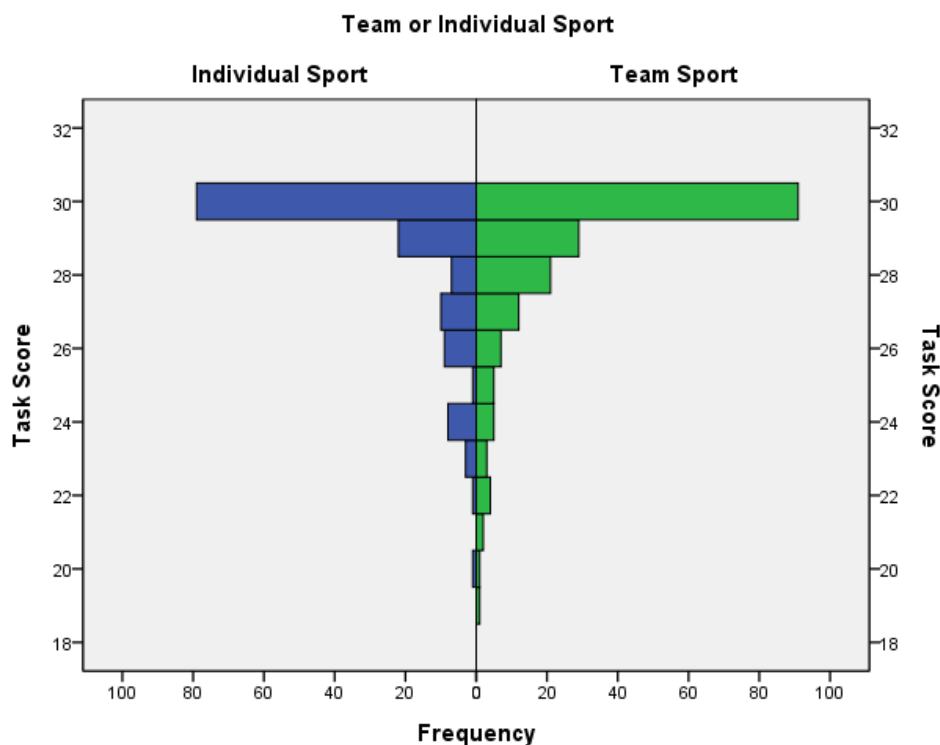


Figure 2. Effect of sport type on task-involvement.

The mean task-involvement and ego-involvement scores for each sport are shown in Table 2. Among the men's sports, baseball, a team sport, had the highest task-involvement score and track and field, an individual sport, had the next highest task-involvement score, while ice hockey had the lowest task-involvement score. The women's results were similar. Softball had the highest task-involvement score and women's track and field had the next highest task-involvement score, while women's swimming and diving had the lowest task-involvement score.

The highest ego-involvement score among the men's sports was recorded by the lacrosse team, while the lowest was recorded by the track and field team. Among the

women, basketball had the highest ego-involvement score while swimming and diving had the lowest ego-involvement score.

Table 2.

Mean Task-Involvement and Ego-Involvement Scores

Males		Task	Ego	
Team Sports	Basketball	27.92	26.50	
	Baseball	28.80	26.10	
	Ice hockey	27.18	26.50	
	Lacrosse	28.34	27.12	
	Individual Sports			
	Swimming and diving	27.83	23.56	
	Track and field	28.64	23.21	
Females		Task	Ego	
Team Sports	Basketball	28.91	24.64	
	Ice hockey	28.68	24.08	
	Lacrosse	28.21	24.21	
	Softball	29.81	25.38	
Individual Sports				
	Swimming and diving	28.16	20.63	
	Track and field	29.10	22.39	

As shown in Figure 3, there was a statistically significant difference between the ego-involvement scores of males and females ($U = 9323.500$, $N_{males} = 181$, $N_{females} = 141$, $p < .0005$, two-tailed). The male participants (mean = 25.22) had a higher average ego-involvement score than the female participants (mean = 23.28), regardless of whether they were involved in team sports or individual sports.

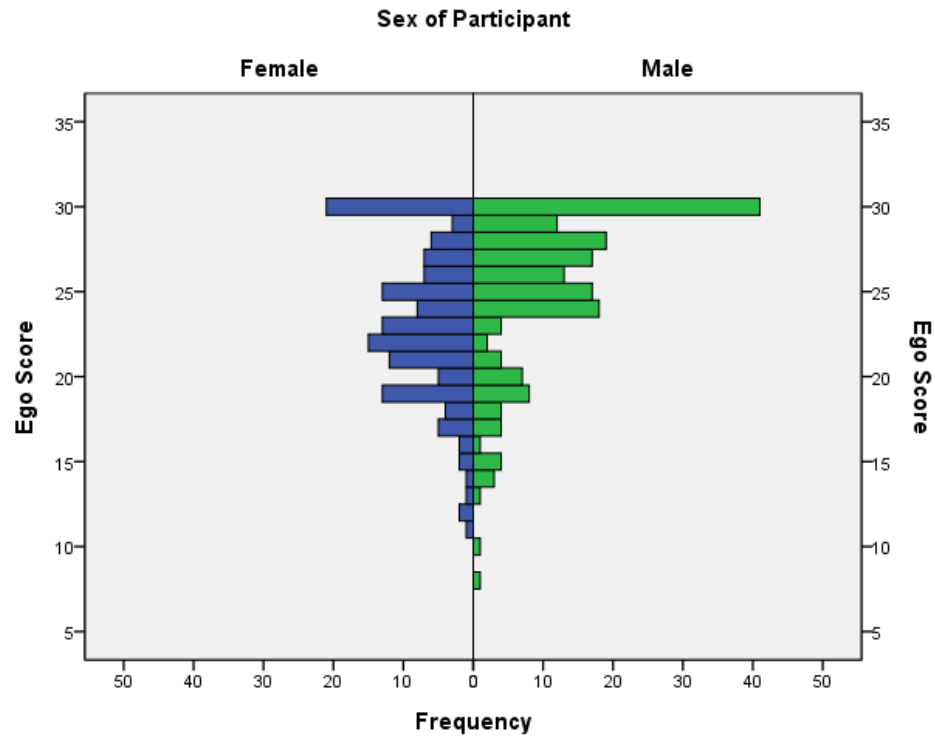


Figure 3. Effect of sex on ego-involvement.

However, there was not a statistically significant difference between the task-involvement scores of males (mean = 28.29) and females (mean = 28.82) ($U = 11375.500$, $N_{males} = 181$, $N_{females} = 141$, $p = .070$, two-tailed) as shown in Figure 4.

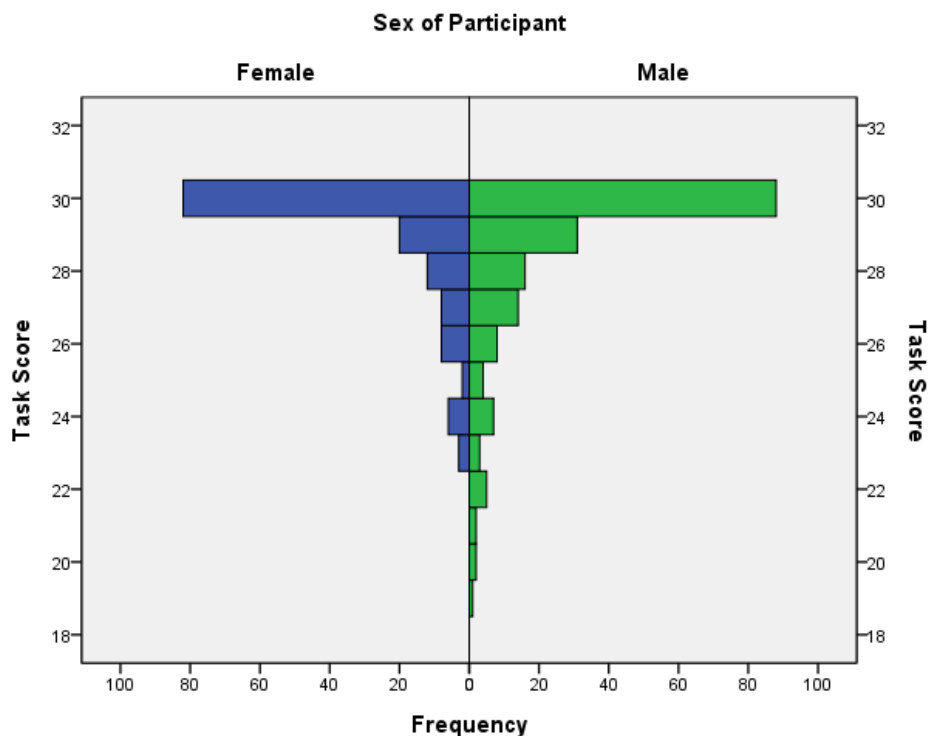


Figure 4. Effect of sex on task-involvement.

Discussion

The first hypothesis of this study was that the goal orientations of team sport athletes would be more ego-involved than the goal orientations of individual sport athletes, which was supported by this study's findings. The other hypothesis was that the goal orientations of individual sport athletes would be more task-involved than the goal orientations of team sport athletes. This second hypothesis was not supported by the results; there was no significant difference between the task-involvement of team sport and individual sport athletes. This study also found that males are more ego-involved than females, regardless of the type of sport played.

The results of this study differed from those found by Vosloo, Ostrow, and Watson (2009) in their study of high school swimmers' goal orientations. Vosloo et al.

hypothesized that males would be more likely to have highly ego-involved goal orientations while females would be more likely to have highly task-involved goal orientations. Their study found that there were no statistically significant differences between sexes regarding type of goal orientation. The present study found no differences regarding task-involvement, but it did find a difference pertaining to ego-involvement.

Hanrahan and Cerin (2009) also had opposite results in their study on male and female athletes from multiple sports. Contrary to the present study's results, Hanrahan and Cerin found that individual sport athletes had higher ego-involvements than did athletes from team sports. However, this could be at least partially attributed to the differences in methods between that study and the present study: Hanrahan and Cerin did not use the POSQ and instead utilized the TEOSQ, the Sport Attributional Style Scale, and a demographic questionnaire.

In a 1988 study similar to the present study, Gill and Dzewaltowski found that male collegiate athletes were more concerned with the outcome of a competition and female collegiate athletes were more concerned with their performance during a competition. These results are consistent with the ego- and task-involvement data from this study. However, it may not be ideal to compare the results of the present study with those of a study published more than 20 years earlier since women's athletics advanced considerably from 1988 to 2011 and females' attitudes toward sports may have changed during this time period.

This study's results were also consistent with Mallett and Hanrahan (2004). After interviewing elite athletes, Mallett and Hanrahan found that elite athletes were both highly task- and ego-involved, as opposed to heavily favoring one goal orientation. The

data from the present study indicated that while having a high task-involvement does not predict a high ego-involvement, the majority of participants who had the highest possible ego-involvements (30 on a scale of 30) also had high task-involvements.

Implications of Research

There were two main findings resulting from this study: (1) team sport athletes have higher ego-involvements than individual sport athletes, and (2) male athletes have higher ego-involvements than female athletes. Being aware of the potential differences among athletes is useful for coaches, athletic trainers, nutritionists, strength and conditioning specialists, and anyone else who works with a variety of athletes. While each athlete has their own personality and should be treated as an individual person, having a generic idea of an athlete's likely psychology will assist those who deal with athletes as they get to know the individual.

Limitations of Research

One limitation of this study was that it used only one assessment tool, the Perceptions of Success Questionnaire. If additional tools had been used, it may have been possible to get a broader view of the type of goal orientation held by athletes in various sports and of different sexes. However, if participants are asked to fill out multiple questionnaires they become more likely to rush through them and not read them as thoroughly, particularly if there is overlap among the questionnaires. One benefit of this study's design was that the POSQ is a very brief questionnaire, which the coaches appreciated since it did not take up much time during practice sessions. Also, the athletes were more willing to participate when they saw how short the questionnaire was.

Another limitation found during the research was that since the POSQ was administered either directly before or directly after a practice session, the athletes may have been more likely to be distracted, to rush through it, or to not give it their full attention. Furthermore, since the participants were surrounded by the rest of their teams and coaches, they may have felt a need to finish at the same time as everyone else, which may have impacted the amount of thought that went into contemplating each item on the POSQ.

Summary

The results of this study show that while there are no significant differences regarding task-involvement between sexes or between type of sport, team sport athletes and male athletes are more ego-involved than individual sport athletes and female athletes. These results were consistent with most but not all previous literature, and may have been affected by the measuring tool used (POSQ) and the environment in which it was administered. The findings are of use to anyone who works with a variety of athletes, as understanding which goal orientation an athlete is predisposed to can increase the quality of the relationship.

Chapter 5

Summary, Conclusions, and Recommendations

Summary

The purpose of this study was to examine whether differences exist between the goal orientations of team sport athletes and individual sport athletes. The participants were 181 male and 141 female collegiate athletes at a Division III school in the Northeast. The sports from which the participants came were track and field, swimming and diving, basketball, ice hockey, lacrosse, and baseball/softball. The Perceptions of Success Questionnaire (POSQ) was the tool used to determine goal orientation, which is made up of one's ego-involvement and task-involvement. The POSQ is a 12-item Likert scale. The Mann-Whitney statistical test was used to analyze the data. The first finding was that male athletes (regardless of whether they compete in a team or individual sport) have higher ego-involvement than female athletes. There was no significant difference between the sexes regarding task-involvement. The second finding was that team sport athletes had significantly higher ego involvement scores on the POSQ than individual sport athletes. There was no significant difference between team sport athletes and individual sport athletes regarding task involvement.

Conclusions

Based upon statistical analysis of the data, the following conclusions were made:

1. Team sport athletes are more ego-involved than individual sport athletes.
2. Male athletes are more ego-involved than female athletes.

3. There are no significant differences between any groups regarding task involvement.

Recommendations

Based upon the conclusions reached in this study, future research pertaining to goal orientations of athletes could benefit by following these recommendations:

1. This study drew all of its participants from a single Division III institution in the Northeast. Future research may benefit from expanding the pool of participants not only to a greater number of institutions but also to colleges and universities that have NCAA Division I, NCAA Division II, National Association of Intercollegiate Athletics (NAIA), and National Junior College Athletic Association (NJCAA) affiliations.
2. The institution used in this study does not offer every sport that is sanctioned by the NCAA. To broaden this study, other sports that were not used while gathering the research should be considered.
3. The athletes who participated in this study varied in skill level. Some of these athletes were starters and award winter while others received little playing time. Furthermore, some of the athletes who were among the most talented on the team may not have been playing as much as they are used to playing due to injury, illness, or academic probation. The amount that an athlete is able to contribute to their team may temporarily impact goal orientation. Taking skill level into consideration may be another point to consider when further developing this study. It may be of interest to also look at Division I and II athletes who may or

may not be on a scholarship, as scholarships can add a whole other realm to what motivates a college student to play a sport.

4. Some of the participants in this study were non-traditional students (e.g., 23 year-old freshmen) who played their sport at the prep school level or in a league post-high school before enrolling in college. Some of these participants were five or more years older than their teammates and participants from other sports. Due to this large difference in age, it may be best to omit any outliers.
5. If the POSQ was to be used as the research tool for a study, the researcher may want to consider clarifying the statements when administering the questionnaire. When the POSQ was administered during this study, several male participants asked whether the statement “I feel most successful when I beat people” referred to physically injuring people or to outperforming people. It is possible that other participants in this study misinterpreted that statement but did not ask for clarification, thus potentially altering their responses to the statement.

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Appendix A – Perceptions of Success Questionnaire

What does success in sport mean to you? There are no right or wrong answers. We ask you to circle the letter that best indicates how you feel.

WHEN PLAYING SPORT, I FEEL MOST SUCCESSFUL WHEN:

	Strongly agree		Neutral		Strongly disagree
I beat other people	A	B	C	D	E
I am clearly superior	A	B	C	D	E
I am the best	A	B	C	D	E
I work hard	A	B	C	D	E
I show clear personal improvement	A	B	C	D	E
I outperform my opponents	A	B	C	D	E
I reach a goal	A	B	C	D	E
I overcome difficulties	A	B	C	D	E
I reach personal goals	A	B	C	D	E
I win	A	B	C	D	E
I show other people I am the best	A	B	C	D	E
I perform to the best of my ability	A	B	C	D	E

Appendix B – IRB Approval

**MEMORANDUM**

To: Jennifer Taft
Katherine Polasek, Kinesiology

From: Jena Curtis, Primary Reviewer
Institutional Review Board

Date: 11-16-2010

RE: Institutional Review Board Approval

In accordance with SUNY Cortland's procedures for human research participant protections, the protocol referenced below has been approved for a period of one year:

Title of the study:	Differences in Goal Orientation Between Athletes in Individual Sports Versus Team Sports		
Level of review:	Exempt	Protocol number:	101120
Project start date:	Upon IRB approval	Approval expiration date*:	N/A: (See * NOTE below)

* **Note: exempt research does not require continuation requests;** the SUNY Cortland IRB only requests annual email notification (to irb@cortland.edu) indicating that the research continues. The purpose of the continuation notification is to alert the IRB Administrator that the records of the original IRB approval must remain available. Unlimited continuations can be registered for exempt research under federal and SUNY Cortland IRB guidelines.

The federal Office for Research Protections (OHRP) emphasizes that investigators play a crucial role in protecting the rights and welfare of human subjects and are responsible for carrying out sound ethical research consistent with research plans approved by an IRB. Along with meeting the specific requirements of a particular research study, investigators are responsible for ongoing requirements in the conduct of approved research that include, in summary:

- obtaining and documenting informed consent from the participants and/or from a legally authorized representative prior to the individuals' participation in the research, unless these requirements have been waived by the IRB;
- obtaining prior approval from the IRB for any modifications of (or additions to) the previously approved research; this includes modifications to advertisements and other recruitment materials, changes to the informed consent or child assent, the study design and procedures, addition of research staff or student assistants, etc. (except those alterations necessary to eliminate apparent immediate hazards to subjects, which are then to be reported by email to irb@cortland.edu within three days);
- providing to the IRB prompt reports of any unanticipated problems involving risks to subjects or others;
- following the principles outlined in the Belmont Report, OHRP Policies and Procedures (Title 45, Part 46, Protection of Human Subjects), the SUNY Cortland College Handbook, and SUNY Cortland's IRB Policies and Procedures Manual;
- notifying the IRB of continued research under the approved protocol to keep the records active; and,
- maintaining records as required by the HHS regulations and NYS State law, for at least three years after completion of the study.

Institutional Review Board
Page 2

In the event that questions or concerns arise about research at SUNY Cortland, please contact the IRB by email irb@cortland.edu or by telephone at (607)753-2511. You may also contact a member of the IRB who possesses expertise in your discipline or methodology, visit <http://www.cortland.edu/irb/members.html> to obtain a current list of IRB members.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jena Curtis', with a long horizontal stroke extending to the right.

Jena Curtis
IRB Primary Reviewer
School of Professional Studies