

THE INFLUENCE OF SCHOLARSHIP STATUS AND COGNITIVE MEANING ON
INTRINSIC MOTIVATION LEVELS OF MALE AND FEMALE COLLEGE ATHLETES: A
COGNITIVE EVALUATION PERSPECTIVE

by

JILL L. FUINI

Under the Direction of Linda F. Campbell

ABSTRACT

The purpose of this study was to examine the relationships of scholarship status, perception of scholarship, sport played and gender with levels of intrinsic motivation, (IM) of NCAA Division II male and female athletes from three different sport domains. This study is based on a pilot study, which examined similar variables in a study of NCAA Division II women's soccer players in the spring of 2005 (Fuini, 2005). Results of this study confirmed many of the hypotheses as set forth by the author. The study revealed that levels of IM are highest for athletes without scholarship and lowest for athletes with half scholarship. Thus higher scholarship status correlated adversely with levels of IM in this population. Significant positive correlations were found between IM and effort and importance (E/I), perceived competence (PCOMP), perceived choice (PCHOICE) and the self-created Athlete Perception Questionnaire (APQ) perceived performance scale. As hypothesized IM correlated negatively with the pressure tension (P/T) scale and the APQ perceived control scale. These findings were consistent with the theoretical ideas of Cognitive Evaluation Theory and findings in the literature regarding the independent and dependent variables. Non-significant findings were found regarding levels of IM and gender and sport played.

INDEX WORDS: Intrinsic Motivation, College Athletics, Scholarship Status, Perception of Scholarship, Gender, Sport Played

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JILL L. FUINI

B.S., Bloomsburg University, 1996

M.S., University of Scranton, 1999

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JILL L. FUINI

Major Professor: Linda Campbell

Committee: Brian Glaser
Arthur Horne
Douglas Kleiber

Electronic Version Approved:

Maureen Grasso
Dean of the Graduate School
The University of Georgia
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CHAPTER I

INTRODUCTION

Motivation is a concept which has received much attention from various branches of psychology since the inception of the specialty. Motivation concerns energy, direction, persistence and all aspects of activation and intention (Ryan and Deci, 2000). It continues to be at the center of a person's biological, social and cognitive functioning. Motivations are reasons people initiate and perform voluntary behavior; they indicate the meaning of human behavior, and they may or may not reveal a person's values. Early motivational theorists in psychology attempted to explain motivation in many different settings and for many kinds of behaviors (Weiner, 1990). Motivation is conceptualized as multidimensional because it measures impulsive and deliberate action, is concerned with both internal and external factors, and observed causes for behavior. Motivation is valued for several reasons. Importantly, this concept is valued by people including teachers, managers, parents and coaches who attempt to mobilize others to act.

In real world situations, motivation is a central factor in accomplishing change and producing desired outcomes. The most self-determined type of motivation is Intrinsic Motivation (IM). It has been argued that intrinsically motivated individuals accomplish the most effective changes in learning, performance, and behavior (Deci, 1971). This appears to be true in a variety of domains including sport, the proposed area of research for this study. As a result, athletes' intrinsic motivation, (IM) is a valuable asset and understanding its origin, development, and enhancement is central to understanding success in athletics.

Intrinsically motivated behaviors are those performed for the satisfaction one gains from engaging in the activity itself. According to the primary theorists, satisfaction is associated with intrinsically motivated actions and experiences and with competence. (Deci & Ryan, 1985; Pelletier et al., 1995) It is commonly understood as the basis of both enjoyment and perceived competence in sport. The issue of how to foster and maximize motivation has long been of interest in the sport domain. Thus for this study, it is assumed that intrinsically motivated individuals who are participating are motivated by competence (desire to engage in challenges and expand skills) or enjoyment (desire to have fun, pursue interest and be stimulated) or a combination of the two.

The types and origins of motivation are numerous; some people are motivated by one form of motivation, that of external reinforcement. This type of motivation is commonly referred to as extrinsic motivation. Both intrinsic motivation and extrinsic motivation have been studied extensively in the field of psychology. Much of the literature has attempted to identify the factors which are associated with motivational climate or factors that may cause individuals to become predominately intrinsically or extrinsically oriented in a particular activity (Amorose and Horn, 2000).

Theoretical Framework of Intrinsic Motivation: Historical Perspective

Of particular interest to athletics is the concept of intrinsic motivation (IM). Individuals are intrinsically motivated when they engage in an activity for the satisfaction derived from the activity itself and not from extrinsic rewards (Deci, 1971). Deci (1975) defines IM as an innate feeling for self-determined competence. IM is marked by high levels of task enjoyment and fosters longevity of interest in an activity (Tauer & Harackiewicz, 2004). There are numerous historical stages in the evolution of the

understanding of IM, some of which have ultimately led to its application in the domain of athletics.

Historically the concept of motivation was guided by behavioral principles. Thus, the extent to which reinforcers were applied, motivation increased and thus performance enhanced (Lepper, Henderlong & Gingras, 1999). These principles of behavior were applied in a variety of settings, including athletics and studied from a variety of theoretical perspectives. One theory of human motivation is the theory of cognitive dissonance. This theory states that contradicting cognitions serve as a driving force that compels the mind to acquire or invent new thoughts or beliefs, or to modify existing beliefs, so as to reduce the amount of dissonance (conflict) between cognitions (Festinger, 1957). This theory operates on the concept that dissonance is an unpleasant motivating state (a feeling) that encourages attitude change to achieve or restore consonance (Festinger, 1957). Cognitive dissonance is a psychological term which describes the uncomfortable tension that comes from holding two conflicting thoughts at the same time, or from engaging in behavior that conflicts with one's beliefs. It is thought that through this internal dissonance, people may be motivated to change behaviors.

Another internal type of motivation to consider is IM. Specifically the concept of IM has its beginnings in the work of White (1959). He argued that Freud's theory of psychodynamic theory and Hull's Drive Theory did not fully encompass a person's motivation. According to White, individuals are inherently motivated to gain mastery over their environment. This results in what he termed "competence" or "effectance motivation", based on an intrinsic need to deal effectively with one's environment. He also maintained that the experience of mastery results in feelings of efficacy that were

inherently pleasurable. He conceived that such IM is an ongoing condition of the organism, energized by the central nervous system and periodically interrupted by tissue needs (White, 1959). This concept is similar to what Deci and Ryan in 1985 defined as IM, which occurs when an individual engages in an activity for pleasure, satisfaction and a sense of competence.

Research of IM was also conducted through the work of Harter in 1978. She held to White's theory regarding "effectance motivation", but considered this idea incomplete. Harter expanded and differentiated White's global idea. She extended White's work by including a developmental perspective. The main components of the additions were viewing effectance as a global entity, addressing both intrinsic and extrinsic motivation, and the correlations between the concepts. She outlined a developmental sequence by which the innate effectance need is modified by socialization in early childhood and becomes a need to perform in accordance with internalized evaluative criteria.

Another important addition was the idea of elaboration to the model of mastery motivation consisting of network of related variables. Harter (1983) proposed a model of mastery or effectance motivation, describing the effects of both success and failure experiences on mastery motivation. The goals of effectance motivation are acquiring competence and influencing one's environment (Eccles, Wigfield, & Schiefele, 1998). Mastery motivation is defined as a general tendency to interact with and to express influence over the environment. This model maintains both informational and motivational components, challenge seeking, curiosity, and independent mastery attempts.

Significance of the Study

This paper examines the literature dealing with motivation, specifically IM as it is applied to the athletic population and sports domain, particularly in relation to gender, scholarship status and perception of scholarship status. This is an important area of research for many reasons. Many people, including athletic coaches, operate under the assumption that there is an important connection between motivation and performance. In addition the sport domain tends to illicit high levels of IM while involving many extrinsic rewards. Athletes, who enjoy their sport, will spend time increasing their skills leading to competency and mastery. This can serve to increase performance (Deci & Ryan, 1985). But how does this motivation develop in athletes? Can it be fostered or diminished in athletes?

There are many reasons why assessing athletes' IM is important for athletes and coaches. An important source of internal motivation for sport participants is the desire to experience the sense of competency and self-determination (Vallerand & Reid, 1984). In sport settings different types of motivation have been associated with different experiential outcomes. A high level of IM has been associated with increased enjoyment, decreased dropout rate and better sportsmanship (Martens & Webber, 2002). This concept also appears to directly relate to intensity of participation and persistence of effort (Martens & Webber, 2002). These related concepts directly correlate with and impact athletes' performance.

Athletes can benefit from the study of this concept of sport psychology in many ways. Results from this study can increase athletes' self-awareness and as a result provide an understanding of how these levels of motivation affect their play and success. Also

realizing that IM is directly related to perceived competence and control, athletes can gain skills to enhance and even maximize their motivation (Martens & Webber, 2002).

An important distinction concerning motivation in sport is that between extrinsic motivation (EM) and IM. Undoubtedly, athletes are activated by both types of motives, but may differ with respect to the relative salience of each. Regardless of the focus, athletes are also motivated to compete for a number of reasons. We, as an individualistic and independent society foster competition in many ways and situations. One of the results of this competition within athletics to gain external rewards is gaining monetary compensation. It is common for professional athletes to gain large contracts in exchange for exceptional athletic ability. However, now it is commonplace for even amateur athletes to receive monetary compensation for athletic accomplishments and athletic potential. One of these expanding markets is the business of collegiate athletic scholarships.

Coaches and athletes may gain valuable insight into the development and maintenance of IM through this research. As a result of this increase in knowledge, the performance and satisfaction of the athletes may be enhanced. This performance enhancement could translate to successful athletic experiences and ultimately personal and financial gains. Lastly this study may benefit both professional and social levels of sport as results will be applicable to various sport levels.

This study examined effects of gender, scholarship status and perception of scholarship status on the IM of athletes from several sport domains. It is noted that findings of the following literature review do not provide an empirical answer for this inquiry; however the literature does suggest many future directions. Specifically of

interest are the amounts of scholarship necessary to impact IM, the effects of gender, sport played and the athlete's perception of what that scholarship represents.

Synopsis of Pilot Study 2005

A pilot study conducted in 2005 resulted in several findings while examining the impact of scholarship status, scholarship percentage, and perception of the representation of this scholarship on the IM of Division II female college athletes. These perceptions of athlete's scholarship were measured in the following terms: 1) whether these perceptions of scholarship represented ways for coaches to control social behaviors; and 2) whether the athletes responded to performance-based and/or informational rewards. In addition, the perception of percentage of teammates on scholarship was measured to examine its effects on IM. The hypothesized relationships were examined through the use of correlational analyses (Pearson, 1900).

Descriptive statistics and correlations were sought on the following measures: the Intrinsic Motivation Inventory (IMI) and the self-created Athlete Perception Questionnaire (APQ). These instruments were correlated with the following independent variables: scholarship status, percentage of teammates believed to be receiving scholarships, and starter versus nonstarter status.

Briefly, the relevant results illustrated through Pearson Product Moment correlations indicated that IM had a significant positive relationship with perceived competence, effort and interest in all the athletes. Starters had higher mean scores than nonstarters on IM, perceived competence, and pressure and tension. Starters showed higher mean scores on perceived performance and perceived control. Scholarship status grouped as none or partial revealed that athletes on partial scholarship showed higher

levels of IM, perceived competence, effort and interest, pressure and tension, and both perceptions of scholarship being performance based and controlling in nature. Non-scholarship athletes showed higher levels of perceived choice. It is also noted that overall the athletes' perception of their scholarships being performance based as measured by the APQ was significantly correlated with the athletes' perceived competence. Athletes on partial scholarship perceived that an athletic scholarship was representative of both controlling and performance-based behaviors; however overall scholarship status was still found to associate with IM. In spite of these results, several research questions were unfounded. Percentage of students on an athletic scholarship was not associated with IM but the amount of the scholarship may have been insignificant to effectively lower IM. Starter status and IM were also not associated.

There are several possible reasons for the lack of clear evidence in this pilot study. However, most noteworthy are the sample size, newness of the Athletic Perception Questionnaire and the correlational analysis techniques. It is also noted that the author attempted to study a large number of variables, which may have interacted or confounded the findings. In future studies, such as the one completed in the present study the amount and types of variables studied were reduced. It is also imperative to incorporate the findings and limitations of the pilot study to enhance the current study.

Although the correlations in the pilot study did not reach conventional level of statistical significance, the magnitude of the findings and effect sizes, correlation coefficients (r^2) indicated that statistical significance could be reached with a larger sample size. Thus while consider these strong findings in light of the small sample

size, the frequencies and power of these analyses were appropriate for the following statistical tests.

Description of the Current Study

The current study was informed by the theoretical framework of Edward Deci's Cognitive Evaluation Theory. Three questionnaires were used to obtain demographic information, intrinsic motivation levels and perceptions of scholarship representation. Correlational analyses, one way analysis of variance (ANOVA), and independent t-tests were conducted between the scholarship variables, gender and dependent IM scores. In the current study it was hypothesized that gender and scholarship status would negatively be associated with intrinsic motivation.

Purpose of the Study

This study examines the effects of scholarship status, sport played, gender, and perception of scholarship status variables on IM. This study involved NCAA Division II male and female athletes, of varying social and academic status who held different levels of athletic scholarship ranging from no scholarship to half scholarship. It included male and female softball, and soccer and field hockey players in order to conduct a preliminary inquiry regarding gender and to examine the variable of athletic sport played (softball, soccer or field hockey). These athletes' characteristics and motivations were assessed by various measures including a demographic survey, the Intrinsic Motivation Inventory, (IMI) and the Athletic Perception Questionnaire, (APQ) a survey measuring an athlete's perception of what this external reward represents with regard to information provided and competence.

This study examined the effects of gender, sport played (soccer, field hockey or softball) and scholarship level (none through half) on the IM of male and female Division II soccer, field hockey and softball players. In addition the relationships were further established as correlations of the measures. The athletes were given a demographic questionnaire, the *IMI*, and the *APQ*. The purpose of this study was to examine the impact of gender, sport played, scholarship status and the athlete's perception of what the scholarship represents in terms of the effect on IM.

Research Questions

Research Question 1: Does the amount of athletic scholarship affect athletes' Intrinsic Motivation?

Research Question 2: Is an Athletes Intrinsic Motivation positively correlated with his or her Perceived Competence, Effort and Importance, Perceived Choice, APQ Perceived Performance and correlated negatively with his or her Pressure and Tension and APQ Perceived Control as Cognitive Evaluative Theory suggests?

Research Question 3: How does the way an athlete perceives this athletic scholarship affect his or her level of Intrinsic Motivation?

Research Question 4: Does gender alone affect levels of Intrinsic Motivation?

Research Question 5: Does intrinsic motivation vary by sport, when gender is controlled?

Hypotheses

1. Non-scholarship athletes will exhibit higher levels of Intrinsic Motivation than scholarship athletes, including partial and half scholarship.

2. Athletes who perceive that scholarship is a measure of competence, performance based and as informational about what is expected in nature will exhibit higher levels of Intrinsic Motivation than scholarship athletes who correlate scholarship with a coaches attempt to control social behaviors, which will illustrate lower levels of Intrinsic Motivation..
3. Overall, both non-scholarship and scholarship females will exhibit overall higher levels than scholarship and non-scholarship male athletes of Intrinsic Motivation.
4. Female scholarship and non-scholarship athletes will exhibit similar levels of Intrinsic Motivation across sport domain, IE sport played will not be associated with different levels of Intrinsic Motivation of all female athletes.

Definitions (Except where noted, adapted from the *Dictionary of Psychology* (Chaplan, 2000) and applied to the current study).

Athletic Scholarship-Monetary reward contracted to an athlete for participation in athletics.

Intrinsic Motivation-Motivation in which the satisfaction arises out of the behavior itself.

Extrinsic Motivation-Motivation not inherent in the behavior itself.

Intrinsic Reward-A form of reward in which the activity itself is found interesting and rewarding.

Amotivation-a feeling of hopelessness that an athlete may experience.

External Reward-A reward external to the behavior such as a token or points.

Inherent-Belonging to or existing in an object as a permanent characteristic, an unlearned characteristic.

Cognitive Evaluation Theory-A component of *Self-Determination Theory*, (see below) which addresses the effects of social contexts on Intrinsic Motivation. It determines how a reward affecting intrinsic motivation depends on whether the recipient perceives it to be more controlling or informational in nature. This perception is critical in determining whether IM increases or decreases.

Controlling Aspects-the affects of rewards that reduce a person's sense of competence, control or causality.

Informational Aspects-the affects of rewards that provide clear feedback about competence.

Self-determination Theory- A macro-theory of human motivation concerned with the development and functioning of personality within social contexts. It focuses on the degree to which human behaviors are volitional or self-determined. This theory is based on an organismic-dialectical meta-theory, which begins with the assumption that people are active organisms, with innate tendencies toward psychological growth and development. These people strive to master ongoing challenges and integrate their experiences into a coherent sense of self. This process requires nutrients and supports from the environment in order to function effectively. Thus, it is the dialectic between the active organism and the social context that predicts behavior, experience and development (Ryan, Kuhl & Deci, 1997).

CHAPTER II

THE INFLUENCE OF SCHOLARSHIP STATUS AND MEANING OF INTRINSIC MOTIVATION OF MALE AND FEMALE COLLEGE ATHLETES: A COGNITIVE EVALUATION PERSPECTIVE

Theoretical Basis of Study: Self-Determination Theory

There is a wealth of literature, which focuses on studying the various motivational factors of individuals. One of these factors is extrinsic rewards. In the early 1970's three independent research teams found detrimental effects of extrinsic rewards on IM. These studies contained different rewards, activities, contingencies and samples. Ryan and Deci in 1985 further developed these ideas by introducing Cognitive Evaluation Theory, (CET). This theory is considered an extension of Self-Determination Theory, (SDT).

According to SDT, individuals' level of IM toward an activity will vary depending on the degree to which the individuals' perceive actual competence and believe themselves to be self-determining in regard to their performance and behavior in that activity (Deci & Ryan, 1991). The basic premise of SDT is that humans inherently possess "psychological needs" for autonomy (needs to be agentic, give input, self-endorsed activities and beliefs), competence (need to effectively interact with one's environment and yield wanted effects and outcomes) and social relatedness (need to feel connected and accepted by others). These needs lead to humans adopting behaviors and engaging in activities that provide satisfaction and fulfillment. SDT attempts to account for both activity and passivity, and the responsibility and indolence of an organism. According to Ryan, 1995 these "needs are essential for healthy and effective functioning".

It is important to note that IM is not a direct function of social factors, but is dependent on the degree to which these social factors satisfy these psychological needs (Ryan and Deci 2000a, 2002). One of the major tenets of the theory concerns the distinction of intrinsic and extrinsic motives. Specifically, Deci and Ryan, (1985) identified three types of motivation intrinsic motivation, extrinsic motivation and amotivation. SDT holds that these types of motivations lie on a continuum of self-determination rather than propose them as individual dichotomous concepts. Incorporating ideals from the SDT perspective, the hierarchical model of intrinsic and extrinsic motivation (Vallerand, 1997, 2000), proposed the following motivational sequence: Social Factors ->Psychological Mediators->Types of Motivation->Consequences. For the purpose of this study, only the psychological mediators (perceptions of competence, autonomy) and motivation (intrinsic motivation) will be utilized to explore various determinants of intrinsic motivation.

Intrinsic motivation (IM) is thought to be the primary source of energy for human behavior and its presence facilitates behavioral maintenance and adherence. When intrinsically motivated individuals are fully self-regulated and engage in activities out of interest can function effectively without the aid of external rewards and or constraints (Deci and Ryan, 1985). In contrast, motives that are based on extrinsic factors and rewards create a condition, which may or may not facilitate adherence or participation. In these cases, the nature and delivery of this reward powerfully impacts the likelihood of continuance of this behavior.

Extrinsic Motivation (EM) refers to a variety of regulatory styles that are characteristically instrumental in nature. EM refers to a behavior that is associated with

pressure, tension and decreases in enjoyments. Extrinsically motivated or controlling intentional behaviors are usually done for the attainment of an extrinsic outcome such as a reward or praise from other. Extrinsically motivated behaviors are those that are performed in order to arrive at some instrumental end, such that the source of regulation is external to the activity. Researchers originally believed that extrinsic motivation implied a lack of self-determination in the behaviors performed.

Lastly Amotivation refers to a feeling of hopelessness someone may experience. It is important to note that these people are unaffected by IM or EM. A person is considered amotivated when she or he does not see a relation between himself or his action and their consequences, but views the consequences as out of his or her control. In such circumstance, it is hypothesized that the person lacks any type of motivation, thus termed amotivated. This continuum of motivation has received much empirical support in a variety of contexts including education, exercise, Physical Education and sport (Standage, Duda & Ntoumanis, 2005).

From the self-determination perspective, it is important to examine the possible gender differences across domains. The psychological literature has shown that females are more self-determined than males in education (Vallerand & Secneal, 1992) leisure pursuits (Pelletier et al. 1995) and interpersonal relationships (Blais et al., 1990). There are many possible explanations for these findings. For example women may be more self-motivated to pursue interpersonal interactions as this contributes to their well-being, social functioning and fulfills their gender roles. However few studies have examined these findings in terms of the athletic context.

Cognitive Evaluation Theory

According to this sub-theory of SDT; Cognitive Evaluation Theory (CET) contends that individuals' IM toward an activity will parallel individuals' perceived autonomy over that activity and that perceived ability will also influence IM (Ryan & Deci, 1985). The basic factors underlying IM are the psychological needs for autonomy and competence, so the effect of an event such as a reward depend on how it affects perceived self-determination and perceived competence. Events that allow need satisfaction tend to increase IM where as those that thwart need satisfaction tend to decrease IM. CET proposes that rewards can be interpreted by recipients primarily as controllers of their behavior or, alternatively, as indicators of their competence (Deci, Koestner, & Ryan, 1999). Thus individuals' level of IM will vary as a function of the degree to which they perceive themselves to be competent in an activity and believe themselves to be self-determining in their regard to their performance and behavior in that activity. Thus the events or factors in the achievement environment that facilitate or enhance individuals' perceptions of competence and self-determination will promote IM. Conversely events or factors which undermine these feelings will decrease IM for that activity (Deci and Ryan, 1971).

Events which are perceived as externally controlling and detrimental to autonomy will result in decreased IM. Thus, even task-contingent rewards have been shown to undermine IM (Enzle, Wright & Redondo, 1996). CET also provides a basis for describing what conditions might cause some people to prefer not to be intrinsically motivated, thus causing "motivation crowding out".

CET predicts that awards and rewards given to an individual can enhance or undermine the individual's IM, depending on how the award is perceived by the performer. If the reward is perceived as a controller, it undermines IM. However if the reward is perceived as an acknowledgement of competence or more informational in nature, IM can be enhanced (Deci, Keostner & Ryan, 1999). It is believed that sport activities are representative of such intrinsically motivated activities (Vallerand and Reid, 1984). Thus, an important source of motivation for sport participants appears to be the desire to experience these feelings of competence, information and self-determination.

Cognitive Evaluation Theory: Aspects of Control Versus Competence

There are two basic conditions under which extrinsic rewards may be perceived as controlling. The first condition is when the size of the reward is large. Empirical evidence suggests that the reward size is negatively related to IM (Newman & Layton, 1984). A person interpreting his or her behavior may become overwhelmed by the salience (size) of EM and is rationally compelled to attribute his or her behavior to the compensation rather than IM. This is known as the "overjustification effect" (Lepper, 1981). Thus, large rewards may compel a person to acknowledge that their locus of causality is external rather than internal and is intended as a means of control. This would undermine his or her sense of autonomy and decrease IM for engaging in the "controlled behavior" (Lepper, 1981).

The second condition is that the object of his or her IM is the source of the reward. For example in some experiments, the external rewards may be verbal reinforcement and or social approval. These external rewards are less likely to be

perceived by him or her as attempts to control his or her behavior, so in essence there is not a stimulus to initiate the process of cognitive evaluation, which would decrease IM.

Effects of Extrinsic Rewards on Intrinsic Motivation

Following the initial studies by Ryan and Deci, based on CET, that demonstrated extrinsic rewards would undermine IM, additional studies were conducted which expanded the literature by exploring the effects of various types of rewards and other external variables. For example, Deci (1971) illustrated the concept that IM decreased as a result of utilizing money as an extrinsic reward where verbal reinforcement tended to increase IM levels.

Several such studies focused on choice, competition, threats, positive and negative feedback, climate, choice and the combination of various variables (Enzle, Wright and Redondo, 1996). Specifically, many studies examined the effects of tangible rewards on IM (Deci, Koestner and Ryan, 1999). However the studies which are most relevant to this paper have recently, been conducted in the area of athletics (e.g. Vallerland, R. J. & Fortier, M. S., 1998; Amorose and Horn, 2002; Vansteenkiste, M., & Deci, E. L., 2003.). In many of these cases the rewards have been shown to have conflicting effects on IM, thus it is important to examine other factors that predict these likely effects. To examine these questions, this study will attempt to review the pertinent literature and apply the concepts, assumptions, theories and findings of these studies to the sport domain.

Review of Meta-Analyses

Three major meta-analyses examine the effects of extrinsic rewards on IM. The three meta-analyses all concluded with substantial support for the general hypothesis that

expected tangible rewards made contingent upon doing, completing or excelling at an interesting activity undermine IM (Deci, Koestner and Ryan, 1999). Further this study concluded that although there are times when extrinsic rewards do not undermine IM, the use of extrinsic rewards poses a serious threat to IM. However two are most relevant to this study's area of focus. One study was conducted by Cameron and Pierce (1994) who sought to examine evidence for a general main effect of extrinsic rewards on IM. This study concretely concluded that extrinsic rewards do not have a detrimental effect on IM (Cameron & Pierce, 1994).

In another meta-analysis Deci, Ryan & Koestner (1999) reviewed the literature regarding this controversy regarding this original finding. This study examined the effects of tangible rewards on IM, and distinguished between expected and unexpected rewards and examined behaviors under which these rewards were garnered. Ryan et al. (1983) studied several extrinsic reinforcement types. These included, task-contingent, which were given for doing or completing the activity; task-non-contingent, which were given for something other than engaging in the target activity; performance contingent, which were awarded for performing well, surpassing a standard of excellence or passing some criteria; completion contingent, which were given as the task was completed and engagement-contingent which were dependent upon engaging but not completing the task or activity.

In general from the 128 studies, which were examined, the results are clear and consistent. Tangible rewards had a significant negative impact on IM for "interesting activities". This impact was consistent through various age ranges and reward types. Specifically, tangible rewards given for engaging in, completing, and doing well were

detrimental to free choice behavior and to an extent self-report IM (enjoyment and pleasure). These rewards were found to be more detrimental for children than college students. They also demonstrated that when they are given as indicators of good performance; they still have a negative effect on IM. The authors believe these negative effects do not stem from controlling behavior, but because they prevent people from motivating themselves. Overall, although there are times when external rewards do not undermine IM the use of them generally poses a detriment rather than promoting IM (Deci, Keostner & Ryan, 1999).

A more recent study Vansteenkiste & Deci (2003) examined the effects of contingent rewards on motivation. This study explored the effects of IM and ego-involved persistence toward winning versus losing a competitively contingent reward, which is based solely on competing. It also examined the additional effects of receiving either positive performance feedback or performance contingent rewards for the losers. The findings were that winners were more intrinsically motivated than losers. However losers who received a performance-based reward displayed less IM, which is in direct contrast with some earlier conclusions (Vallerand and Reid, 1984). It remains difficult to gain clarity on the concept of undermining IM with extrinsic rewards as many of the results seem to provide conflicting evidence.

Intrinsic Motivation: Applied to Athletics

Many authors have explored the “why and “how of the investment of athletes in sport (Recours, Souville & Griffet, 2004). Recently the concept of IM has been applied and studied in the field of sport psychology and within the athletic population. One reason for this application is that many coaches “covet” the type of player who is self-

motivated. These athletes, who hold an intrinsically motivated attitude, tend to work hard regardless of recognition, social approval or rewards. Research has shown the immense value of being intrinsically motivated in many applied settings, the sport domain being a prominent example (Martens and Webber, 2002).

It is for this reason that sports psychology has gained significant attention in recent years. If sports psychology is to be successful, then reasons for participation by the athletes needs to be examined. Various methods have been developed to assess the reasons why athletes participate in sport. Assessing IM and EM in sport settings is important because different types of motivation have been associated with different experiential outcomes. For example, high IM has been associated with increased enjoyment in an activity, a desire to pursue challenges, better sportsmanship, and decreased drop-out rates from sport. It is important for psychologists to have an understanding of IM. Many factors and events have been identified as potential determinants of IM in the sport domain. However the use or non-use of awards and the behaviors and leadership style of adult supervisors, including coaches, have been shown to be specifically relevant in the academic and sport context (Deci & Ryan, 1991; Frederick & Ryan, 1995). It is also noted that this distribution of these rewards is often under the coach's discretion; as a result both of these areas have received considerable attention in the literature (Frederick & Ryan, 1995).

Effects of Athletic Scholarship Status on Intrinsic Motivation

Given the importance of competition and performance in our society and in athletics, studies have begun to examine the effects of these factors on individuals' IM for the activity or domain in which they compete. Research has provided support for the

influence of monetary awards on IM in athletes. This research operates under the assumption that financial rewards have a differential effect from other types of extrinsic motivators (Deci, 1971). It appears that it is possible that money may decrease an individual's IM by motivating through only financial means (Deci, 1971).

This idea that external rewards do decrease IM has a long history. DeCharms (1968) proposed that when external rewards are given for an activity, the person perceives that the locus of control or the knowledge or feeling of personal causation shifts to an external source. This may lead to the subject feeling as though he is a "pawn" to the source of the external rewards. His behavior may then be motivated by the external reward rather than by his own interest. It is important to note that distinctions must be made among the different kinds of external rewards. If a person's cognitive evaluation of external rewards is different, it is possible that different rewards would have dissimilar effects on the person's IM. It is very possible that money and closely associated tangible rewards (i.e. scholarships) have some peculiar property associated with them, which affects IM differently from non-tangible rewards. Specifically, it is suggested that money is frequently used as a means of buying services, which probably would not be otherwise rendered. Perhaps this suggests the presence of money as an external reward suggests to the athletes that they should not render this service without this financial compensation. Ultimately this would undermine the IM to do the activity as this extrinsic reward would be expected. These ideas spurred numerous studies related to sports that examine the effects of scholarship status on IM. The most relevant and recent literature is summarized below.

In 1977 and 1980 Ryan conducted two field studies to examine the effects of athletic scholarship on IM levels of athletes. In the first study, the researchers measured the degree of IM in both scholarship and non-scholarship athletes. It was hypothesized that scholarship athletes would score lower on the measures of IM than non-scholarship athletes. The rationale that he adopted was that the players were being rewarded for an activity that they found initially internally motivating. The results supported his hypothesis and the scholarship athletes showed a lesser degree of IM than the non-scholarship athletes (Ryan, 1977).

In his second study, Ryan, (1980) replicated and extended his earlier study by including male subjects from both wrestling and football and women from a variety of sports. The results of this study also indicated that athletes on scholarship had lower levels of IM than non-scholarship athletes, but this was only true for the football players. Thus, female athletes and male wrestlers on athletic scholarship showed higher levels of IM. These conflicting results were explained by many possible reasons. One emphasized the idea of competence of evidence from acquiring a scholarship, since they were so few in number may have increased IM. Also he hypothesized that male football players may have seen these rewards as controlling, which may have decreased their IM.

These studies illustrate that athletic scholarship can under certain circumstances undermine athlete's IM. It was obvious that further research was needed to address these inconsistencies. Recently, one such study by Amorose and Horn (2000) was conducted to test whether athletes' IM would vary as a function of several factors including gender, scholarship status, perceived number of people on their team receiving scholarship and coach's behavior. The results did not provide any evidence to suggest that scholarship

level would lower levels of IM of scholarship versus non-scholarship athletes. In fact this study does suggest that scholarship status can affect IM in a positive manner; athletes on full scholarship had higher levels of IM as measured by the IM Inventory. However, it also illustrated that negligible differences in IM were noted between non-scholarship and partial scholarship athletes. These results suggest that athletic scholarships actually enhance IM due to the fact that they convey positive information about sport competence rather than being perceived as controllers of behavior. Based on the inconsistency of the results in this study, it is unclear whether athletic scholarships directly undermine an athlete's self-determination. It is also noted that this difference was illustrated with full scholarship athletes.

A study, which researched the relationship of scholarship status and coaching behavior and its effect on IM in first year collegiate athletes, also yielded significant results. This study, by Amorose and Horn (2001) measured pre-season and post-season changes in the IM of Division I athletes and the question of IM remaining consistent across time. This longitudinal format attempted to address long term effects of interpersonal and environmental factors on IM. One of the factors expected to affect IM was scholarship status. It was hypothesized that athletes on scholarship would show higher levels of IM than non-scholarship athletes. Relevant results, which were contrary to predictions, illustrated that neither time nor scholarship status affected motivation levels as measured by the IMI. This finding is in direct contrast with previous literature (Amorose & Horn 2000; Ryan, 1977, 1980). These results, combined with the previous study, provide possible evidence that the amount of scholarship may have varying effects on IM (Amorose and Horn, 2001). It is possible that a partial scholarship may not be

large enough to be perceived as a controller or vote of confidence, thus not showing a significant effect on IM (Amorose and Horn, 2001). It is noted that both studies were conducted on athletes of Division I institutions. The literature appears to provide questions for future research.

Effects of Gender on Intrinsic Motivation

Another factor which has been examined with respect to IM is gender. Researchers have been curious about if and why men and women maintain different levels of IM. There have been several studies which illustrate the possible effects of gender on IM. Researchers have studied these differences in several contexts, including employment, academic and sports settings.

Initially it is important to re-examine CET and its possible contributing factors which may interact with the effects of gender on IM. Several studies have examined differences in autonomy and functional aspects of motivators (i.e. controlling or informational in nature). These studies have suggested that females are particularly susceptible to negative outcomes resulting from diminished autonomy (Deci, 1971 and Kast & Connor, 1988). In the literature this pattern has been explained by the socialization of females to be dependent and interpersonally aware. This is in contrast with the socialization of males to be independent and focused on achievement (Deci, 1975 and Deci and Ryan, 1980, 1985).

According to this line of research, females become easily dependent on feedback, and consequently pay particular attention to evidence of having pleased the evaluator. Conversely, males develop internal standards of evaluation and focus on achievement rather than pleasing the evaluator. Thus, Deci & Ryan, 1985 argue that males tend to

focus on the informational aspects of motivators where as females focus on the controlling aspects of rewards. Under this assumption and operating from the CET theory, females with greater perceptions of control of scholarship, would exhibit lower levels of IM. However they would also be less susceptible then to undermining conditions.

Studies which attempted to examine the effects of gender on IM date back several decades. These studies have been conducted in many environments. An investigation by Weinberg, 1979 purposely determined the effects of success-failure and monetary reward on IM of males and females competing on a motor task. Results indicated a significant main effect for feedback with subjects exhibiting more IM after success than after failure. The gender plus feedback interaction showed that males displayed more IM than females after success whereas females exhibited more IM than males after failure. Results are discussed in terms of Deci and Ryan's CET and sex-role appropriate behaviors for males and females (Weinberg, 1979).

More recently, in a study conducted by Lambert (1991), the most noticeable differences between men and women was that the measures capturing job stress are significant in explaining men's but not women's job satisfaction, job involvement, and IM. This result provides additional support for the importance of occupational stress in helping explain differences in work responses of men and women workers. This result provides support for the expectation hypothesis which posits that women maintain higher levels of job satisfaction than men under similar job conditioned because they have lower expectations for the rewards provided in the workplace. After controlling for job condition, men and women report comparable levels of both job satisfaction and job

involvement. Prior studies supporting the expectation hypothesis did not control for both social rewards and stressful job conditions. Although women's jobs are on the average less rewarding, they are also on the average less stressful and appear to provide greater social rewards. The results of this study suggest that the less stressful and more social nature a woman's employment is can help compensate for their lack of intrinsic rewards. The greater IM of women than men in jobs perceived as providing similar rewards and stresses is consistent with expectation hypothesis; women may not expect work to be intrinsically rewarding and so are especially receptive when so rewarded.

Gender and Intrinsic Motivation: Academic Settings

Several studies have assessed and documented differences between IM and gender with various populations (children, adults) and various settings (schools, work, colleges). Specifically many studies have been conducted which focus on IM and gender in the academic setting. A study investigated whether competition influences children's artistic creativity and IM toward an activity (Conti, Collins, & Picariello 2001). Study one tested the hypothesis that boys' creativity would be enhanced by competition while girls' would be undermined. Fifty subjects completed collages under two conditions, condition one provided prizes and condition two did not provide any rewards. The hypothesis regarding creativity was supported when the participants self-selected by gender.

In the second study (Conti, Collins, & Picariello 2001), the participants were sex-typed and separated by gender and the prize condition. After completing the collage activity, an IM and EM questionnaire were administered. Male participants reported higher levels of IM when competing and separated by gender. This study demonstrates

that gender is an important factor in determining and measuring IM in subjects and again males reported higher levels of IM.

This field study investigated the effect of three factors, scholastic level, and teacher orientation on control/autonomy and pupil gender on IM. One of the major aims of this study was to investigate possible gender differences in classroom IM. Both Carone (1975) and Deci, Cascio, Krussell (1973) found that certain rewards tended to have an adverse effect on the IM of a female but not on a male subject. Maccoby and Jacklin (1975) reviewed a substantial body of research and concluded that one of the most consistent gender difference involved cognitive functioning. This is evidence for the socialization of boys and girls. Girls are thought to be trained among other things, to inhibit independent assertiveness, to evaluate themselves in terms of others approval (Barwick, 1971) and to be given less competence-eliciting playthings (Williams, 1979). Thus it is fair to assume that perceptions of competence in the classroom may not occur under the same condition for the girls and boys. Again it is important that girls tended to be more intrinsically motivated when paired with teachers whom fostered autonomy and as result self-determination. It is noted that there were no differences in the control-oriented conditions, thus levels of IM were similar across gender in this study.

Results suggested that teacher orientation toward autonomy enhanced the IM of the females on two of the three motivational dimensions and one of the motivational dimensions for the males. The females were more intrinsically motivated with respect to classroom curiosity and age of the pupils also appeared to increase IM across gender. Clearly this study supports the tenets of CET and self-determination as they relate to

gender. As the results illustrate that as males and females autonomy is enhanced, their IM increases.

Bouffard et al. (2003) examined the impact of competence on IM in a school setting, specifically in mathematics and reading abilities. Children responded to questionnaires about their Perceived Competence and IM. It is noted that these correlations did differ according to domain and gender. The differences between gender were not linked to a specific academic domain and thus could not be attributed to gender-role stereotypes. Overall, girls appeared different with respect to their competence and IM according to academic domain. They also were able to process and integrate information about their ability from past performance in a domain to judge their competence in the same domain.

In a similar study (Skaalvik & Skaalvik, 2004), gender differences in mathematics and verbal self-concept, performance expectations, IM and goal orientation were examined in samples of Norwegian students. Findings indicated that gender differences continued to exist. Male students had higher self-concept, performance expectations, IM and self-enhancing ego-orientation. Female students had higher IM for learning language than male students and gender differences were negligible in older students' self-concepts. It is important to consider gender stereotypes and gender roles in many of these findings. One must consider the roles of these concepts on IM of both genders. Again it is apparent that the results with regard to gender are important yet their origins are inconclusive.

Effect of Gender on Intrinsic Motivation of Athletes

This study also attempts to assess gender differences in IM of athletes. As illustrated, past research has revealed gender differences in motivational orientations in

several life domains, including education (Vallerand & Bissonnette, 1992), interpersonal relationships (Blais, Vallerand, Briere & Pelletier, 1992), and recently sports (Briere et al., 1998) using a multi-dimensional perspective. Such research has shown that females display a more self-determined motivational profile than males. However it is important to note that this evidence is quite inconclusive in validating and discussing why these differences exist.

It is important to recognize the scarcity of the literature in the area of the relationships with collegiate athletes, gender and IM. In regard to gender this study hypothesizes that gender would not alone interact with scholarship status to affect IM. This hypothesis is in contrast with E. Ryan's (1980) findings and is based on significant changes in women's sport programs, which have taken place over the past decade (i.e. Title IX, scholarship, changing coaches). These changes would have likely reduced differences between male and female athletes' levels of IM. It is also based on the level of play, as it is proposed that Division II athletes have different scholarship status and perceptions of scholarship than Division I athletes.

In line with the previously mentioned research, it was hypothesized by a study by White and Duda (1994) that female athletes would exhibit a more self-determined motivational profile than male athletes. Specifically when compared to male athletes it was expected that female athletes would demonstrate higher levels of IM. This is in accordance with SDT.

It is important to stress that this study hopes to illustrate a shift and enormous growth in women's athletics and overall IM levels. However it is evident that from the review of the literature, men appear to illustrate slightly higher levels of IM.

In a study conducted by, examining college students' motivation for participation in sports and exercise, Kilpatrick et al. 2002 found significant differences between men and women's motivation in sport. Men reported higher levels of motivation than women for challenge, competition, social recognition and strength and endurance. In addition to these effects, a significant activity by gender interaction was found on several variables, including enjoyment. Men indicated that this motive was significantly more important for sport participation than exercise participation (Kilpatrick et al. 2002). Thus in this study men exhibited higher levels of IM in sport than their female counterparts.

A field study, involving track and field athletes was conducted by Baric and Zagreb, (2002). This study examined the relationship of gender, goal orientation and IM in athletes ranging in age from 12-16. The subjects completed questionnaires concerning goal orientation and IM. Results showed that gender significantly influenced task orientation in sport. However most pertinent was the finding that two components of the IMI, I/E and T/P were significantly affected by gender where males exhibited a higher level of IM than females.

A study which appears to bolster the validity of these results was recently conducted. The purposes of a study conducted by Mavi, 2003 were to 1) examine the differences in goal orientations, motivational climate, perceived competence, perceived coaching behaviors and intrinsic motivation of athletes as a function of gender, playing status, and competitive level, 2) explore the compatibility of the athletes and coaches in terms of motivational climate and perceived coaching behaviors, 3) predict perceived coaching behaviors and 4) predict intrinsic motivation of athletes.

Male and female high school athletes and their coaches from three sports (basketball, baseball and softball) completed an “Athletes' and Coaches' Multi-Section Questionnaire”. A (Gender by Playing Status by Competitive Level) multivariate analyses of variance (MANOVA) showed a significant gender main effect, and a playing status main effect. Male athletes felt that coaches displayed more democratic behaviors and provided greater social support, while female athletes felt less athletically competent and reported more pressure and tension. Starting players had higher interest/enjoyment and higher effort/importance toward their sport and they felt more athletically competent than bench (substitute) players. The MANOVA compared all coaches versus athletes and also all coaches versus male and female athletes separately. This later comparison revealed a significant main effect on the environment. Coaches perceived the athletic environment as more “task-separately” while male athletes viewed the environment as more democratic and their coaches as more socially supportive. Contrastingly, female athletes perceived their coach as giving less positive feedback. This study illustrates some significant differences between male and female athletes with respect to gender and perceptions of coaches' behaviors (Mavi, 2003).

Another study examined the predictions of goal perspective theory within Korean youth sports. The athletes ranged from 13 to 18 years of age and represented 17 different schools. Although many of the findings are significant on the IMI and TEOSQ, most relevant were the gender effects observed. The MANOVAS revealed that males were higher than females on two specific dimensions of the Intrinsic Motivation Inventory (IMI), Perceived Competence, (PCOMP) and Effort and Interest (E/I) and thus their overall IM scores, which is in accordance with CET. This study provides not only a

cultural representation but further indication that males' levels of PCOMP and IM may be greater than female athletes (Mavi, 2003).

Recours, Souvville & Griffett (2004) examined four kinds of sport motivators: exhibitionism, competition, social ability and playing to the limit. Overall, the study showed that intrinsic motives were more important than extrinsic motives. However more specifically, females were more likely than males to be motivated by social ability and extrinsic motivators, (competition and exhibitionism were less important for men than women) (Kieran et al., 2006). The purpose of this investigation was to examine whether levels of multidimensional intrinsic, multidimensional extrinsic motivation and amotivation could accurately discriminate scholarship status and gender in United States collegiate athletes. With respect to gender, a significant discriminant function existed, again with the least self-determined forms of extrinsic motivation representing the strongest discriminating variables. In addition, results from this study provide convincing evidence that rewards such as scholarships can undermine intrinsic motivation. This study is consistent with theoretical tenants embedded in CET as the results suggest that in addition to undermining intrinsic motivation, scholarships could foster non-self-determined forms of motivation.

Perhaps the most relevant study with respect to this paper was conducted by Amorose and Horn (2000). This study examined the relationships among athletes' IM, gender, scholarship status and perceptions of their coaches' behaviors. The subjects were Division I athletes who completed a series of pencil and paper questionnaires. There are several relevant findings, which contributed to the inspiration of the current study. As expected by the researchers, all interaction effects with regard to gender were non-

significant. Gender only accounted for three percent of the variance of IM. However, in follow-up statistical analysis, females showed lower levels of perceived choice (PCHOICE) than male athletes and higher levels on Effort/Importance (E/I) and tension and pressure (T/P). It is evident that these results suggest a significant difference between male and female athletes in levels of IM. Thus although the main effect was statically significant, it may not be a meaningful in relationship to other factors which explain larger percentages of variance in IM. These results suggest that females are only slightly lower on a few indicators of IM.

Briefly a study which examined athletes in Canada, showed gender differences in the opposite direction. This study (Pelleteir et al., 1995), illustrated that females were higher than males on selected aspects of IM and lower on EM. Females also scored higher than males on the T/P subscale which is consistent with previous research and indicates lower IM. In contrast, females scored lower on PCHOICE and may suggest a lower level of self-determination on the part of the female athlete, which also indicates lower IM than male athletes. Thus overall it appears that documented gender differences are quite diminutive. It is unknown if this is a function of the studies conducted or a significant clinical non-finding.

Effects of Sport Played and Gender on Intrinsic Motivation of Athletes

Although several areas of IM have been examined, it is evident that no one existing study has examined the possible differences across IM in athletes of different gender and sport played. In addition to the aforementioned variables, this study will attempt to examine the differences in IM, scholarship status of male and female soccer,

softball and field hockey players. It is noted that effects of gender and scholarship will be considered as they interact with the sport played.

Conclusions of Literature Review

Over the last three decades arguments regarding the factors, which affect IM, have persisted. One of the factors, which guide much of the research on IM, is the possibility that parents, teachers, coaches, and other adults in positions to monitor behavior will accidentally undermine IM. The use of these external rewards, such as scholarships for competing in sports, may lead to reduced motivation in the future when the rewards are no longer available. These rewards undermine the interests that they are meant to enhance and may also decrease IM to engage in other activities. This phenomenon may be a result of inability to motivate oneself, which may lead to a decrease in performance and ultimately success.

This research shows that conditions, which were supportive of autonomy and competency, facilitate this human growth tendency. Conversely conditions that controlled behavior and hindered perceived effectiveness undermined its expression. Contexts supportive of autonomy, competence, and relatedness were found to foster greater internalization and integration than contexts that thwart satisfaction of these needs (Ryan & Deci, 2000). This latter finding is of significance for individuals who wish to motivate others in a way that engenders commitment, effort, and high quality performance (Ryan & Deci, 2000). This finding is also particularly applicable in the sports domain where high performance is essential for success in intense competition.

The research in the area of gender and the affects on IM is inconclusive and conflicting. However many of the studies indicate that male athletes appear to be slightly

more intrinsically motivated. However it is unclear how other variables, such as how the level of play (Division II versus Division I athletics) and sport played will influence these results.

From this theoretical perspective, a fundamental precept of Deci and Ryan's theory is that psychological processes and constructs embraced by SDT are universal to all cultures, across gender and throughout developmental periods (Deci and Ryan, 2000, 2002). This is consistent with several preliminary studies and several researchers expect the model to be largely invariant across gender (Standage, Duda & Ntoumanis, 2005). However, as illustrated through the literature above it is plausible that minute gender differences do exist in specific dimensions of IM. It is unclear what dimensions of IM illustrate these differences. It is also unclear whether gender interacts with SDT or is an independent variable which produces differences in IM. Future research should focus on identifying meaningful gender differences in IM and after our field determines these exist, identify what factors contribute and interact to create these differences (Self Determination Theory, Perceived Competence, Perceived Choice ECT).

CHAPTER III

METHOD

Participants

The participant sample (N=86) was composed of 50 American Caucasian female and male Division II soccer athletes (24 male and female). In addition the sample contained Division II softball (18 female) and field hockey (18 female) players. The gender variable contained 26 males and 60 females in this study. Their ages ranged from 18-22 years (M=19.34 and SD=1.058). The athletes were in their first, second, third or fourth year of NCAA eligibility. A total of 21 athletes reported they were on half scholarship, thirty-seven reported they were on partial and 28 reported they were not receiving any amount of athletic scholarship. There were no athletes on full scholarship in this study, as this is quite rare at a Division II institution. As these scholarships changed throughout the athletes' eligibility, their perceptions of purpose of the scholarship were regarded as being salient (i.e. scholarship performance based and/or informational or controlling in nature). Athletes received scholarships per semester throughout the academic year.

Procedures

Recruitment of the participants began by contacting the head coaches of each sport prior to the beginning of each competitive season. With the coach's agreement, a data collection was scheduled. At this data collection, the athletes were given a verbal and written description of the study. The athletes who agreed to participate completed an informed consent form. The subjects were given a demographic questionnaire, the Intrinsic Motivation Inventory (IMI) and the Athletic Perception Questionnaire (APQ).

Instruments

Demographic Questionnaire (DEMO). Questions from this instrument assessed the participant's age, GPA, starter or nonstarter status, sport, gender and ethnicity. The questionnaire also inquired about current and past scholarship status and class status.

The Intrinsic Motivation Inventory (IMI). This instrument was originally developed by R. Ryan, Mims and Koestner (1983) to assess the overall level of IM experienced by an individual engaged in an achievement task. For this study a sport-oriented version of the measure was used (McAuley, Duncan, & Tammen, 1989). The sport version of the IMI included five subscales, which measured IM and various related concepts associated with IM including: perceived competence, effort and importance, and tension and pressure. In addition a fourth subscale, which is considered the measure of Intrinsic Motivation, (interest and enjoyment) was calculated. Following the recommendations of McAuley et al. (1989), a fifth subscale was added, perceived choice to assess the degree to which athletes thought their participation in the sport was by personal choice (Amrose & Horn, 2000). It is noted that although the subscales are thought to have associations with one another, however the overall measure of Intrinsic Motivation is the interest and effort (I/E) subscale.

All items were scored on a seven point likert scale ranging from strongly disagree (1) to strongly agree (7). Mean scores were calculated for each of the five subscales. For example items from the I/E scale were "I enjoy playing soccer very much" or "I think soccer is quite enjoyable". An example item from the E/I subscale was "I put a great deal of effort into playing soccer. Examples from the PERCOMP and PERCHOICE are "I think I do well at soccer compared to other athletes" and "I play soccer because I have

to”, respectively. Lastly an item from the T/P subscale was “I feel pressure while playing soccer” (See Appendix C).

High scores on the subscales of interest/enjoyment (I/E), perceived competence (PCOMP), perceived choice (PCHOICE), and effort/importance (E/I) were correlated with high levels of IM. Conversely a low score of the subscale of pressure/tension (P/T) indicated a high level of IM. All items were scored and added to comprise the subscale values.

The psychometric properties of the sport version of the IMI have been reported by McAuley et al. (1989) and Vallerand and Fortier (1998). Review of internal consistency of the subscales and overall inventory were determined by coefficient alpha (Cronbach, 1951). The resulting coefficients were as follows: Interest and Enjoyment (.78), Perceived Competence (.80), Effort and Importance (.84), Pressure and Tension (.78), Perceived Choice (.78) and the overall consistency of the scale was (.85).

Athlete Perception Questionnaire (APQ). Athletes were asked to answer 20 questions regarding their perceptions of what they believe their athletic scholarship represented. These questions were generated based on assumptions of Cognitive Evaluation Theory and Self Determination Theory. In addition these hypotheses were generated from the literature review and experiences working as a coach with multiple elite sport teams. As this is a self-created instrument psychometric properties were not available, however levels of internal consistency and a factor analysis were conducted before the statistical analysis. This analysis indicated that the proposed items loaded into the appropriate subscales, as predicted. Again the questions were created using a likert scale which range from strongly disagree (1) to strongly agree (7). It was hoped by

utilizing a parallel scale that comparison of means would be facilitated. An example from the APQ PERPERF was “More is expected of my performance than my teammates who are not on athletic scholarship” and “My athletic scholarship signifies my coach’s confidence in my athletic abilities”. An example item from the APQPERCONT scale were “My athletic scholarship is a way for my coach to control my behaviors” and “My athletic scholarship allows my coach to control who I date”. (See Appendix D)

Prior to individual and specific statistical analyses, the internal consistency of the APQ measure was calculated using Cronbach’s (1951) alpha coefficient. A minimum acceptable criterion was set at .70 as suggested by Nunnally (1978). It is noted that the APQ’s total coefficient was .75. This was followed by a check for multicollinearity, which was deemed negative. In addition a factor analysis was conducted to validate the two primary subscales of the APQ, specifically perceived performance (APQPERPERF) and perceived control (APQPERCONT). This reliability analysis yielded a Cronbach’s Alpha for the perceived performance subscale as .40. However this analysis indicated that with the removal of item 1 on the APQ, which sorts into the perceived performance scale, would increase the Alpha coefficient to .55. Thus the following analyses were performed while including and excluding item #1 (“Athletic scholarships are performance-based”). The perceived control scale alpha coefficient was .58. It is noted that while these coefficients are slightly below moderate standards, it is important to note that this is a self-created instrument in its initial stages of development and replication.

Half of the questions assessed athletes’ perceptions regarding whether their scholarship enabled their coach to control social aspects of their behavior, such as friends, significant others, academics and time spent with family. This was labeled as

Perceived Control (APQPCONTROL) of the coach. Thus a high score indicated that the athletes believed having a scholarship enabled their coach to control their social behaviors in many settings. The additional questions assessed whether the athlete perceived the athletic scholarship to be informational in nature, competency based or performance based; Perceived Performance (APQPERPERF). These questions were randomly assigned within the APQ. The scoring system paralleled the IMI to enable appropriate mean comparisons and correlations. It was hypothesized that high levels of APQ perceived performance would correlate with high levels of IM and high levels of coaches' APQ perceived control would correlate with low levels of IM.

Following data collection on the students each coach was asked to rate the players on levels of IM. The coaches were resistant to "rating" the players and three of the four coaches did not feel comfortable with this additional request, as it was not part of the preliminary agreements.

To control for social desirability, the coaches were asked to leave the testing classroom and the following information was emphasized by the researcher to the athletes: 1) No one would view the responses except the main investigator and advising committee, 2) The coaches would not have access to the questionnaires 3) Names would not appear on the questionnaires, and 4) Questions did not have definitive "right or wrong" answers.

Research Design

In the current study, several assumptions were tested; including normality, skewness and kurtosis. These were all deemed negative. Histograms were also examined for outliers and it was determined that the data was distributed normally. In addition G-

Power was utilized to determine accurate power and sample sized to acquire moderate effect sizes. In light of these findings, several statistical procedures comparing mean scores between groups, including independent T-tests, analysis of variance, and product moment correlations comparing subscale scores within the instruments were employed.

CHAPTER IV

RESULTS

Preliminary Analyses of Hypotheses

Descriptive statistics were calculated for all dependent measures of IMI and APQ. Overall means and standard deviations are as follows: Interest and Enjoyment $M=42.52$, $SD=3.607$, Effort and Importance $M=40.77$, $SD=5.204$, Perceived Competence $M=40.72$, $SD=4.088$, Perceived Choice $M=41.55$, $SD=4.092$, Pressure and Tension $M=26.20$, $SD=6.590$, APQ Perceived Performance $M=38.25$, $SD=5.509$ and APQ Perceived Control $M=13.58$, $SD=2.557$ (See Table 1).

Pearson Product Moment Correlations were computed between all factors of the IMI and the APQ for all of the athletes ($N=86$). IMI was significantly correlated with Perceived Competence ($r=.541$, $p=.05$) and with Effort and Importance ($r=.457$, $p=.01$) (See Table 3). The athletes showed statistically significant levels of Perceived Competence and perception that their scholarships were APQ Performance Based ($r=.460$, $p=.01$) Lastly IMI was significantly negatively correlated with APQ perceived control ratio ($r=-.756$, $p=.05$) (See Table 2).

IMI and IMI Subscales

It was predicted that athletes across sport domain, scholarship amount, gender and scholarship status would exhibit levels of IMI that correlate positively with PERCOMP, E/I and PERCHOICE and negatively with P/T. As expected, through the IMI subscales (I, E/I, P/T, PCOMP and PCHOICE) the athletes demonstrated levels of IMI which indicated that they enjoyed their sport, were substantial in their endorsement and amount of effort they exhibited and did not feel that they experienced much pressure or tension or

perceived control by their coach in their sport. They also exhibited high levels of perceived competency and perceived choice.

Scholarship Status and IM

HYPOTHESIS #1: All non-scholarship athletes will exhibit higher levels of IM than all scholarship athletes, including those on partial and half scholarship.

To test this hypothesis, a One-way ANOVA was conducted, which revealed significant differences $F(2, 83) = 62.06, p = .00$. In addition, results of mean comparisons indicated significant differences between athletes on full, partial and no scholarship. Higher means of IM were associated with lower levels of scholarship (See Table 4). There was homogeneity of variance as indicated by the similarities of the standard deviation of the groups. A Bonferoni post hoc test was conducted to confirm this significance across groups, through mean differences and standard errors. This indicated that each group was significantly different than the other two groups. The Bonferoni confirmed that the athletes without scholarships exhibited the highest levels of IM. Levels of IM are highest for athletes without athletic scholarships and lowest for athletes with half scholarship, as was predicted.

APQ Scholarship Perception and Levels of IMI

HYPOTHESIS #2: Athletes who perceive scholarship as a measure of competence, (APQ PERPERF) performance based and as effortful in nature will exhibit higher levels of IM than scholarship athletes who associate scholarships with a coach's attempt to control social behaviors (APQPERCONT), which in turn will illustrate higher levels of pressure and tension thus lower IM.

These findings were indicated by Pearson's Product Moment Correlation Coefficients illustrated significant negative relationships between APQ perceived performance (APQPERPERF) ratio and APQ perceived Control (APQPERCONT) Ratio. As expected, significant positive correlations were found between IM, effort and importance IM and perceived competence, and IM and perceived choice. As hypothesized, IM correlated negatively with pressure tension scale and the APQ Perceived Control Ratio. Thus with Item #1 included all of the expected hypotheses are significant correlations.

However when item #1 was removed (APQ-1) from the instrument to increase internal consistency, the hypothesis were still founded. The values of the correlations APQ perceived control and perceived performance correlated significantly as ($r=-.64$). Significant positive correlations were found as expected between IM and effort and importance ($r=.46$), perceived competence ($r=.54$), perceived choice ($r=.61$) (See Table 3), and APQ Perceived Performance ($r=.66$) (See Table 2). As hypothesized, IM correlated negatively with the pressure tension scale ($r=-.39$) (See Table 3) and the APQ Perceived Control Ratio scale ($r=-.76$) (See Table 2).

Thus with Item 1 on the APQ instrument excluded, all of the expected hypotheses continue to yield significant correlations and results. Excluding this item effectively increases the alpha coefficient yet continues to yield significant findings. Athletes who perceive scholarship as a measure of competence, performance based exhibited higher levels of IM than athletes who correlated scholarship with a coaches attempt to control social behaviors. The athletes with this perception also illustrated higher levels of pressure and tension thus lower IM.

Gender and IM

Hypothesis # 3: Overall, both non-scholarship and scholarship females will exhibit overall higher levels of IM.

An independent t-test was conducted and revealed that females and males had were marginally different in their levels of IM across gender, $T(2, 84) = 1.87, p = .07$. Group descriptive statistics indicate that overall female athletes exhibited slightly higher levels of IM, where as males levels of IM were lower (See Table 5). This difference might have been greater if standard deviations were closer to being equal however there was approximately 2 times the variance across the samples of females as male athletes.

In terms of sample size, power and minor mean difference, gender differences were not statistically significant, but may be clinically significant and it is important to consider whether these results are a function of statistical measures or of methodology. However this finding is consistent with past evidence that IM levels appear to be similar across gender. These ideas will be further addressed and developed in the discussion section.

In light of these findings, further comparison of means was sought between women's (WS), and men's soccer (MS), where the sport is held constant, and gender and sample size are equal. Descriptive statistics showed that WS players exhibited higher levels of IM (43.99) than MS players (41.46) but utilizing the Levene statistic, these differences were found to not be statistically significant. In light of these findings the hypothesis that female athletes exhibit higher levels of IM is rejected, which is consistent with the previous literature.

Sport Played and Levels of IM

Hypothesis 4: Female scholarship and female non-scholarship athletes will exhibit similar levels of IM across sport domain, IE the sport played (soccer, softball or field hockey) will not be associated with different levels of IM in any of the female athletes.

This hypothesis was confirmed through a One-way ANOVA, $F(2, 57) = 1.71$, $p = .19$. This revealed no significant differences in IM levels across sport in the female athletes and confirmed the hypothesis that sport played does not associate with levels of IM in female athletes (See Table 6).

In review three of the four hypotheses set forth in this study were supported. Results provided support for associations between PERCOMP, PERCHOICE, E/I, P/T, APQCONTROL and APQPERPERF and IM. In addition, significant differences were found between all levels of scholarship status and IM. Significant differences were not found between IM levels in groups selected by gender or between IM levels of groups selected by sport played.

CHAPTER V

DISCUSSION

Analysis of Findings

There were three main purposes of this study, they included examining the effect of scholarship status, gender and sport played on levels of IM of collegiate athletes. Additionally the effects of athletes' perceptions of scholarship representation of either social control versus competence were assessed. These perceptions were then correlated with levels of Interest and Enjoyment, Effort and Importance, Perceived Competence, Perceived Choice and Pressure and Tension. This study utilized a model grounded in a sub-theory of Self Determination, Cognitive Evaluative Theory. The results provided support for three of the four hypotheses presented in this paper.

The purpose of the present study was to test the contention of Cognitive Evaluation Theory that focuses on the proposed motivational sequence of psychological processes which can lead to changes in intrinsic motivation. Operating under the established tenants of CET, this paper focused on the perceived competence process, which shows that performance contingent rewards produce increases in intrinsic motivation and perceived competence. Results of this study reaffirm this theory in the context of sport. This study examined the impact of scholarship status and perception of the representation of this scholarship on the IM of Division II male and female college athletes. The perceptions of athlete's scholarship were measured in the following terms: 1) whether these perceptions of scholarship represented ways for coaches to control social behaviors; and/or 2) whether the scholarship was performance-based and/or provided informational rewards. The hypothesized relationships were examined through

correlational analyses and comparison of group means. This study adds to a substantial yet inconclusive body of evidence. The results provided interesting findings concerning levels of IM and some factors that affect these levels are presented and discussed below.

Scholarship Status and Intrinsic Motivation

One of the factors thought to influence athletes' levels of IM is scholarship status. Based primarily on Amorose and Horn (2000), it was hypothesized that athletes receiving any level of athletic scholarship would show lower levels of IM compared to athletes whom were not on athletic scholarship. This premise was supported through the findings of the present study. The differences between non-scholarship and scholarship athletes found in the current study were consistent with current theory and current previous research (Amorose and Horn, 2000). It appears that money acts as a precipitant to the process of a cognitive evaluation of the activity in which an athlete is participating. It may serve to shift the reason that the person is participating in the activity from interest and enjoyment (IM) to expectation of financial rewards (EM) (Deci, 1971). In this study it was shown that the higher the scholarship an athlete garnered the less likely he or she was participating in the sport for the pure enjoyment of the task.

There are several reasons why this finding is important. For example, for a former scholarship athlete, if that scholarship is no longer available, athletes' intrinsic motivation may never increase or may return to baseline levels or below without this extrinsic reward. This "overjustification effect" may decrease the enjoyment an athlete possessed prior to the incentive and thus his or her intrinsic motivation to engage in it.

As a result of the extrinsic incentive, the person views his or her actions as externally controlled rather than intrinsically appealing. Further it is possible that if

athletes' intrinsic motivation is decreased in the arena of sport it is feasible that other related areas of an athlete's life may also suffer decreased intrinsic motivation. For example, academic success may decrease as a result of their athletic scholarship. This connection may be made as many scholarships are contingent on both athletic performance and academic standards.

While scholarships may provide access to an education for athletes, it will be important to consider is the actual coaching behaviors that influence intrinsic motivation. Therefore, in addition to scholarship status the role and function of a coach should be monitored and evaluated throughout the college athletics experience. It is possible that these coaching behaviors contribute to the perceptions athletes' hold regarding the meaning of their scholarship. In light of these results, it is important to attempt to further investigate and explore the complex thought process which is attached to the scholarship, as it significantly impacts levels of intrinsic motivation.

Athlete Perception of Scholarship Meaning and Intrinsic Motivation

According to Cognitive Evaluation Theory, a reward can increase or decrease IM depending on whether it is perceived as controlling or performance-based and/or informational with respect to expected behavior in nature (Deci, & Ryan, 1985). The present study replicated these theoretical constructs in a field setting through the presented results. Both scales of the APQ were found to correlate significantly with the IM of the athletes. The tendency to perceive scholarship as a measure of competence thus (performance based) was related to higher levels of IM. Conversely, the perception of scholarship as reflective of a coach's attempt to control their social behaviors was associated with lower levels of IM. It is interesting to note here that it is possible that

many coaches may unintentionally undermine IM of athletes through the manner in which they distribute scholarship, discuss scholarship and treat players differently dependent on level of scholarship. As a result they may alter these perceptions of athletes inadvertently. This unintentional negative manipulation of the environment and reward may lead to decreased IM. It will be beneficial for coaches to consider first that these perceptions exist and second that in some cases an athlete's intrinsic motivation may become unintentionally undermined by coaches' behavior, coaching style or feedback. This line of research will enable coaches to consider the affects they have on players and even consider changing the context in which they award scholarships. Thus it is feasible to believe that coaches could actually utilize scholarship perception to enhance athletes' IM.

Gender and Intrinsic Motivation

It was contended that this study would illustrate the finding that overall, both non-scholarship and scholarship females will exhibit overall higher levels of IM than scholarship and non-scholarship male athletes. This was proposed in light of the significant changes in women's athletics over the past decade and the author's personal experiences. Although females exhibited slightly higher mean values of IM, the differences were not statistically significant and thus results did not confirm this hypothesis. This study actually revealed quite similar levels of IM across gender. The results from this study further support the findings in the literature including theory of SDT that IM levels appear to be similar across gender. In light of this result, the hypothesis that female athletes' exhibit higher levels of IM is rejected.

In light of the limited sample composition this hypothesis requires further investigation. This study was comprised of a significant number of females when compared to the males and this limitation will need to be addressed to gain a more accurate picture of the possible differences between gender and IM. These findings do support some of the literature findings and are in accordance with Self Determination Theory, which proposes its tenants universally across groups, including gender. Thus to more fully test this hypothesis, further research should utilize a large samples of male athletes.

Sport Played and Intrinsic Motivation

It was proposed that female scholarship and non-scholarship athletes will exhibit similar levels of IM across sport domain, in other words, the sport played (soccer, softball or field hockey) will not reflect with different levels of IM in any of the female athletes. This hypothesis was confirmed as the levels of IM were quite similar for the women athletes across sport, in spite of scholarship level. It is interesting to consider the former research question here, as one would expect that level of scholarship may impact the levels of IM in spite of sport played. However when the samples were reviewed the levels of scholarship of athletes within each sport were quite similar. It was evident from this study that no one sport domain seemed to either foster higher levels of IM or attract athletes with higher baseline levels of IM. This makes sense when the divisions of competition and scholarship levels are controlled. One might expect that the type of athlete that pursues a collegiate athletic career at this specific institution, which does not provide full scholarship or many extrinsic rewards, may already have similar and higher levels of IM. As viewed in the context of this specific study, these findings seem realistic.

Limitations

Although promising, the results of this study must be tempered by a consideration of several limitations. There are many possible reasons for the inconsistencies and recognized limitations, including primarily the sample composition and the utilization of self-created and unvalidated instrument. Briefly, the sample population did not represent an adequate cross section of Division II athletes or sports. For example, none of the athletes in the current study had full scholarship. It is uncertain what these levels of IM would be for these athletes, whose entire collegiate experience is afforded them through sport participation.

It is noted that there was a greater number of females in the study which made gender comparison difficult and may have led to inconclusive results. The sample is comprised of Division II athletes from a specific rural college. In order for these results to be applicable at other levels and divisions of competitive sport domain the analysis will need to be replicated within those specific populations. This will be essential as many variables will differ in these populations, specifically scholarship status. In summary, external validity may have been compromised or limited by selection bias of the sample in this study.

Additionally, a limitation of internal consistency is noted through the use of a self-created, unvalidated instrument. This instrument is based on theoretical assumptions and a sample of personal experiences of coaches and athletes, but was not created in a formalized manner. In spite of its use in a pilot study, it is possible that this measure is not accurately assessing the perceptions and or cognitive processes of the athletes regarding the meaning of their scholarships. In addition, although the alpha coefficients

of the APQ scales are near acceptable levels it will be important to continue to utilize and analyze the results with this instrument. This instrument will require careful scrutiny and replication if these results are to be considered statistically and clinically significant. It is plausible in light of the moderate alpha coefficients that changes to or removal of specific items will need to be performed to more accurately reflect the two proposed theoretical dimensions of the athletic perception construct.

Another limitation involves the reliance on self-report data from teenagers for many of the constructs. The questionable accuracy of these reports would need to be counteracted by obtaining corroborating coach or teammate reports. Having more data points would be helpful to decrease this self-report limitation.

It is also relevant that this study does not provide a baseline level of IM of the athletes prior to the awarding of the scholarship. It would have been more relevant and conclusive had the athletes provided an initial level of IM prior to gaining the scholarship. It may have been more scientifically sound to re-survey following the awarding of the scholarship. It is possible that more explicit conclusions may have been drawn regarding these constructs had a pre and post test research design been adopted. In addition, a longitudinal study may more accurately reflect conclusive results. Again, this underscores the need for more advanced and complex studies to accurately capture these multi-dimensional constructs.

It is also important to consider the concept of Intrinsic Motivation further. In this study the construct of IM was primarily examined as a single dimension, when in reality studies have attempted to identify its many components. Sport researchers in particular have attempted to deconstruct the concept of IM. In this study IM was defined as

enjoyment and interest in an activity, however other researchers have further explored dimensions of IM. For example, several studies have utilized the Sport Motivation Scale (Pelletier et al., 1995) to attempt to measure IM. This scale of measurement attempts to further explore IM in terms of IM to know, IM toward accomplishment and IM to experience stimulation. Although these concepts could be further developed, it is merely presented as an example to illustrate the possibility that IM is a multidimensional construct and requires closer scrutiny to gain effective access into an athlete's state of mind and the complex motivational forces which affect performance. This idea is further developed by Reiss's theory of 16 basic desires, which is put forth as a multifaceted alternative to the unitary models of IM (Reiss, 2004). It is unclear how exploring the other dimensions of IM would have affected the results of the current study.

Lastly parts of this study were correlational in nature, which could not fully address the cognitive process, which CET asserts. Further exploration of the actual psychological and cognitive process will need to be preformed to ensure that this concept is accurately assessed. It may be plausible to utilize qualitative methods to gain access into athletes' specific perceptions. However, in spite of all of these limitations, statistically significant results were particularly persuasive because with relatively small sample sizes, they required fairly large effect sizes to achieve statistical significance.

Future Research

Future research should be directed at several levels. It is clear that this study confirms that a process of perceptions about external rewards in the form of scholarships exists. It will be important for future studies to further address this process of "becoming competent or gaining competence." In addition it would be important to explore the role

of the coach in this process and how it impacts the perceptions of scholarship. It is clear that the coach is an integral part of an athlete's experience and to continue to measure levels of IM and factors which affect these levels, without exploring the role of the coach, would be counterproductive and incomplete. Specifically in the current study, the coach is responsible for distribution of the scholarship and likely contributes to the perceptions of the meanings of these scholarships held by the athlete; it is evident that future studies will need to continue to focus on this variable to provide a more accurate picture of IM levels of athletes.

Additionally, alternative objective methods for assessing these perceptions regarding the meaning of scholarship status would bolster validity of the self-created measure. For example it may be interesting to employ qualitative interviewing methods to further develop these perceptions in detail.

To enhance generalizability, future studies should include athletes of both sexes, various levels of sport, types of sport and varied ethnic and socioeconomic backgrounds in the sample. Specifically in light of the mixed literature findings and results of this study further research in the area of gender is warranted. It is apparent that some gender differences may exist, but we are unclear what these differences are and how they affect Intrinsic Motivation levels in athletes.

It is also important for future researchers to assess a number of the influences which affect the development of IM. Projects should continue to include methods for assessing IM; specifically exploring the components which comprise IM.

Conclusion

Bearing the limitations in mind, this study poses some interesting findings. It has long been argued that learning, performance and behavior change are most likely to occur when individuals are intrinsically motivated. For this very reason, research on the conditions which undermine and enhance intrinsic motivation has theoretical value and practical significance in the area of athletics. It is evident that individuals engage in athletics for many reasons. Some of reasons parallel internal rewards and some seem focused on external rewards. In many cases athletes are engaging in these activities for the pleasure of the activity which can result in feelings of self-determination. The motivation of athletes is an important area of research as the pressures and competitive nature of gaining scholarships as a way to gain a college education has blossomed into a business and even a way of life.

It is inevitable that athletes will encounter aspects within their sports that test their internal motivation to compete. Clearly, the study by Deci et al. (1999) established general negative effects of reward on IM has important theoretical and practical implications, requiring further analysis of contradictory interpretations. To overcome these challenges it is important to understand reasons for participating in sport, or motivations. By better identifying and understanding the manner in which this concept applies to sport it is likely that an athlete can remain intrinsically motivated while receiving athletic scholarship.

It is imperative that we do not crush the spirit of athletes who play their respective sports for the love of the game and pure enjoyment. This study raises our awareness of the importance of regulating levels of stress and tension so that they do not rise to heights

which negatively impact IM and ultimately decrease performance levels and interest in sport. Intrinsic Motivation has long since been related to performance and it is important to consider its affects on outcome of success and interest. In summary, the motivational factors which guide sport participation are diverse, complicated and difficult to pinpoint. Sport settings are an arena in which intrinsic motivation can be paramount to participation and even success.

The field of psychology continues to explore the effects of intrinsic and extrinsic rewards as contributing variables and in a variety of performance domains, including sport. It is my hopes that by utilizing the results of this study while addressing its limitations, future research can enable athletes competing at high levels of competition to be rewarded yet remain motivated. Overall these results imply that a greater effort must be made to decrease feelings of pressure and tension, and athletes perceptions of coaches' control. It is clear from the literature that if rewards are administered across sex and sport in a manner which emphasizes competence rather than control these scholarships need not undermine IM and will actually enhance athletes' interest, competence, performance and ultimately their success.

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Appendix A

CONSENT FORM

I agree to participate in the research study entitled: The Effects of the Amount of Athletic Scholarships and the Athlete's Perception of this Athletic Scholarship on Intrinsic Motivation. This study is being conducted by Jill L. Fuini (Department of Counseling & Human Development at the University of Georgia, phone: 706.542.8508, email:jfuini@uga.edu) under the direction of Linda F Campbell (Department of Counseling & Human Development at the University of Georgia, phone: 706.542.8508 email:lcampbel@uga.edu). I understand that my participation is entirely voluntary. I understand that I can withdraw my consent at any time without penalty and can ask that my forms be destroyed or returned to me.

I understand the following points:

1. **PURPOSE:** The general purpose of this research is to examine my perceptions about what my athletic scholarship represents. This research will be used to identify my level of intrinsic motivation and how the amount of my scholarship affects this level of intrinsic motivation.

Another purpose is to gather the perceptions that athletes hold regarding what his or her scholarship represents. Overall, the purpose of the research is to examine the effects of scholarship amount and perception of what those monies represent and how those perceptions effect intrinsic motivation.

2. **BENEFITS:** The benefit of participating in this research involves knowing how scholarship value affects intrinsic motivation. This study will enable athletes and coaches to enhance performance, by increasing intrinsic motivation. Further, at the conclusion of my participation, I will be offered an explanation of the topics that were investigated in this study.

3. **PROCEDURES:** I will be asked to answer three different questionnaires. This will take approximately 15 minutes to complete. These will include a demographic survey, Athlete Perception Inventory and the Athletic Intrinsic Motivation Inventory.

4. **DISCOMFORTS or STRESSES:** There are no discomforts or stresses foreseen in completing this research.

5. **RISKS:** No risks are expected.

6. **CONFIDENTIALITY:** Participants' responses to these surveys, their identifying information, and their contact information will be confidential. That is, nobody but the personnel at University of Georgia who administer the questionnaire or Dr. Campbell will see my responses to the questionnaires. These questionnaires will be stored in

secure facilities (locked offices with lockable filing cabinets). Once the data are entered into the computer for analyses, participants' names on the hard copies will be marked through with a heavy marker. After five years, the questionnaires will be destroyed completely. Again, only the researcher and personnel connected with this project will have access to the questionnaires and will take all reasonable precautions to protect my identity until my name is marked from the questionnaires.

7. FURTHER QUESTIONS: Following the completion of the data collection, I will be offered a complete explanation of the study and will be able to contact the researcher if I have any questions: Jill L. Fuini (jfuini@uga.edu or 706.542.8508). The researcher will answer any further questions about the research, now or during the course of the project

8. My signature below indicates that the researchers have answered all of my questions to my satisfaction and that I consent to volunteer for this study. I have been given a copy of this form.

I have read and understand the consent agreement above:

(Participant's Signature & Date)

Investigator (Jill L. Fuini)

Additional questions or problems regarding your rights as a research participant should be addressed to The Chairperson, Institutional Review Board, University of Georgia, 612 Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-3199; E-Mail Address IRB@uga.edu

Appendix B

Demographic Questionnaire

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

Name_____

Code_____

Age_____

Sport_____

Gender M F

Ethnicity_____

Class Status Freshman Sophomore Junior Senior Senior +

Current GPA _____

Current athletic scholarship status Full Half Partial None

Amount per semester \$_____

What is the LEAST amount of athletic scholarship that you believe any member of your team receives? \$_____

What is the GREATEST amount of athletic scholarship that you believe any member of your team receives? \$_____

Has your athletic scholarship amount changed from year to year? Yes No

If yes how? Increased or Decreased

What do you believe led to this change?_____

What percentage of this team do you believe is on some amount of athletic scholarship?_____%

Appendix C

Intrinsic Motivation Inventory Sport Version

For each of the following statements, please indicate how true it is for you, using the following scale:

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

1. I enjoy playing soccer very much

1	2	3	4	5	6	7
---	---	---	---	---	---	---

2. I put a lot of effort into soccer

1	2	3	4	5	6	7
---	---	---	---	---	---	---

3. I feel pressured while playing soccer.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

4. Soccer does not hold my attention at all.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

5. I am anxious while playing soccer.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

6. I feel like I have to play soccer.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

7. I think soccer is quite enjoyable.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

8. I play soccer because I have to.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

9. I think I do pretty well at soccer, compared to other athletes.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

10. I feel like it was not my own choice to play soccer.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

11. After playing soccer for awhile, I feel pretty competent.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

12. Soccer is fun to play.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

13. I am pretty skilled at soccer.

- | | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. I would describe soccer as very interesting. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. While I play soccer, I am thinking about how much I enjoyed it. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. I didn't really have a choice about playing soccer. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. I feel very tense while playing soccer. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. It is important to me to do well at soccer. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. I didn't put much energy into soccer. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. I do not feel nervous at all while playing soccer. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. I play soccer because I have no choice. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. I think I am pretty good at soccer. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. I think soccer is a boring activity. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. Soccer is an activity that I can't do very well. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. I believe I have some choice about playing soccer. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26. I am satisfied with my performance on the soccer field. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. I didn't try very hard to do well at soccer. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 28. I am very relaxed when playing soccer. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 29. I play soccer because I want to. | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

30. I try very hard in soccer.

1 2 3 4 5 6 7

Appendix D

Athlete Perception Questionnaire

For each of the following statements, please indicate how true it is for you, using the following scale:

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

1. Athletic scholarships are performance based.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

2. More is expected of my performance than of my teammates who are not on athletic scholarship.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

3. My athletic scholarship signifies my coach's confidence in my athletic abilities.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

4. My athletic scholarship motivates me to perform better.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

5. I do not try as hard at my sport because I am on athletic scholarship.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

6. The amount of my athletic scholarship is an indicator of my performance.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

7. The amount of my athletic scholarship is an indicator of my athletic abilities.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

8. My athletic scholarship is a way for the coach to control my behavior.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

9. Receiving an athletic scholarship allows my coach to control who I date.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

10. My athletic scholarship motivates me to keep playing soccer at the collegiate level.

1 2 3 4 5 6 7

11. My athletic scholarship is the reason I started playing soccer.

1 2 3 4 5 6 7

12. My athletic scholarship allows my coach to determine when I study.

1 2 3 4 5 6 7

13. My athletic scholarship means my coach can determine what I can do as extracurricular activities.

1 2 3 4 5 6 7

14. I cannot visit my family as much as I would like to because I am on athletic scholarship and my coach will not allow it.

1 2 3 4 5 6 7

15. I cannot choose my friends because I am on athletic scholarship.

1 2 3 4 5 6 7

16. My athletic scholarship gives my coach control over my academic progress.

1 2 3 4 5 6 7

17. Because I am on athletic scholarship, my coach can determine who my friends are.

1 2 3 4 5 6 7

18. My social life is different because I am on athletic scholarship.

1 2 3 4 5 6 7

19. My athletic scholarship allows my coach to control when I can go out.

1 2 3 4 5 6 7

20. My athletic scholarship enables my coach to control who I am.

1 2 3 4 5 6 7

Table 1

Overall descriptive statistics of Intrinsic Motivation Inventory and Athletic Perception Questionnaire.

N=86	Mean	Standard Deviation
Effort and Importance (E/I)	40.77	5.20
Perceived Competence (PERCOMP)	40.72	4.08
Pressure and Tension (P/T)	26.20	6.59
Perceived Choice (PERCHOICE)	41.55	4.09
Interest and Enjoyment (I/E)	42.52	3.60
APQ Perceived Performance (APQPERPERF)	38.25	5.50
APQ Perceived Control (APQPERCONT)	13.58	2.55

Table 2

Pearson correlations Intrinsic Motivation Inventory and Athletic Perception Questionnaire.

	APQ PERPERF	APQPERCONT
Effort and Importance (E/I)	.292**	-.264*
Perceived Competence (PERCOMP)	.460**	-.469**
Pressure and Tension (P/T)	-.476**	.350**
Perceived Choice (PERCHOICE)	.509**	-.599**
Interest and Enjoyment (I/E)	.663**	-.756**

* = $p < .05$

** = $p < .01$

Table 3

Intercorrelations of Intrinsic Motivation Inventory dimensions.

	E/I	PERCOMP	P/T	PERCHOICE	I/E
Effort and Importance (E/I)	1				
Perceived Competence (PERCOMP)	.192	1			
Pressure and Tension (P/T)	-.059	-.285**	1		
Perceived Choice (PERCHOICE)	.268*	.429**	-.382**	1	
Interest and Enjoyment (I/E)	.457**	.541**	-.390**	.609**	1

* = $p < .05$ ** = $p < .01$

Table 4

Descriptive statistics of Intrinsic Motivation Inventory by scholarship status.

	Mean	Standard Deviation	F=(2,83), p=.00
<u>Effort and Importance (E/I)</u>			
Half	37.94	3.75	
Partial	40.27	5.39	
None	43.54	4.63	
<u>Perceived Competence (PERCOMP)</u>			
Half	38.66	3.88	
Partial	39.97	4.27	
None	43.28	2.50	
<u>Pressure and Tension (P/T)</u>			
Half	30.24	5.25	
Partial	26.48	6.40	
None	22.79	6.06	
<u>Perceived Choice (PERCHOICE)</u>			
Half	38.42	2.86	
Partial	41.18	3.46	
None	44.38	4.10	
<u>Interest and Enjoyment (I/E)</u>			
Half	38.48	2.82	
Partial	42.27	2.28	
None	45.89	3.60	

Table 5

Overall means (M) and standard deviations (SD) of Intrinsic Motivation Inventory and Athletic Perception Questionnaire subscales grouped by gender.

	Female (M, SD)	Male (M, SD)	t=(2.84,p=.07)
Effort and Importance (E/I)	42.03, 4.74	37.85, 5.12	
Perceived Competence (PERCOMP)	40.19, 4.43	41.96, 2.86	
Pressure and Tension (P/T)	26.40, 6.65	25.73, 6.53	
Perceived Choice (PERCHOICE)	41.70, 4.46	41.19, 3.12	
Interest and Enjoyment (I/E)	42.98, 4.05	41.46, 1.96	
APQ Perceived Performance (APQPERPERF)	38.49, 5.72	37.69, 5.03	
APQ Perceived Control (APQPERCONT)	13.53, 2.82	13.69, 1.85	

Table 6

Means and standard deviations of Intrinsic Motivation levels grouped by sport.

	Means	Standard Deviations F(2,57), p=.19
Soccer	44.12	4.10
Hockey	42.62	3.45
Softball	42.00	4.16

Figure 1

Group differences in Intrinsic Motivation by scholarship status.

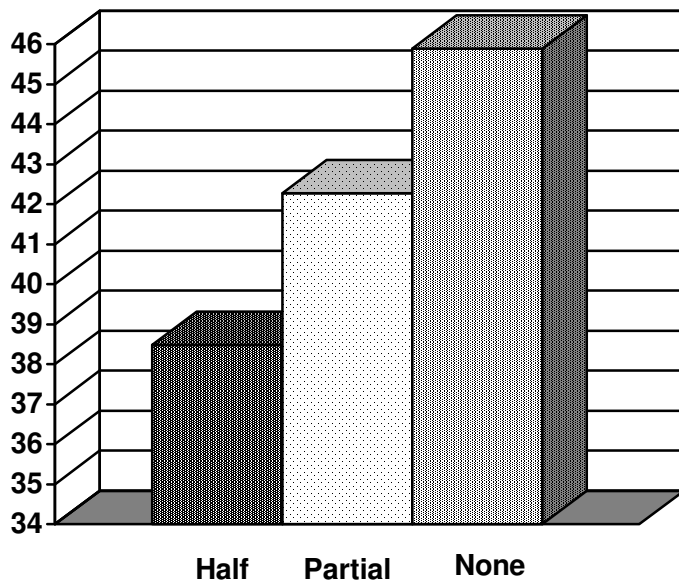


Figure 2

Group differences in Intrinsic Motivation by gender.

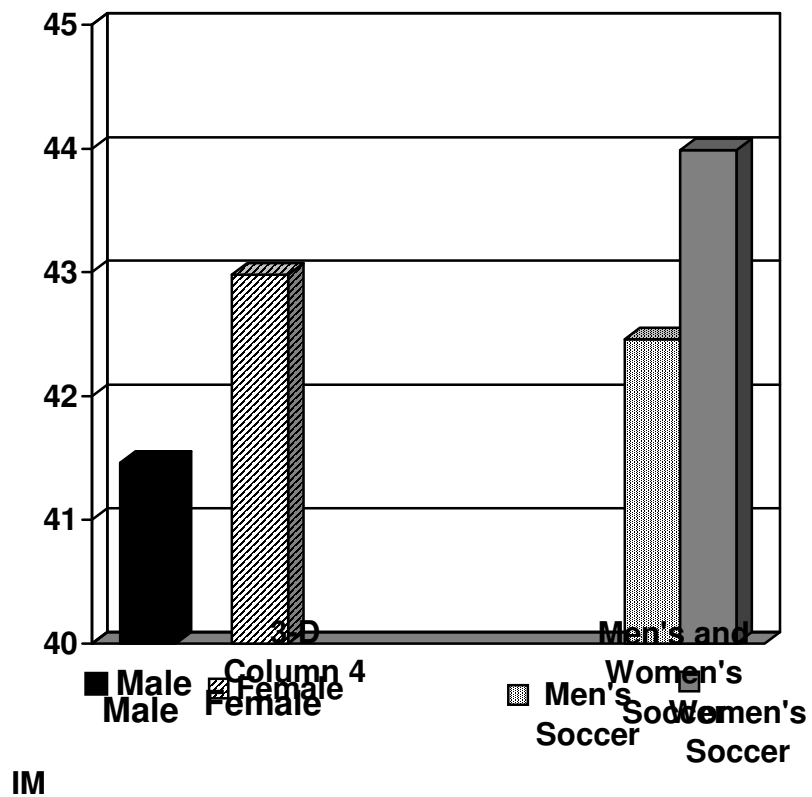


Figure 3

Group differences in Intrinsic Motivation by sport played.

