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Differences in Motivation: Scholarship and Non-Scholarship Collegiate Track and Field Athletes

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DIFFERENCES IN MOTIVATION: SCHOLARSHIP AND NON-SCHOLARSHIP COLLEGIATE TRACK AND FIELD ATHLETES

BY

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To the Dean of the School of Human Performance and Leisure Sciences:

I am submitting herewith a thesis written by Brandice Flournoy entitled "Differences in Motivation: Scholarship and Non-scholarship Collegiate Track and Field Athletes." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science with a major in Exercise and Sport Psychology.

Dr. Gualberto Cremades, Thesis Committee Chair

We, members of the thesis committee,
have examined this thesis
and recommend its acceptance:

Accepted:

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Abstract

Researchers have identified intrinsic and extrinsic motivation as key components when investigating sports (Deci & Ryan, 2002; Vallerand & Rousseau, 2001). However, research has found conflicting evidence when examining the motivation of scholarship and non-scholarship athletes. The aim of the current study was to examine the differences in motivation (IM, EM, and amotivation) among scholarship and non-scholarship collegiate male and female track and field athletes. Participants consisted of one hundred sixty two collegiate track and field athletes from Division I track and field teams in the Colonial Athletic Association and the Mid-Eastern Athletic Conference. The participants consisted of scholarship males (n = 37), non-scholarship males (n = 41), scholarship females (n = 37), and non-scholarship females (n= 47). It was hypothesized that athletes on athletic scholarships will have lower levels of intrinsic motivation and therefore have higher levels of extrinsic motivation. The Sport Motivation Scale (SMS; Pelletier, Fortier, Vallerand, Tusson, Briere & Blais, 1995) was used to assess participant's motivation. A 2x2 MANOVA was used to assess the difference between scholarship and non-scholarship athletes. The results of the present study indicated there are significant differences in motivation (intrinsic, extrinsic, and amotivation) between scholarship and non-scholarship male and female athletes. Scholarship athletes had higher levels of EM, while non-scholarship athletes had higher levels of IM. Female athletes displayed higher levels of IM, while male athletes reported higher EM. The results further indicated that non-scholarship females had the highest level of IM: to accomplish and scholarship males had the highest level of amotivation.

CHAPTER ONE

INTRODUTION

Motivational constructs play an important role in the sport domain. Motivation has been defined in a variety of ways, but most typically refers to an internal state or condition that activates, energizes and provides direction for behaviors (Bandura, 1986; Frederick & Ryan, l995). Motivation is often viewed within the framework of the self-determination theory (SDT). This theory suggests that human behavior be examined from that of a needs perspective. Furthermore, it also purports that individuals possess certain innate psychological needs, including autonomy, competence and relatedness (Ryan & Deci, 2000). Participation in sports comprises an arena of activities in which many people, both young and old, participate for the simple enjoyment of the physical activity. Simply put, the activity itself is intrinsically motivating.

Hundreds of articles have been published examining the relationship between intrinsic and extrinsic motivation (Deci, Ryan, & Koestner, 1999; Ryan & Deci, 2000; Vallerand & Rousseau, 2001; Henry, 1981). Researchers have identified intrinsic and extrinsic motivation as key components when investigating sports. Motivation may be further broken down into intrinsic motivation (IM), extrinsic motivation (EM) and amotivation. IM refers to “doing an activity for its inherent satisfactions and pleasures rather than for some separable consequences” (Ryan & Deci, 2000). While, EM refers to behaviors that are performed not for their own sake, but to achieve some separate goal (Ryan & Deci, 2000). Lastly, amotivation refers to the absence of IM or EM (Ryan & Deci, 2000).

Motivational processes are best described using a continuum of internalizations ranging from volitional to highly controlling forms of regulation, according to the self-determination theory (Ryan & Deci, 2000). At one end of the continuum self-determined intrinsic motives underline behavior while on the other side non-self-determined regulations in the form of EM control behavior. Furthermore, four sources of EM have been identified in the sport motivation literature including: external regulation, introjected regulation, identified regulation, and integrated regulation (Vallerand & Rousseau, 2001). When external regulation is present, an individual engages in an activity for external rewards or constraints, such as social recognition and criticism from the social world (Tsorbatzoudis, Alexandris, Zahariadis, & Grouios, 2006). Introjected regulation refers to behaviors that are initiated and coordinated by internally controlling imperatives such as guilt and or anxiety (Blais, Sabourin, Boucher, & Vallerand, 1990). Lastly identified regulation suggests the individual judges the behavior as highly valued and therefore performs it out of choice even if it is not pleasurable (Tsorbatzoudis et al., 2006).

On the other hand, according to Vallerand and Rousseau (2001), three forms of IM have been identified including: IM to know which regulates activity for pleasure one receives from learning, exploring or trying to understand new concepts; IM to accomplish which refers to the pleasure and satisfaction one feels while striving to accomplish particular tasks or goals; and IM to experience stimulation which occurs when one engages in a behavior because of the pleasurable sensations this acts confers. According Tsorbatzoudis et al., (2006), this type of motivation might be particularly applicable to those who engage in outdoor and extreme sports.

Researchers have utilized the Sport Motivation Scale (SMS; Pelletier et al., 1995), which was adapted from the original version written in French (Briere, Vallerand, Blais, & Pelletier, 1995). The scale consists of seven subscales to measure intrinsic motivation, extrinsic motivation, and amotivation. The SMS (Pelletier et al., 1995) was developed to test the cognitive evaluation theory (Deci & Ryan, 1985). Since the development of the SMS a vast majority of existing research measured athlete's motivation level through the use of this questionnaire (Tsorbatzoudis, et al., 2006).

Fortier, Vallerand, Briere, and Provencher (1995) assessed motivational levels and self-determination of recreational and competitive athletes who participated in basketball, badminton, volleyball, and soccer. Fortier et al. (1995) administered the SMS (Pelletier et al., 1995) to male and female athletes. They found that competitive athletes exhibited less intrinsic motivation than recreational athletes. Competitive athletes also demonstrated more extrinsic motivation as well as higher levels of amotivation. Female athletes exhibited more intrinsic motivation as well as more extrinsic motivation than male athletes. Males displayed more amotivation than female athletes.

In an effort to draw conclusions on the effects of extrinsic rewards on intrinsic motivation, Deci, Ryan, and Koestner (1999) conducted a meta-analysis of 128 studies and concluded that reward effects tended to have a substantially negative effect on intrinsic motivation. Even when tangible rewards are offered as indicators of good performance, they typically decrease intrinsic motivation for interesting activities. The evidence shows clearly when strategies focus primarily on the use of extrinsic rewards, there is a risk of lowering intrinsic motivation because it tends to undermine personal responsibility and impede self-regulation.

Another study, investigated the motivational levels of non-scholarship student athletes using a motivation questionnaire distributed to men and women basketball players (Henry, 1981). The questionnaire was constructed to measure internal and external factors of motivation. Henry (1981) concluded that internal motivation was higher than external motivation for both male and female athletes. Therefore, both male and female non-scholarship athletes reported intrinsic factors as their primary source of motivation.

In other research, results of two studies by Ryan (1977, 1980) suggested that intrinsic motivation may be negatively influenced by athletic scholarships. Ryan (1977) indicated that male football players not on scholarship exhibited higher levels of intrinsic motivation. Ryan (1977) also found that female athletes on scholarship displayed higher levels of intrinsic motivation for their sport. In both studies, those athletes on scholarship showed a lower level of intrinsic motivation when compared to those non-scholarship athletes. Similarly Medic, Mack, Wilson and Starkes (2007) found confirming results in their study comparing collegiate athletes in Canadian universities with Division I collegiate athletes in the United States. The U.S. collegiate scholarship athletes were more motivated by extrinsic factors and experienced more guilt and pressure with regard to their performance.

However, in the replication of the Ryan study, Amorose and Horn (2000) found very different results. In this study, scholarship athletes reported higher levels of intrinsic motivation while the non-scholarship athletes in their study reported lower levels of intrinsic motivation. Amorose and Horn (2000) concluded that these athletes did not perceive the scholarship as having control over their behavior, but instead saw it as an

indication of their skills. In addition, those athletes with higher levels of intrinsic motivation had coaches whose leadership styles tended to be more instructional and democratic rather than punitive and autocratic, thus suggesting that coaching style might also impact the intrinsic motivation of athletes.

Research has found conflicting evidence when examining the motivation of scholarship and non-scholarship athletes. One of the major limitations in previous studies lies in the fact that only intrinsic motivation was investigated (Vallerand & Rousseau, 2001). Also Ryan (1977, 1980) only tested athletes from one institution, therefore the results are not conclusive. Based on previous research, non-scholarship athletes would be predicted to exhibit higher levels of intrinsic motivation, while scholarship athletes would exhibit higher levels of extrinsic motivation and amotivation (Ryan, 1977, 1980). Male athletes would also display higher levels of amotivation. Therefore, the purpose of the current study is to examine differences in motivation (IM, EM, and amotivation) between scholarship and non-scholarship collegiate track and field athletes. Track and field athletes will provide a large diverse group of athletes, which will increase the applicability of the results. Also there are few studies that examined track and field athletes and motivational constructs. This study will add to any existing literature examining track and field athletes.

Statement of Problem

Motivation toward sport participation is the drive that attracts and keeps people bonded to a sport. Due to the progression of sports, much of the previous research findings may no longer be applicable to current student athletes. More research on the motivation of scholarship and non-scholarship athletes is necessary due to the conflicting

research findings (Ryan, 1977; Amorose & Horn, 2000). The aim of this study was to examine the differences in motivation (intrinsic, extrinsic, and amotivation) between scholarship and non-scholarship athletes, thus expanding on the work of Amorose and Horn (2000). Who speculated that scholarship athletes exhibited higher levels of intrinsic motivation, while non-scholarship athletes displayed lower levels of intrinsic motivation. Furthermore, some studies have suggested that scholarship athletes may exhibit higher levels of extrinsic motivation than non-scholarship athletes (Ryan, 1977 & Medic et al., 2007). Therefore, a study examining motivational levels in scholarship and non-scholarship athletes is necessary.

Purpose of the Study

The purpose of the current study was to examine the differences in motivation (intrinsic, extrinsic, and amotivation) between scholarship and non-scholarship collegiate male and female track and field student-athletes. More specifically, this study examined the following:

1. Differences in motivation levels between male and female scholarship athletes
2. Differences in motivation levels between male and female non-scholarship athletes
3. Differences in motivation levels between male scholarship and non-scholarship athletes
4. Differences in motivation levels between female scholarship and non-scholarship athletes
5. Determine whether there are interaction effects in motivation levels between gender and scholarship status

Hypotheses

The following hypothesis was tested in this study:

1. Athletes on athletic scholarships will have lower levels of intrinsic motivation and therefore have higher levels of extrinsic motivation than non-scholarship athletes.
2. Non-scholarship athletes will have higher levels of intrinsic motivation and lower levels of extrinsic motivation than scholarship athletes.
3. Female athletes will have higher levels of intrinsic motivation than male athletes.
4. Scholarship male athletes will have the highest levels of extrinsic motivation.
5. Amotivation will be the lowest level among all the athletes.

Operational Definitions

Sport Motivation: The motivational constructs that influence sport behavior (intrinsic motivation, extrinsic motivation, and amotivation) (Bandura, 1986; Frederick & Ryan, 1995)

Intrinsic Motivation: Doing an activity for its inherent satisfactions and pleasures rather than for some separable consequences. (Deci & Ryan, 2000)

Extrinsic Motivation: Behaviors that are performed not for their own sake, but to achieve some separate goal/reward (Deci & Ryan, 2000)

Amotivation: The absence of intrinsic motivation or extrinsic motivation. Having no sense of purpose and lacking intent to engage in a particular behavior (Deci & Ryan, 2000)

Scholarship Athlete: Any student athlete that currently holds full or partial scholarship for their participation in a college/university track and field team

Non-scholarship Athletes: Any student athlete not receiving any athletic aid in tuition for their participation in a college/university track and field team

Track and Field Athlete: Athletes who currently participate on a college/ university track and field team (runners, jumpers, and throwers included)

Assumptions

The researcher assumes that the participants have access to the Internet and are able to understand and follow the directions in order to gain access to the questionnaire. It is also assumed the participants understand written instructions provided on the questionnaire. It is further assumed that the participants in this study answered the questionnaire honestly and independently.

Delimitations

The participants in this study were delimited to male and female scholarship and non-scholarship track and field athletes who participate on a Division I team in the Colonial Athletic Association and the Mid-Eastern Athletic Conference. The age of participants range from 18-23 years. Participants were also delimited to athletes that are currently participating on the track and field team.

Limitations

The measure used for this study was a questionnaire, which relies on the self-report of the participants and the truthfulness of their responses. Another limitation to the study is only one sport was being measured (track and field). Another limitation to this study is coaching style was not examined. Therefore, these limitations might influence the results and must be considered when analyzing the results.

Significance

There are few studies in the motivational literature that have focused on direct comparisons of scholarship and non-scholarship athletes. Furthermore, even less literature exist using track and field athletes as participants. While Medic, Mack, Wilson and Starkes (2007) made direct comparisons between scholarship and non-scholarship athletes, track and field athletes were not included in their pool of participants. Also, this study compared Canada student athletes to United States athletes, which may have influenced the results. Therefore this study expanded the current knowledge base of motivational constructs by examining scholarship and non-scholarship track and field athletes. Examining track and field athletes also provided a diverse pool of participants. Also, research on motivation can promote a better understanding of individual's decision regarding their sport behavior. According to Vallerand (2001) the consequences of motivation can be categorized into three types: cognitive, affective, and behavioral. Thus practitioners in the field will gain insight on these outcomes. The study of motivation from an internal and external perspective will help researchers and sport participants understand the "why" of sport behavior (Tsorbatzoudis et al. 2006).

CHAPTER TWO

REVIEW OF LITERATURE

Motivation is the force that drives people to act a certain way. Everything done in life is the product of some sort of motivational force. Motivation is a dynamic concept, which makes the process of understanding motivation difficult. According to Roberts (1982), the study of motivation is the investigation of the constructs that energize and direct behavior. The energy in the motivational theory is essentially a matter of needs (Roberts, 1992). Therefore, the theory of motivation must take into account both the needs that are innate to an individual and those that are acquired through the environment. Furthermore, the direction in motivational theory is relative to the direction toward the satisfaction of needs (Roberts, 1992). Deci and Ryan (1985) have also indicated that motivation theorists need to explore all aspects of an organism's needs along with the processes and structures that relate those needs to behavior.

Although, motivation has been extensively studied, it is still not completely understood in the context of sports. Many people in sport, such as coaches and team administrators tend to conceptualize motivation in a similar theoretical base as arousal (Gerson, 1999; Kelly & Warnick, 1999). Some coaches have attempted to simplify motivation into pep talks or positive imagery. Other coaches have the notion that motivation is innate or genetically endowed. On the contrary, Ames (1984) and Roberts (1982, 1984) emphasized that motivation is not innate, but rather a learned behavior on the part of the individual. This notion can be helpful in explaining why people participate in their sport.

People participate in sport for a variety of reasons. Some participate for social reasons, such as being with friends, while other reasons might be more personal. For instance, skill enhancement, to remain fit, to obtain scholarship, or earn a living. Thus, motivation acts as a stimulus to begin engaging in sport as well as reinforcement to maintain adherence to the sport. The review of literature on sport motivation has been divided into the following sections: theories of motivation; measurement of sport motivation; research related to sport motivation; research related to motivation of scholarship and non-scholarship athletes; and a summary.

Theories of Motivation

Many theories of motivation have been developed and reviewed by psychologists and sport psychology researchers (Alderman, 1974; Carron, 1980; Deci & Ryan, 1985). Alderman (1974) proposed that the study of human motivation is the study of human action and its determinants. The following theories of motivation have been reviewed in this section: Drive Theory; Theory of Achievement Motivation; and Cognitive Evaluation Theory.

Drive Theory

Researchers have investigated motivation using various techniques and perspectives (Deci & Ryan, 1985; Gerson, 1999; Carron, 1980). Earlier research involving motivation focused primarily on the drive theory. The drive theory was first postulated by Hull in 1943. Who defined motivation as the initiation of learned or habitual patterns of movement or behavior. Carron (1980) later stated that the drive theory must be viewed as the most influential theory of motivation in terms of impact upon field of social psychology and sport and physical activity. Hull (1943) considered

behavior to be the product of satisfying the biological needs of hunger, thirst, sex, and the avoidance of pain.

The drive theory suggests that without the presence of certain variables motivation can not exist. Furthermore, motivation consists of a need, stimulus, and response (Hull, 1943). These variables include the following: a drive state (D), habit strength ($_sH_r$), and excitatory potential ($_sE_r$). According to Hull (1943), a drive state (D) is created by need. Habit strength ($_sH_r$), is concerned with the direction of behavior. The r and s represent 'stimulus and response'. The excitatory potential ($_sE_r$) is a function of D (drive state) multiplied by $_sH_r$ (habit strength). Hull (1943) used the formula, $_sE_r = D \times {}_sH_r$ to illustrate the drive theory.

Hull (1952) later revised the drive theory by adding another variable, incentive (K) to the equation. K relates to the importance of reward expectancy on behavior. The revised formula read $_sE_r = D \times {}_sH_r \times K$. Spence (1956) modified the Hull (1943) theory by proposing the idea of the presence of either D (drive state) or K (incentive) as a result of $_sE_r$, if $_sH_r$ existed. The modified formula read $_sE_r = (D + K) \times {}_sH_r$ (Spence, 1956).

Theory of Achievement Motivation

The later research on motivation began to focus on the reasons why people are more or less motivated. Unlike the drive theory, the theory of achievement motivation attempts to account for the determinants of the direction, magnitude, and persistence of behavior in a limited but very important domain of human activities (Atkinson, 1964). The theory of achievement motivation (McClelland, Atkinson, Clark, and Lowell, 1953) has developed from the postulates of the drive theory (Hull, 1952). McClelland, Atkinson, Clark, and Lowell (1953) were some of the first theorists of achievement

motivation. Components of the theory of achievement motivation were identified by Murray (1938) and extended by Atkinson (1964). Achievement motivation was more clearly defined by Atkinson (1964) as a personality disposition. The first disposition is motivated to achieve success (M_s). M_s is present in the individuals who seek high achievements without the worry of failure. The second disposition is motivated to avoid failure (M_{af}). Individuals with this disposition avoid challenges to avoid failure.

In developing the achievement motivation theory, Atkinson (1964) combined two situational factors with personality dispositions. The first situational factor is the probability of success (P_s). The P_s is very high when the individual is almost certain of success. When an individual is uncertain of success the expectancy of success or P_s value, is much lower. The expectancy of success in an individual may be very strong or very weak. Another situational factor is the incentive value of success (I_s) at a particular activity. The achievement motivation theory, or tendency to approach success (T_s) may be represented as $T_s = M_s \times P_s \times I_s$ (Atkinson, 1964).

According to Atkinson (1964), M_s (motivated to achieve success) is a stable characteristic in an individual that is present in any behavioral situation. The other two variables, P_s (probability of success) and the I_s (incentive value of success) change as the individual encounters different life situations. The individual who is considered a high achiever always has a tendency to achieve success. The individual considered a low achiever always has a tendency to avoid challenges to avoid failure and humiliation. These two personality dispositions exist in sports through the motivational behaviors of athletes (Atkinson, 1964).

Cognitive Evaluation Theory

The cognitive evaluation theory was developed to examine the effects of certain events on a person's motivation level. Unlike the theory of achievement motivation, cognitive evaluation theory does not account for personality dispositions. The cognitive evaluation theory (Deci & Ryan, 1985) evolved from a much larger theory of intrinsic motivation. According to Deci and Ryan (1985), the cognitive evaluation theory describes the effects of events that initiate or regulate behavior based on motivation and motivationally relevant processes. The cognitive evaluation theory was first proposed to categorize the early findings related to the effects of external events on intrinsic motivation. Ryan (1982) extended the theory to include initiating and regulatory events inside the person as well as events external to the person.

Moreover, the cognitive evaluation theory (Deci & Ryan, 1985) includes four principal propositions. The first proposition is stated in terms of perceived locus of causality and is related to the intrinsic need of an individual to be self-determined. The perceived locus of causality represents the degree to which one is self-determined with respect to behavior. According to Deci and Ryan (1980), events that promote a more external perceived locus of causality will undermine intrinsic motivation, whereas those that promote a more internal perceived locus of causality will enhance intrinsic motivation. Events that deny an individual to be self-determined will result in a decrease in intrinsic motivation. Events that facilitate self-determination will enhance intrinsic motivation.

The second proposition of cognitive evaluation theory, according to Deci and Ryan (1985), relates to the need of an individual to be competent and conquer challenges.

Deci and Ryan (1980) indicated that activities that promote greater perceived competence would enhance intrinsic motivation, whereas those that diminish perceived competence would decrease intrinsic motivation. Positive feedback typically increases the perceived competence level of an individual, which will increase intrinsic motivation, so long as a sense of self-determined behavior is conveyed to the individual with respect to the activity. When the individual perceives themselves as responsible for failures, a decrease in intrinsic motivation occurs.

The third proposition of cognitive evaluation theory relates to the fact that events, such as feedback and rewards, relevant to behavior have three aspects that may affect individuals in different ways (Deci & Ryan, 1985). These three aspects are informational, controlling, and amotivational. Deci and Ryan (1980) proposed: "The informational aspect facilitates an internal perceived locus of causality and perceived competence, thus enhancing intrinsic motivation. The controlling aspect facilitates an external perceived locus of causality, thus undermining intrinsic motivation and promoting extrinsic compliance or defiance. The amotivating aspect facilitates perceived incompetence, thus undermining intrinsic motivation and promoting amotivation. The relative salience of these three aspects to a persons' motivational level determines the functional significance of the event" (p. 64). An event in which the option of choice of an individual is minimized, intrinsic motivation will decrease. An event that promotes a sense of competence and choice will enhance intrinsic motivation.

Ryan (1982) added a fourth proposition to the theory by asserting that: "Internally informational events facilitate self-determined functioning and maintain or enhance intrinsic motivation. Internally controlling events are experienced as pressure toward

specific outcomes and undermine intrinsic motivation" (p. 107). Deci and Ryan (1985) also hypothesized that internally informational events would promote intrinsic motivation. Ryan (1982) broadened the theory by adding the concept of amotivating events. Internally amotivating events shed light on one's incompetence and also undermine intrinsic motivation. Furthermore, events that diminish self-determination decrease intrinsic motivation, while events that promote self-determination will enhance intrinsic motivation. Deci and Ryan (1985) also indicated that internal and external events that initiate or regulate behavior have different effects on intrinsic motivation.

In addition to these four propositions, the cognitive evaluation theory purports the notion that the motivation can be further broken down into intrinsic, extrinsic, and amotivation (Deci & Ryan, 1985). According to the self-determination theory, intrinsic, extrinsic, and amotivation fit at different points along a self-determined continuum (Deci & Ryan, 1985). The continuum extends from most self-determined to least self-determined. At the most self-determined end of the continuum are the three levels of intrinsic motivation (IM-to know, IM-to accomplish, and IM-experience), followed by the three levels of extrinsic motivation (external regulation, introjected regulation, and identified regulation). At the least self-determined end of the continuum is amotivation. Intrinsic, extrinsic, amotivation and the levels of each have been defined by Deci and Ryan (1985) and will be further broken down.

Intrinsic motivation

Intrinsic motivation, as defined by Deci and Ryan (1985), " is based in the innate organismic needs for competence and self-determination. Intrinsic motivation energizes a wide variety of behaviors and psychological processes for which the primary rewards are

experiences of effectance and autonomy" (p. 32). Therefore, the need for competence and self-determination keeps individuals involved in sports, in order to conquer optimal challenges. The individual continues to be involved in activity in the absence of a contingency or control. An athlete who is intrinsically motivated participates in sports for the challenge, pleasure, and satisfaction derived from such participation (Vallerand & Losier, 1999; Deci & Ryan, 1985). Furthermore, the athlete participates to have fun, learn new techniques, and enhance skill. Chantal, Guay, Dobreva-Martinova, and Vallerand (1996) stated that an intrinsically motivated activity is seen as an end in itself as opposed to a means to some end.

Pelletier et al. (1995) revealed that intrinsic motivation (IM) could be divided into three types: IM- to accomplish; IM-to know; and IM-to experience stimulation. Pelletier et al. (1995) defined IM-to accomplish as engaging in an activity for the pleasure and satisfaction experienced when one attempts to accomplish or create something. An athlete who is trying to master difficult training techniques in order to experience personal satisfaction represents an example of intrinsic motivation to accomplish.

IM-to know was defined as performing an activity for the pleasure and satisfaction that one experiences while learning, exploring, or trying to understand something new (Pelletier et al. (1995). Athletes are intrinsically motivated to know when they attempt to learn a new training technique within their sport of choice for the sheer satisfaction of learning a new skill.

Lastly, Pelletier et al. (1995) indicated that IM- experience stimulation occurs when someone engages in an activity to experience stimulation sensations (i.e. sensory pleasure, aesthetic experience, as well as fun and excitement) derived from one's

engagement in the activity. Athletes who play a certain sport to live exciting experiences are examples of those who are intrinsically motivated to experience stimulation. Intrinsic motivation is at its highest when athletes have control over their actions. When there are no worries, distractions or anxieties present and the activity is carried out for its own sake. Furthermore a cycle is created: the athlete is stimulated and challenged by the task and therefore, practices to improve. Practice in turn, leads to improvements, which produces more enjoyment.

Extrinsic motivation

Extrinsic motivation refers to behavior where the reasons for doing it are something other than the interest in the activity itself (Deci & Ryan, 1985). Extrinsic motivation is participating in an activity for the external rewards associated with completing the activity. Deci and Ryan (1985) have indicated that in regards to extrinsic motivation, "… behaviors whether they be acquisitions or abstentions, do not occur spontaneously out of interest, they require the provision of extrinsic factors if they are to occur at all" (p. 129). For instance, athletes may participate in sport to obtain awards, praise, or prestige from others. Without the presence of contingencies, the athletes will not perform the activity. Extrinsic motivation can also be divided into three different types from higher to lower levels of self-determination: external regulation; introjected regulation; and identified regulation.

External Regulation was defined as" behavior that is controlled by external sources, such as material rewards or constrains imposed by others" (Pelletier et al., 1995) (p. 37). Athletes who participate in sport to receive praise from others or because they are

urged to do so by their parents are motivated by external regulation. The sport or activity is not performed for pleasure but to obtain rewards or to avoid negative consequences.

Introjection Regulation is when the formerly external source of motivation has been internalized such that its actual presences are no longer needed to initiate behavior (Pelletier et al., (1995). Athletes, who place pressure upon themselves to be in good shape for aesthetic reasons, or feel guilt when they are not in best form, represent an example of introjection regulation.

The last type of extrinsic motivation, identified regulation was defined as the operation when the individual comes to value and judge the behavior as important and therefore performs it out of choice (Pelletier et al., 1995). The activity is still performed for extrinsic reasons (i.e. to achieve personal goals); however, it is internally regulated and self-determined. The activity becomes internalized within athletes as something valued and beneficial to them. If athletes perceive their participation in sport contributes to their growth and development as a person, then identified regulation is represented.

Vallerand, Deci and Ryan (1987) indicated that various examples of extrinsic motivation, such as extrinsic rewards, have a controlling and an informational aspect. The controlling aspect of a reward is when the athlete perceives the reward to control behavior rather than to inform the athlete of a good performance. The occurrence would decrease intrinsic motivation within the athlete. An increase in intrinsic motivation would be the result of a reward perceived as informational. If a reward is given unexpectedly after a good performance, the reward is less likely to be perceived as controlling. Both have an affect on intrinsic motivation depending on which aspect is more salient.

According to Vallerand et al. (1987) the interpersonal contexts in which they are administered tend to determine how they will be experienced.

Amotivation

Amotivation is the most non self-determined aspect of the continuum. Deci and Ryan (1985) have stated that, according to cognitive evaluation theory, when environments allow neither self-determined nor competence for a given behavior, people will become amotivated with respect to that behavior. Amotivation typically occurs when athletes continuously receive negative feedback about their performance, when they repeatedly fail or when they believe that outcomes are non-contingently delivered.

Furthermore, Fortier, Vallerand, Briere, and Provencher (1995) stated that individuals are said to be amotivated when they do not perceive contingences between their actions and the outcomes of their actions. The presence of amotivation means that the athlete is neither intrinsically nor extrinsically motivated. Amotivation is similar to the concept of learned helplessness (Abramson, Seligman, & Teasdale, 1978). They perceived the outcomes of their actions as caused by forces out of their control. The athlete experiences feelings of incompetence and lack of control. Reasons to continue training become difficult to identify. The athlete begins to question the reasons for participating in the sport. Amotivation might lead the athlete to eventually stop practicing the sport.

Measurement of Sport Motivation

Various questionnaires and scales have been developed to quantify the motivation levels on sport. Howe (1986) indicated that, motivation is an abstract concept only observable from the resultant behavior and measurable by imperfect devices. The

imperfect devices Howe describes are questionnaires and psychological scales to measure self-reported levels of motivation. Unfortunately, self-reported scales are the only resources for quantitatively measuring motivation in sport. Two specific questionnaires have been reviewed in this section: The Intrinsic Motivation Inventory (IMI; Ryan, 1982) and the Sport Motivation Scale (SMS; Pelletier et al., 1995), which are both developed to test the cognitive evaluation theory (Deci & Ryan, 1985).

Intrinsic Motivation Inventory

As mentioned earlier, the intrinsic motivation inventory (IMI) was developed in order to quantitatively measure motivation in the sport domain. According to Markland and Hardy (1997), the origins of the IMI are somewhat of a mystery. The IMI, which consisted of 27-items, was developed for laboratory tasks. The scale measures levels of intrinsic motivation as an additive function of the underlying dimensions of interest enjoyment, perceived competence, effort, and pressure-tension. Interest-enjoyment refers to the amount of interest and enjoyment experienced by the participant during the fitness testing. Perceived competence relates to the feeling of efficacy associated with the performance of the fitness tests. Effort-importance was measured by the level of effort put forth and the amount of importance placed upon the activity. The pressure-tension subscale measured the amount to which the participants experienced pressure or tension during the fitness testing (Ryan, 1982).

Early research surrounding the IMI focused on examining the validity of the measure. McAuley, Duncan, and Tammen (1989) were the first to examine the psychometric properties of IMI (Ryan, 1982) in a competitive sport setting. McAuley et al. (1989) described the psychometric properties of the IMI (Ryan, 1982) for a basketball

shooting task and participation in aerobic dance. An 18 and 16-item versions of the IMI (Ryan, 1982) were employed for the participants (McAuley et al., 1989). A principal objective was to determine how well this data could be collected in a sport setting and fit the hypothetical structure of the original IMI (Ryan, 1982). The researchers tested the hierarchical model against a four-factor model, a single model, and a null independent model. The internal consistency of subscales was adequate with alpha coefficients for each of the following scales: interest enjoyment (alpha .78); perceived competence (alpha .80); effort (alpha .84); and pressure-tension (alpha .68). A fifth dimension was included: perceived choice (McAuley et al., 1989). The dimension reflected perceived locus of causality, a core construct of cognitive evaluation theory (Deci & Ryan, 1985), which formed the theoretical grounding for the instrument.

Although the IMI (Ryan, 1982) displayed adequate alpha coefficient levels, Markland and Hardy (1997) proposed a conflict between the hierarchical model of the McAuley et al. (1989) and the tenets of the cognitive evaluation theory. The results reported by McAuley et al. (1989) did not contradict the hierarchical model; however, they did not conclusively support the model in respects to the cognitive evaluation theory. McAuley et al. (1989) indicated that the IMI represents a promising advance in the assessment of the motivational construct. Yet, Markland and Hardy (1997) suggested that the conceptual and operational problems with IMI should be addressed before it becomes established as the instrument of choice for assessing levels on intrinsic motivation.

Sport Motivation Scale

Researchers in sport have attempted to answer many questions over the last decade in studies concerning the cognitive evaluation theory (Deci & Ryan, 1985).

Intrinsic motivation, antecedents of motivation, and the consequences of various intrinsic motivational levels have also been the examined in order to gain more knowledge about motivational levels (Gerson, 1999). The Sport motivation scale (SMS) was developed to test the cognitive evaluation theory by assessing intrinsic, extrinsic, and amotivation in athletes (Deci & Ryan, 1985). The SMS (Pelletier et al., 1995) was first developed in French (Briere, Vallerand, Blais, & Pelletier, 1995). The French version of the SMS (Briere et al. , 1995) was not valid to conduct research with English speaking athletes. The scale represented a new measure of motivation toward sport and was therefore translated to English.

The scale consists of seven subscales measuring the following: three types of intrinsic motivation (IM-to know, IM-to accomplish, and IM-to experience); three types of extrinsic motivation (External regulation, Introjected regulation, and Identified regulation); and amotivation. Each subscale consists of four items and thus the entire scale has a total of 28 items. The participants rate the extent to which the item corresponds to one of their motives for participating in the sport on a 7-point Likert scale, ranging from “not at all” (1) to “exactly” (7).

Many sport psychology studies have used the SMS to in order to examine the motivational constructs within athletes. Earlier studies focused on transforming the SMS into a valid and reliable English version. Pelletier et al. (1995) conducted two studies to translate the measure into English and to validate the scale. The first study had several purposes. The first purpose was to examine the factor structure through confirmatory factor analysis (CFA). The second purpose was to assess the internal consistency of the seven subscales. The final purpose was to attempt to verify if the gender differences on

the subscale means within the French sample would also be observed with the English sample.

Several statistical analyses were made in order to assist in validating the SMS. Pelletier et al. (1995) used a confirmatory factor analysis model that permitted free loadings of the items on one of the seven subscales. No cross-loading were postulated. All the items had factor loadings over .70. The confirmatory factor model was tested with various goodness of fit measures. Various fit indexes indicated acceptable fit and the seven-factor model was considered acceptable.

In addition to using the confirmatory factor model the internal consistency of the seven subscales were also analyzed using the Cronbach alpha coefficient (Cronbach, 1951) (Pelletier et al., 1995). Each subscale consisting of four items appeared to show adequate levels of internal consistency. The values varied from .74 to .80, except for the identified regulation subscale, which had an alpha level of .63. The subscales on the English version are considered equivalent to the subscales of the original questionnaire (Pelletier et al., 1995).

Further examination of the SMS also revealed gender differences. A gender × scale analysis of variance with repeated measures on the scale factor was conducted to examine these gender differences (Pelletier et al., 1995). The research indicated that the subscale means were significantly different from each other for males and females except for the introjected regulated, identified regulation, IM-to know, IM-to accomplish, and IM-to experience stimulation subscales. Furthermore, female athletes scored higher than males on the IM-to know and the IM-to accomplish subscales. However, females scored lower on external regulation. Pelletier et al. (1995) concluded by indicating, “globally,

these results replicate the results obtained with the French version of the SMS by Briere et al. (1995)" (p. 44).

The second part of Pelletier et al. (1995) study examined the stability of the scale. The internal consistency was also reassessed in the second study. Stability was assessed through test-retest correlations with coefficients ranging from .58 to .84 with a mean test-retest correlation of .70. The results from the second study were similar to the results of the French version (mean $\underline{r}$ = .69). These results give support for the stability of the English version of the scale. The alpha values of the pretest and posttest were similar to those obtained in the study by Briere et al. (1995), and therefore give support for the reliability and internal consistency of the subscales. Pelletier et al, (1995) indicated that the SMS represents not only an adequate adaptation of the French version, but a reliable and valid scale in its own right that should be useful for research on sport motivation (p. 49).

Research Related to Sport Motivation

Researchers have investigated various sport populations to determine motivational patterns. Athletes have been examined to assess if an increase or decrease in motivation is due to various sport experiences. Researchers have also assessed the effects of competition, pressures to succeed, and achievements on motivation (Tsorbatzoudis et al., 2006).

Some of the earlier sport motivation research focuses on the differences between competitive and recreational athletes. Fortier et al. (1995) examined sport motivation in competitive and recreational athletes. The participants studied by Fortier et al. (1995) were 399 French-Canadian athletes attending two junior colleges who participated in

badminton, basketball, volleyball, and soccer. The participants consisted of 223 males and 176 females who completed the SMS (Pelletier et al., 1995). The scale was given to the competitive athletes before regular scheduled practice and before free gym time to the recreational athletes. It was revealed that competitive athletes exhibited less IM-to accomplish than recreational athletes, while demonstrating more identified regulation and more amotivation. In competitive sports, a great emphasis is place on winning. The pressure of winning possibly diminished the sense of self-determination within competitive athletes and therefore produced a feeling of amotivation.

The results for the female athletes varied from the male athletes. Fortier et al. (1995) found that female athletes exhibited more IM-to accomplish and expressed more identified regulation than male athletes, while displaying less external regulation and less amotivation. Fortier et al. (1995) suggested that it appears that in competitive structures the focus is more on winning something extrinsic to the sport than in recreational structure, where athletes probably play for fun rather than to win at all costs. A recreational structure tends to serve as more relaxed atmosphere whereas a competitive structure tends to create a tense atmosphere applying pressure on the athletes.

Fortier et al. (1995), research provided great insight into the motivational constructs of athletes, however elite athletes were not included in his sample. Chantal et al. (1996) analyzed sport motivation in relation to elite performance. It was expected that the best performing athletes would display lower levels of intrinsic motivation and higher levels of non-self determined extrinsic motivation and amotivation than the less successful athletes (Chantal et al., 1996). The participants in the study were 35 female

and 63 male Bulgarian national elite athletes from various sport teams. Each athlete completed the Bulgarian version of the SMS (Pelletier et al., 1995).

Chantal et al. (1996) found that in comparison with less successful athletes, the best performing athletes displayed higher levels of non self-determined types of motivation. Female athletes exhibited higher levels of intrinsic motivation than their male counterparts. Title and medal holders seemed more inclined to report external rewards as their primary source of motivation than less successful athletes. The results of Chantal et al. (1996) are similar to those of Fortier et al. (1995) regarding cognitive evaluation theory (Deci & Ryan, 1985). Chantal et al. (1996) and Fortier et al. (1995) both indicated that for competitive athletes external factors such as competitive sport settings and the pressure to meet certain expectations may also encourage non self-determined types of motivation.

In a different study, Rutherford, Corbin, and Chase (1992) examined factors that influence intrinsic motivation towards physical activity. Unlike the two previous studies mentioned, this study included participants of varying sport experience. Sixty adult males ranging in age from 18 to37 years of age were utilized for this study. Rutherford et al. (1992) operationally defined intrinsic motivation as the amount of time individuals voluntarily spend at an activity during their free time (p. 19). Using a scale designed specifically for the study, Rutherford et al. (1992) investigated two factors thought to influence intrinsic motivation toward physical activity; the use of information about performance and previous sport experience.

The participants in the study were separated into three groups based upon the number of years of sport experience and achievements (Rutherford et al., 1992). They

performed these 20- speed bike rides. The rides were separated by at least 24 hours. One group received feedback immediately after the ride, but the second group did not. Rutherford et al. (1992) examined the difference between the two groups. It was discovered that performance information given to people with little to no sport experience immediately after task performance, increases the perceived competence and intrinsic motivation levels (Rutherford et al., 1992). This information can be helpful in many sport domains. For example, giving positive feedback to beginning athletes will increase intrinsic motivation and increase opportunities for adherence to athletic programs.

A future study also utilized bicycle rides to examine the relationship of financial rewards, performance, and motivation. Prong, Rutherford, and Corbin (1992) examined the practice of giving financial rewards for fitness testing performance and the effects of these awards on intrinsic motivation. The participants were 64 males with a mean age of 21.5 ± 2.8 years from a southwestern university. The participants were randomly assigned to one of four treatments groups: 1) rewards, 2) positive feedback, 3) no rewards, and 4) negative feedback. The participants were tested on a 20-s maximum bicycle ride. Prior to the testing, participants in the reward group were informed that they would receive five dollars if they passed the performance test. Participants in the no reward group were advised to do their best on the test.

Prong et al. (1992) administered a modified version of the IMI by Whitehead and Corbin (1991). As mentioned earlier the IMI (Ryan, 1982) was designed to assess four elements of intrinsic motivation namely; interest-enjoyment, perceived competence, effort-importance, and pressure-tension. Prong et al. (1992) indicated that the practices of offering rewards did not enhance intrinsic motivation associated with fitness activity.

Interpretation of the IMI (Ryan, 1982) revealed that monetary rewards as an incentive did not increase the amount of effort the participants expended during the fitness testing. These findings support previous research in that the offering of rewards extrinsic to the activity does not increase the intrinsic motivation of individuals.

More research, further examined the relationship of financial reward and motivation. Earn (1982) also investigated the effects of extrinsic financial rewards on the locus of control of individuals and intrinsic motivation. Earn (1982) hypothesized that individuals with high internal locus of control who place a greater weight on the informational aspect of the reward would show an increase in intrinsic motivation as pay increased. Individuals with high external locus of control, who focus on the controlling aspect of the reward, were expected to exhibit a decrease in intrinsic motivation as pay increased. Earn (1982) conducted two studies where the participants had to put together puzzles. Weeks before the actual experiments were conducted, 804 students completed a 23-item locus of control scale (Rotter, 1966) to determine which individual had a high internal locus of control and which had a high external locus of control. In study one, Earn (1982) manipulated the situation so that either the informational or controlling aspect of the financial reward would be more salient. In the second study, pay was made contingent upon performance in order to increase the controlling aspect of reward. Pay was awarded on a piece rate basis.

Earn (1982) provided strong support for the hypothesis that financial rewards may differentially affect the intrinsic motivation of individuals varying upon locus of control. In the first study, the hypothesis was supported in that increasing the level of pay increased the intrinsic motivation of those with an internal locus of control and decreased

the intrinsic motivation of those with an external locus of control. In study two, when the controlling aspect of the reward was made more salient by making pay contingent upon performance, high pay undermined intrinsic motivation of individuals with an internal locus of control as well as individual with an external locus of control.

The results of Earn (1982) were different from those of Prong et al. (1992), which may be due to a difference in testing populations. Prong et al. (1992) tested their hypothesis in a physical fitness domain where offering monetary rewards did not increase intrinsic motivation. Earn (1982) examined his hypothesis outside of the physical domain studying the locus of control of the participants, finding that monetary rewards can increase intrinsic motivation in individuals with

Motivation of Scholarship and Non-scholarship Athletes

Over the years, many researchers have spent time trying to find out why athletes participate in sports. The motivational levels of athletes were examined by utilizing various self-assessment scales designed to quantify motivation. A population that has been frequently overlooked is the intercollegiate athlete competing on a college or university team. Differences in the motivational levels of scholarship and non-scholarship athletes are important considerations, when examining motivation. Investigating this population will bring researchers closer to understanding motivational levels of athletes.

Deci and Ryan (1985) and Ryan (1977, 1980) proposed that participation in sport is largely self-determined and the perceived locus of causality is internal. However, when extrinsic factors, which are perceived by the individual as controlling, a more external perceived locus of causality is the result. An external perceived locus of causality is

accompanied by a decrease in intrinsic motivation for the sport. Many athletes experience this pattern when awarded an athletic scholarship.

The study of scholarship and non-scholarship athletes, allows researchers to investigate what draws athletes and keeps them drawn to their sport. Ryan (1977) conducted one of the first studies examining motivation levels of athletic scholarship and non-scholarship athletes. Ryan (1977) hypothesized that most football college athletes on athletic scholarship would perceive themselves performing for the grant. To test this hypothesis, Ryan (1977) administered a questionnaire designed specifically for the study. The questionnaire was designed to indirectly assess intrinsic motivation. The questionnaire was distributed to athletes at two institutions that awarded scholarships to some athletes but not others. Results indicated scholarship athletes, compared to non-scholarship athletes, found little enjoyment in daily practices and found college athletics less enjoyable than they had expected (Ryan, 1977).

Ryan (1977) supported the hypothesis but the data was not conclusive. The difference revealed between scholarship and non-scholarship athletes could have been due to the influence of the particular football teams at the tested institutions. To eliminate some of the limitations of the previous study, Ryan (1980) attempted to test the hypothesis again. In the second investigation it was hypothesized that male athletes on scholarship would exhibit less intrinsic motivation for their sport than males not on scholarship. Ryan also hypothesized that females on scholarship would show more intrinsic motivation for their sport than females not on scholarship.

The participants in this study were 424 male and 188 female intercollegiate competitive athletes. The males in the study participated in either football or wrestling,

while the females were involved in one of seven sports (basketball, field hockey, swimming, tennis, track, volleyball, and cross-country). Ryan (1980) administered a questionnaire designed specifically for the study to assess intrinsic motivation in the athletes. The responses to the questions were on a 7-point scale, ranging from very much to none.

Ryan (1980) revealed that male football players, who received monetary rewards as incentives for sport performance, displayed less intrinsic motivation than football players not on scholarship. Male football players on scholarship exhibited less intrinsic motivation than the male wrestlers on scholarship. The male football players perceived their scholarships as controlling which undermined intrinsic motivation.

Ryan (1980) also revealed that the male wrestlers on scholarship reported higher intrinsic motivation than the non-scholarship wrestlers. The wrestlers on scholarship perceived their scholarships as conveying a sense of competence, thus enhancing intrinsic motivation. Contrary to the males, the females supported the hypothesis in that females on scholarship showed more intrinsic motivation than females not on scholarship. The scholarships awarded to the females conveyed a feeling of competence and worth.

As with many studies these results are not conclusive. Ryan (1980) examined athletes who played two sports that were quite different from each other. The results can possibly be attributed to the difference in sports. Football, in comparison to wrestling, places a great deal of external pressure on the participating athletes. Scholarships in football are awarded often. The players therefore were under a great deal of pressure to perform well and saw themselves as performing for the grant. In wrestling, there is less external pressure and scholarships are awarded less frequently. For these reasons, the

informative aspect of the scholarship was more salient, therefore increasing intrinsic motivation in the wrestlers.

Also during this time, females were infrequently awarded athletic scholarships. Females on scholarship experienced an increased in intrinsic motivation due to a sense of competence. The females received a sense of accomplishment from their scholarships. Ryan (1980) indicated that in the case of the female athletes the reward seems to suggest they are good. The scholarship award to the female athletes suggested that they excelled in their sport. Ryan (1980) found that awarding scholarships can serve as an incentive toward sport, increasing intrinsic motivation but can also decrease intrinsic motivation.

Later studies further investigated the relationship of non-scholarship athletes and motivation levels. Henry (1981) conducted a study to investigate motivation of non-scholarship athletes. Henry (1981) stated that the athletic grant is undoubtedly a key motivation to the athletes receiving it but what are the primary motivators for the non-scholarship athletes (p. 83). Many programs that do not award athletic scholarship require the same amount of dedication and effort from their athletes.

Henry (1981) distributed a motivation questionnaire to 135 men and women collegiate basketball athletes. The questionnaire was constructed to measure the importance placed by the athletes upon particular sources of motivation. The internal factors evaluated were social relationships, personal enjoyment, winning, physical conditioning, mental wellbeing, academic motivation, and overall importance. The external factors evaluated consisted of parents, friends, brothers and sisters, and overall importance verses other interests of the athlete.

Henry (1981) indicated that, of the internal factors, both men and women rated physical conditioning of the highest importance. Rated second highest for males and females was personal enjoyment. Both genders rated friends as the highest importance of external factors. Henry (1981) concluded that the mean scores of the internal factors were higher than the mean scores of the external factors of motivation. Therefore, both male and female non-scholarship athletes reported intrinsic factors as their primary source of motivation. The ratings of the external factors suggest awareness by the athletes of how important their athletic performance is to their friends, but is not a strong motivating factor to the non-scholarship athlete. The high rating of personal enjoyment by males and females supports the idea that athletes must enjoy competing in a sport to put forth the required dedication and effort demanded.

Although the previous studies (Ryan, 1980; Henry 1981) provide great information into the motivational constructs and athletes, more research is still necessary. In a different study, the examination of sport participation as work was the main focus. Wagner, Lounsbury, and Fitzgerald (1989) investigated the hypothesis that scholarship athletes would be more likely to view participation in basketball as work than non-scholarship athletes. A questionnaire was developed and completed by 310 male and female scholarship and non-scholarship collegiate basketball players. The participants were requested to respond to a series of questions to assess their perceptions of their sport participation. Sixty head basketball coaches developed the scale. Twenty-five of the items on the scale assessed background information. One item on the scale was concerned with the perception of participation in basketball as work, leisure, or both, while another item measured the degree to which the athlete liked the sport. Wagner et al.

(1989) listed a typical item on the scale as the following: “Do you consider playing (your sport) at your school to be primarily: 1. Work 2. Leisure 3. About equally work and leisure” (p. 158).

Wagner et al. (1989) revealed a significant relationship between being on scholarship and perception of participation in sport as work. Only nine percent of the scholarship athletes viewed participation in their sport as leisure versus twenty-four percent of the non-scholarship athletes. Wagner et al. (1989) concluded that non-scholarship athletes displayed high levels of intrinsic and perceived their involvement in sport as leisure. Whereas, scholarship athletes perceived participation in their sport as being primarily work. Furthermore, the scholarship athletes displayed significantly lower scores on the intrinsic motivation factor compared to the non-scholarship athletes. These findings are consistent with those of Ryan (1977, 1980), Henry (1981), and Prong et al. (1992).

Summary

Motivation in sport is a topic that has intrigued many researchers for many years (Ryan, 1980; Henry 1981). A great deal of research has been done, however the study of motivation in regards to sport is far from complete. Motivation is a dynamic topic, which make the process of understanding it difficult. Since motivational constructs play an important role in the sport domain, it is imperative that research be conducted to further understand its influence.

Researchers have identified several theories of motivation that are influential in the sport domain (Deci & Ryan, 1985; Gerson, 1999; Carron, 1980). The drive theory defined motivation as the initiation of learned or habitual patterns of movement or

behavior (Hull, 1943). Furthermore, the theory of achievement motivation stemmed from the postulates of the drive theory. The theory of achievement motivation attempts to account for the determinants of the direction, magnitude, and persistence of behavior (Atkinson, 1964). Deci and Ryan (1985) introduced the cognitive evaluation theory, which is based on a larger theory of intrinsic motivation. From this theory the motivational constructs in sport have been identified as intrinsic, extrinsic, and amotivation. Intrinsic motivation was defined as participating in an activity for the pleasure of itself. Extrinsic motivation was defined as participation in an activity for rewards external to the sport. Amotivation was defined as the absence of either intrinsic or extrinsic motivation. (Pelletier et al., 1995).

In order to examine the many constructs of motivation, development of valid and reliable scales was necessary. The IMI (Ryan, 1982) was developed to measure the levels of intrinsic motivation as an additive function of the underlying dimensions (interest enjoyment, perceived competence, effort, and pressure-tension). The SMS (Pelletier et al., 1995) was developed to quantify motivational levels. The SMS tests the cognitive evaluation theory by assessing intrinsic, extrinsic, and amotivation in athletes. It is considered a valid and reliable measure in assessing sport motivation (Pelletier et al., 1995).

Motivation has been extensively studied but it is still not completely understood in the context of sports. Motivation acts a stimulus to begin engaging in sport as well as reinforcement to maintain adherence to the sport. Researchers have investigated various sport populations to determine motivational patterns (Fortier et al., 1995, Chantal et al., 1996, & Rutherford et al., 1992). These studies have examined competitive athletes, elite

athletes, and recreational sport groups to access the effects of monetary rewards on intrinsic motivation. Researchers found that in a sport setting offering financial rewards as an incentive does not increase intrinsic motivation. A population that has been frequently overlooked in past research is intercollegiate athletes. Collegiate scholarship and non-scholarship student athletes constitute a large part of the sport domain, thus further examination is necessary. Furthermore, another population that is overlooked is track and field athletes. Track and field athletes provide a large and diverse group of athletes. Some of the athletes participate solely in individual events, while others participate in team (relay) events and individual events. Examining track and field athletes can provide some insight on the role scholarship plays on an athlete's motivational construct. The diversity of track and field athletes may also allow the researcher to apply the results to various types of sports. Research has found conflicting evidence when examining motivation of scholarship and non-scholarship athletes (Ryan, 1980, Henry, 1981; Wagner et al., 1989). Some results indicate that non-scholarship athletes exhibit higher levels of intrinsic motivation then scholarship athletes (Ryan, 1977). However, other studies report scholarship athletes exhibit higher levels of intrinsic motivation. These conflicting results may be due to a major limitation; the fact that many studies only examined intrinsic motivation (Vallerand & Rousseau, 2001). Investigating scholarship and non-scholarship student athletes will help in understanding why athletes may perceive their participation in their sport as work and or a leisure activity.

CHAPTER THREE

METHODS

Participants

One hundred and sixty-two participates were recruited for this study. Participants consisted of seventy-eight male and eighty-four female collegiate student athletes who participate in Division I track and field teams in the Colonial Athletic Association and the Mid-Eastern Athletic Conference. The participants consisted of scholarship males (n = 37), non-scholarship males (n = 41), scholarship females (n = 37), and non-scholarship females (n= 47). The participants included freshmen, sophomores, juniors, and seniors. The age range of the participants was typical of college athletes, 18-24 years.

Measures

Demographic and Athlete History Information

Participants provided their age, gender, academic level (freshmen, sophomore, etc.), events they participate in, and scholarship status (Appendix B). This information allowed the researcher to make additional comparisons of the data.

Sport Motivation Scale

The Sport Motivation Scale (SMS; Pelletier, Fortier, Vallerand, Tusson, Briere & Blais, 1995) was used to assess participant's motivation (Appendix C). The SMS contains seven subscales that measure three types of intrinsic motivation (IM - to know, IM - to accomplish things, and IM - to experience satisfaction), three types of extrinsic motivation (external, interjected, and identified regulation), and amotivation toward sport participation. Athletes responses was assessed on a 7-point Likert scale which is anchored by the following: 1 = does not correspond at all, 7 = corresponds exactly and with the middle being 4 = corresponds moderately.

Pelletier et al. (1995) provides support for the construct and discriminant validity, as well as internal consistency and temporal stability for SMS scores. The internal consistency reliability ranges from .67 to .86 (Pelletier et al., 1995). The SMS was originally constructed in French and preliminary and validation studies were conducted with approximately 600 athletes representing eight different sports (Ostrow, 2002). A mean cronbach alpha internal consistency coefficient of .82 was reported and a mean test-retest reliability coefficient of .69 was also found over a one-month interval.

Procedure

Flyers (Appendix D) were posted in the athletic facilities on the college campuses. The flyer along with a brief description of the study was also emailed to coaches in order gain access to more participants (Appendix F). The flyer contained a link that allowed participants to gain access to the survey online. This link included a cover letter (Appendix E), the SMS, and the demographic and athlete history survey. The participants were given an introduction to the study and asked to participate. The participants were also informed that the surveys make take 20-30 minutes of their time, as indicated in the cover letter. The athletes who decided to participate in this voluntary study then completed the demographic and athlete history survey and the SMS. Lastly the participants were thanked for their participation. The survey and SMS was made available to student athletes for 4 weeks.

Design Analysis

The dependent variables for this study were intrinsic motivation, extrinsic motivation, and amotivation. The independent variable included scholarship status (scholarship or non-scholarship) and gender. The data was collected and entered into

Statistical Package for Social Sciences (SPSS) and analyzed. Descriptive statistics were calculated and comparisons between the variables were made. Data was also screened for out of range responses. A 2x2 MANOVA was used to compare the mean score from scholarship and non-scholarship male and female student athletes on the seven subscales of the SMS (Pelletier et al., 1995).

CHAPTER FIVE

RESULTS

Preliminary Analysis

Data was screened for out of range responses, as well as any systematic patterns of missing data. Individual item distributions were checked to ensure normal distribution. Z-scores were calculated and participant one hundred was deleted as an outlier. This participant was not an active member on their team due to an injury. Descriptive statistics were calculated on variables, which matched the assumptions of multivariate tests. Participants' demographic information was also calculated (see table 1). Cronbach's alphas (correlation co-efficient) were calculated for each of the subscales and ranged from .70 to .98, demonstrating the stability of the scale (see table 2). The subscale EM: introjected included questions nine, fourteen, twenty-one, and twenty-six. Question fourteen was deleted to increase the cronbach alpha level over .70. The means of each subscale of the SMS was calculated for the types of motivation for male and female scholarship and non-scholarship athletes (see tables 3 & 4).

Main Analyses

A 2x2 (gender and scholarship status) multivariate analysis of variance (MANOVA) was conducted to examine the differences in motivation (3 types of IM, 3 types of EM, and amotivation) between male and female scholarship and non-scholarship athletes. The dependent variables included the six SMS subscales, while the independent variables included gender and scholarship status.

Hypothesis One

It was hypothesized that scholarship athletes would have lower levels of intrinsic motivation and therefore higher levels of extrinsic motivation. A significant main effect was found for scholarship status (Pillai's trace (7, 152) =.828, $p < .01$, $\eta_p^2 = .659$). Follow up univariate ANOVAs indicated significant scholarship status main effect in EM: identify ($F(1, 158) = 283.066$, $p < .01$), EM: introjected ($F(1, 158) = 215.291$, $p < .01$), EM: external regulation ($F(1, 158) = 7.661$, $p < .01$), and amotivation ($F(1, 158) = 6.500$, $p < .05$) (see table 4). Results indicated that scholarship athletes had higher levels of extrinsic motivation than intrinsic motivation.

Hypothesis Two

It was also hypothesized that non-scholarship athletes would have higher levels of intrinsic motivation and lower levels of extrinsic motivation. A significant main effect was found for scholarship status (Pillai's trace (7, 152) =.828, $p < .01$, $\eta_p^2 = .659$). Follow up univariate ANOVAs indicated significant scholarship status main effect in IM: to know ($F(1, 158) = 47.513$, $p < .01$, IM: to accomplish ($F(1, 158) = 234.661$, $p <. 01$) , and IM: to experience stimulation ($F(1, 158) = 168.982$, $p < .01$) (see table 4). Non-scholarship athletes displayed higher levels of intrinsic motivation.

Hypothesis Three

It was hypothesized that female athletes would have higher levels of intrinsic motivation and lower levels of extrinsic motivation. A significant main effect was found for gender (Pillai's trace (7, 152) = .367, $p < .01$, $\eta_p^2 = .567$). Follow up univariate ANOVAs indicated significant gender main effect in IM: to know ($F(1, 158) = 22.511$, $p < .01$), IM: to accomplish ($F(1, 158) = 5.738$, $p < .05$) , IM: to experience stimulation

(F(1, 158) = 32.811 , p <. 01), EM: identify (F(1, 158) =10.736, p < .01), EM: introjected (F(1, 158) = 26.567, p < .01), EM: external regulation (F(1, 158) = 11.095, p < .01), and amotivation (F(1, 158) =8.817, p < .01) (see table 3). Female athletes reported higher levels of IM: to know (m = 3.9345, SD = .58742), IM: to accomplish (m = 4.2976, SD: 1.17612), and IM: experience stimulation (m = 4.5000, SD = .89257) than males. Male athletes displayed higher levels of extrinsic motivation and amotivation.

Hypothesis Four

It was hypothesized that scholarship males would display the highest level of extrinsic motivation among all the athletes. A significant interaction effect was found for scholarship status and gender (Pillai's trace (7, 152) = .096, p < .05, η_p^2 = .123). Follow up univariate ANOVAs indicated a significant scholarship status by gender interaction effect in IM: to accomplish (F(1, 158) = 5.181, p < .05) (see figure 1). Results indicated non-scholarship females displayed the highest level of IM: to accomplish (m =5.17, SD = .600). Non-scholarship males reported higher levels of IM: to accomplish (m = 4.64, SD = .993) than scholarship females (m = 3.18, SD = .656).

Hypothesis Five

It was hypothesized that amotivation would be the lowest level among all the athletes. A significant interaction effect was found for scholarship status and gender (Pillai's trace (7, 152) = .096, p < .05, η_p^2 = .123). Follow up univariate ANOVAs indicated a significant scholarship status by gender interaction effect in amotivation (F(1, 158) = 4.853, p < .05) (see figure 2). Scholarship males reported the highest level of amotivation (m= 1.09, SD = .198). Overall amotivation was the lowest level among all the athletes.

CHAPTER FIVE

DISCUSSION

The purpose of this study was to examine the differences in motivation (3 types of IM, 3 types of EM, and amotivation) between scholarship and non-scholarship collegiate track and field athletes.

Hypothesis One

It was hypothesized that scholarship athletes would have lower levels of intrinsic motivation and therefore have higher levels of extrinsic motivation. The results supported this hypothesis. Scholarship athletes reported having significantly lower levels of intrinsic motivation and significantly higher levels of extrinsic motivation compared to non-scholarship athletes. Much of previous research has found confirming results (Medic et al., 2007; Wagner et al., 1989; Ryan, 1977). Medic et al. (2007) investigated collegiate scholarship and non-scholarship athletes. They compared collegiate athletes in Canadian universities with Division I collegiate athletes in the United States. They discovered that collegiate scholarship athletes were more motivated by extrinsic factors and experienced more guilt and pressure with regard to their performance.

Furthermore, Wagner et al. (1989) revealed a significant relationship between being on scholarship and perception of participation in sport as work. Wagner et al. (1989) investigated the hypothesis that scholarship athletes would be more likely to view participation in basketball as work than non-scholarship athletes. A questionnaire was developed and completed by 310 male and female scholarship and non-scholarship collegiate basketball players. The participants were requested to respond to a series of questions to assess their perceptions of their sport participation. Only nine percent of the

scholarship athletes viewed participation in their sport as leisure versus twenty-four percent of the non-scholarship athletes. Wagner et al. (1989) concluded scholarship athletes perceived participation in their sport as being primarily work and scholarship athletes displayed significantly lower scores on the intrinsic motivation factor compared to the non-scholarship athletes. These findings are consistent with this study.

Moreover, Ryan (1977) hypothesized that most football college athletes on athletic scholarship would perceive themselves performing for the grant. To test this hypothesis, Ryan (1977) administered a questionnaire designed specifically for the study. The questionnaire was designed to indirectly assess intrinsic motivation. The questionnaire was distributed to athletes at two institutions that awarded scholarships to some athletes but not others. Results indicated scholarship athletes, compared to non-scholarship athletes, found little enjoyment in daily practices and found college athletics less enjoyable than they had expected (Ryan, 1977). Ryan's (1977) findings are consistent with the results from this study; scholarship athletes display higher levels of EM than non-scholarship athletes. Previous research supports the findings of scholarship athletes display higher levels of extrinsic motivation and lower levels of intrinsic motivation (Medic et al., 2007; Wagner et al., 1989; Ryan, 1977).

Hypothesis Two

It was hypothesized that non-scholarship athletes would have higher levels of intrinsic motivation and therefore lower levels of extrinsic motivation. The results also supported this hypothesis. Non-scholarship athletes displayed significantly higher levels of intrinsic motivation and lower levels of extrinsic motivation. These findings are consistent with previous research (Henry, 1981; Wagner et al., 1989; Ryan, 1980). Henry

(1981) investigated the motivational levels of non-scholarship student athletes using a motivation questionnaire, which was distributed to male and female basketball players. The questionnaire was constructed to measure the importance placed by the athletes upon particular sources of motivation. He concluded that internal motivation was higher than external motivation for both male and female athletes. Therefore, both male and female non-scholarship athletes reported intrinsic factors as their primary source of motivation. Also, Wagner et al. (1989) concluded that non-scholarship athletes displayed high levels of intrinsic and perceived their involvement in sport as leisure. Both studies support the findings of the current study.

Furthermore, Ryan (1977) conducted the first couple of studies examining motivation levels of athletic scholarship and non-scholarship athletes. In his second study, Ryan (1980) hypothesized that male athletes on scholarship would exhibit less intrinsic motivation for their sport than males not on scholarship. Ryan also hypothesized that females on scholarship would show more intrinsic motivation for their sport than females not on scholarship. The participants in this study were 424 male and 188 female intercollegiate competitive athletes. The males in the study participated in either football or wrestling, while the females were involved in one of seven sports (basketball, field hockey, swimming, tennis, track, volleyball, and cross-country). Ryan (1980) administered a questionnaire designed specifically for the study to assess intrinsic motivation in the athletes. Ryan (1980) revealed that football players, who received monetary rewards as incentives for sport performance, displayed less intrinsic motivation than football players not on scholarship. Football players on scholarship exhibited less intrinsic motivation than the wrestlers on scholarship. The football players perceived their

scholarships as controlling, which undermined intrinsic motivation. Previous research (Henry, 1981; Wagner et al., 1989; Ryan, 1980) has found a confirming result; that is non-scholarship athletes display higher levels of IM than scholarship athletes, which further supports the results from this study.

Hypothesis Three

It was hypothesized that female athletes would have higher levels of intrinsic motivation than male athletes. This hypothesis was also supported in the results. Female athletes reported higher levels intrinsic motivation and lower levels of extrinsic and amotivation than male athletes. These results are consistent with previous research (Fortier et al., 1995; Chantal et al., 1996; Ryan, 1980). Fortier et al. (1995) assessed motivational levels and self-determination of recreational and competitive athletes who participated in basketball, badminton, volleyball, and soccer. Fortier et al. (1995) administered the SMS (Pelletier et al., 1995) to male and female athletes. They found female athletes exhibited more intrinsic motivation as well as more extrinsic motivation than male athletes. The results from this study partly support Fortier et al. (1995) findings. Female athletes did not display higher levels of extrinsic motivation than male athletes in this current study.

Moreover, Chantal et al. (1996) analyzed sport motivation in relation to elite performance. It was expected that the best performing athletes would display lower levels of intrinsic motivation and higher levels of non-self determined extrinsic motivation and amotivation than the less successful athletes. The participants in the study were 35 female and 63 male Bulgarian national elite athletes from various sport teams. Each athlete completed the Bulgarian version of the SMS (Pelletier et al., 1995).

Chantal et al. (1996) found that in comparison with less successful athletes, the best performing athletes displayed higher levels of non self-determined types of motivation. Chantal et al. (1996) discovered female athletes exhibited higher levels of intrinsic motivation than their male counterparts. Title and medal holders seemed more inclined to report external rewards as their primary source of motivation than less successful athletes. The results of Chantal et al. (1996) are similar to those of Fortier et al. (1995) regarding cognitive evaluation theory (Deci & Ryan, 1985). Both studies suggest female athletes tend to be more intrinsically motivated.

Also in Ryan ‘s (1980) investigation of intrinsic motivation among male and female athletes, he discovered the females showed more intrinsic motivation than the male athletes. The females were involved in one of seven sports (basketball, field hockey, swimming, tennis, track, volleyball, and cross-country). The female athletes conveyed a feeling of competence and worth for their respective sport. The results of this study are in alignment with previous research (Fortier et al., 1995; Chantal et al., 1996; Ryan 1980). Female athletes display higher levels of IM than male athletes.

Hypothesis Four

It was hypothesized that scholarship males would display the highest level of extrinsic motivation. This hypothesis was not supported by the results. There were no significant differences between scholarship (male and female) athletes and non-scholarship (male and female) athletes when comparing extrinsic motivation. Although the hypothesis was not supported, the results indicated that non-scholarship females reported the highest level of IM: to accomplish. Non-scholarship males also reported

higher levels of IM: to accomplish than scholarship females. Previous research has found varying results (Ryan, 1980; Fortier, 1995; Wagner, 1989).

Ryan (1980) revealed that football players (males), who received monetary rewards as incentives for sport performance, displayed less intrinsic motivation than football players not on scholarship. The football players perceived their scholarships as controlling, which undermined intrinsic motivation. This is consistent with this study's hypothesis, however these findings are not reflective in the current study's results. Ryan (1980) also revealed that wrestlers (males) on scholarship reported higher intrinsic motivation than the non-scholarship wrestlers. The wrestlers on scholarship perceived their scholarships as conveying a sense of competence, thus enhancing intrinsic motivation. These finding do not support the results of this study. Contrary to the males, the females on scholarship showed more intrinsic motivation than females not on scholarship, which is also not consistent with the results of this study. Non-scholarship females exhibited the highest level of IM: to accomplish in the current study.

Fortier et al. (1995) administered the SMS (Pelletier et al., 1995) to male and female athletes. Fortier et al. (1995) found that female athletes exhibited more IM: to accomplish and expressed more identified regulation than male athletes, while displaying less external regulation and less amotivation. These findings partly support the results; non-scholarship females displayed the highest level of IM: to accomplish. Also, Wagner et al. (1989) revealed a significant relationship between being on scholarship and perception of participation in sport as work. Wagner et al. (1989) concluded that scholarship athletes perceived participation in their sport as being primarily work. Furthermore, the scholarship male athletes displayed significantly lower scores on the

intrinsic motivation factor compared to the non-scholarship (male and female) athletes. Wagner et al. (1989)'s findings are consistent with this study's hypothesis, however this study was not able to identify significant differences between scholarship and non-scholarship male and female athletes and extrinsic motivation. Although the hypothesis was not supported several studies (Ryan, 1980; Fortier, 1995) supports the findings of non-scholarship females displaying highest level of intrinsic motivation.

Hypothesis Five

It was hypothesized that amotivation would be the lowest level of motivation among all the athletes. The results supported this hypothesis. Non-scholarship athletes (both male and female) and scholarship female athletes reported significantly low levels of amotivation. The results also indicated that scholarship males displayed the highest level of amotivation. In previous studies (Fortier et al., 1995; Chantal et al., 1996; Prong et al., 1992) there have been varying results of amotivation levels among athletes.

Fortier et al. (1995) examined sport motivation in competitive and recreational athletes. The participants studied by Fortier et al. (1995) were 399 French-Canadian athletes attending two junior colleges who participated in badminton, basketball, volleyball, and soccer. The participants consisted of 223 males and 176 females who completed the SMS (Pelletier et al., 1995). The scale was given to the competitive athletes before regular scheduled practice and before free gym time to the recreational athletes. It was revealed that competitive athletes exhibited less IM-to accomplish than recreational athletes, while demonstrating more identified regulation and more amotivation. In competitive sports, a great emphasis is place on winning. The pressure of winning possibly diminished the sense of self-determination within competitive athletes

and therefore produced a feeling of amotivation. Both male and female competitive athletes displayed more amotivation (Fortier et al., 1995). These findings partly support the results of this study.

The results of Chantal et al. (1996) are similar to those of Fortier et al. (1995) regarding amotivation levels among athletes. Chantal et al. (1996) analyzed sport motivation in relation to elite performance. Chantal et al. (1996) discovered male athletes exhibited higher levels of amotivation than their female counterparts. Also Prong et al. (1992) examined the practice of giving financial rewards for fitness testing performance and the effects of these awards on intrinsic motivation. The participants were 64 males from a southwestern university. Prong et al. (1992) administered a modified version of the IMI by Whitehead and Corbin (1991). Prong et al. (1992) indicated that the practices of offering rewards did not enhance intrinsic motivation associated with fitness activity. The participants were neither intrinsically motivated nor extrinsically motivated. Previous research (Fortier et al., 1995; Chantal et al., 1996; Prong et al., 1992) suggests that amotivation levels vary among athletes, however males tend to display higher levels than females.

Findings

These results suggest that scholarship status and gender effects motivation in collegiate track and field athletes. These results are consistent with previous studies (Medic et al., 2007; Pelletier et al., 1995; Ryan, 1977), which suggest that motivational differences were dependent on athletic scholarship status, with athletes on scholarship showing lower levels of IM.

The results from this study were similar to Deci et al. (1999), which proposed that only verbal praise enhanced IM and that different reward characteristics significantly undermined IM (i.e. when a reward was tangible). Although verbal praise was not investigated in the present study, both studies did find that scholarship athletes reported lower levels of IM than non-scholarship athletes. Previous research of Medic et al. (2007) also indicated that scholarship males report higher level of external motivation and internal pressures. Furthermore, motivational difference was dependent on athlete scholarship status and gender only for non-self determined types of motivation.

Prior research has also suggested that more self-determined motives are positively associated with various cognitive, affective, and behavioral outcomes in sport settings (Ryan & Deci, 2000). The three forms of IM (IM to know, IM to accomplish, & IM to experience stimulation) identified by Vallerand and Rousseau (2001), reflect the most self-determined form of behavioral regulation. IM to accomplish was the only significant level of IM when comparing both scholarship status and gender in this study. IM to accomplish refers to the pleasure and satisfaction one feels while striving to accomplish particular tasks or goals. IM to know regulates engagement in activity for the pleasure one receives from learning. IM to experience stimulation occurs when one engages in a behavior because of the pleasurable sensations this act confers. The effect of rewards on IM has generated substantial interest form both motivational researchers and sport psychologist. Early research findings in laboratory settings suggested that rewards negatively affect free-choice behavior, resulting in decreased IM (Medic et al., 2007). The results from this study are consistent with previous research; non-scholarship athletes reported higher levels of IM (Henry, 1981; Wagner et al., 1989; Ryan, 1980).

The results of this study provide additional support for the connection between scholarship status and gender as well as motivation. This connection has relevance for both coaches and sport psychologists. Since IM: to accomplish was significantly high in non-scholarship athletes (both male and female) than EM in this study, coaches and sport psychologists should incorporate activities that stimulate intrinsic motivation when working with athletes. Since scholarship athletes had lower levels of IM than non-scholarship athletes, it is safe to assume non-scholarship athletes are more intrinsically motivated. The quality of motivation (the athletes' sustained and positive engagement in the sport) plays an important role in the performance of an athlete. If an athlete is intrinsically motivated to participate in the sport for the inherent pleasure of doing the activity, coaches and sport psychologists may want to focus on increasing scholarship athletes' intrinsic motivation levels, which may help to improve performance. Previous research has indicated that being intrinsically motivated helps to improve performance, as well as the competence to meet the demands of the task at hand because they believe they have some control or autonomy (Medic et al., 2007).

Furthermore, the results indicated significant differences in amotivation among the athletes. Amotivation is the most non self-determined aspect of the continuum. Deci and Ryan (1985) have stated that, according to cognitive evaluation theory, when environments allow neither self-determined nor competence for a given behavior, people will become amotivated with respect to that behavior. The results from this study provide additional support for the connection of scholarship status and gender and amotivation.

In previous studies (Fortier et al., 1995; Chantal et al., 1996; Prong et al., 1992) amotivation level was usually the lowest among athletes, which is consistent with the

results of this study. Amotivation has been linked to the concept of learned helplessness (Abramson, et al., 1978). Athletes perceived the outcomes of their actions as caused by forces out of their control. The coach's influence plays an important role in the level of amotivation among athletes. Amotivation typically occurs when athletes continuously receive negative feedback about their performance and when they repeatedly fail or when they believe that outcomes are non-contingently delivered. Based on the results of this study scholarship male athletes may be receiving negative feedback from their coaches, which is why they display the highest level of amotivation. Also Medic et al. (2007) discovered that collegiate scholarship athletes were more motivated by extrinsic factors and experienced more guilt and pressure with regard to their performance. These factors may also help explain why scholarship males exhibited the highest level of amotivation.

Limitations

Although the results of this study have continued to add to the literature, certain limitations should be noted. One limitation to the study was the type of measure used, the SMS, which is a questionnaire. Questionnaires rely on self-report of participants and the truthfulness of their responses and therefore have the potential to be inaccurate. Also, the contextual variability was influenced. The time of the season the questionnaire was taken was towards the end of the season. Athletes may have been less motivated since the season was coming to an end. The questionnaire was completed either before or after practice and this may have impacted the results of the study. Another limitation may be related to the types of scholarships provided to athletes. Some athletes were receiving only partial scholarships, while others were receiving full scholarship, therefore possibly affecting the results. Additionally, this study only examined one sport (track and field).

As a result, the findings from this study are limited to the sport of track and field collegiate athletes.

Future Research

Moreover, future research should utilize a more diverse group of athletes including males and female athletes from various collegiate division levels and a wider range of sports should be represented. Additionally, a longitudinal approach could be implemented to examine the accuracy of motivation projection such that motivation level can be measured and compared over time. This approach could also identify whether scholarship athletes are initially more extrinsically motivated and remain so throughout their athletic careers. Also, future research should examine different coaching styles and behaviors. Coaching style and behaviors have been shown to influence the motivational context in which athletes' development takes place. Coaches have a large impact on whether the sport experience of an athlete will be positive or negative. Furthermore, motivational tactics coaches could use with their teams should be examined. These tactics would assist in understanding ways to increase motivation among athletes.

This study did not find any significant results connecting the events the athletes participate in and motivational level. Future studies could further examine the variable of "events" as it may have an influence on an athlete's motivation. If an athlete only participates in relay events they may be more intrinsically motivated than athletes who participate solely in individual events. Relay athletes have the pressure and support of teammates, which may influence their motivational climate. Another variable that may influence an athlete's motivation is their performance. Chantal et al. (1996) found that in comparison with less successful athletes, the best performing athletes displayed higher

levels of non self-determined types of motivation. Chantal et al. (1996) discovered title and medal holders seemed more inclined to report external rewards as their primary source of motivation than less successful athletes. Thus, future research should examine athlete's performance along with their motivation level and scholarship status.

Lastly, another variable that should be examined in future research with regards to motivational levels among athletes is positive feedback. Rutherford et al. (1992) discovered that performance information given to people with little to no sport experience immediately after the task performance increases the perceived competence and intrinsic motivation. This information can be helpful in many sport domains. For example, giving positive feedback to beginning athletes will increase intrinsic motivation and increase opportunities for adherence to athletic programs.

Conclusions

In conclusion, non-scholarship athletes reported significant higher levels of intrinsic motivation than extrinsic motivation. Scholarship athletes displayed significantly higher levels of extrinsic motivation. Amotivation was the lowest type of motivation reported by the participants. The results indicated male athletes displayed the highest level of EM among the group of athletes and female athletes reported the highest level of IM. There were significant differences in IM: to accomplish between scholarship (male and female) athletes and non-scholarship (male and female) athletes. Non-scholarship athletes also reported higher levels of IM: to accomplish than scholarship athletes. There were also significant differences in amotivation between the groups of athletes. Scholarship males reported the highest level of amotivation, while non-scholarship athletes and scholarship females displayed similar levels.

The results of this study provide additional support for the connection between scholarship status and gender as well as motivation. These findings have relevance for coaches and researchers. One practical implication from these findings is coaches may want to focus on increasing scholarship athlete's and male athlete's intrinsic motivation, which may be beneficial to their performance. Both scholarship and male athletes displayed the highest levels of extrinsic motivation. Previous research has indicated that being intrinsically motivated helps to improve performance, as well as the competence to meet the demands of the task at hand because they believe they have some control or autonomy (Medic et al., 2007). Another implication may be for coach to create a practice environment that fosters intrinsic motivation when working with female and non-scholarship athletes (positive feedback). These athletes displayed the highest level of intrinsic motivation. These levels of intrinsic motivation should be maintained throughout the entire season. In addition this study suggests that Deci and Ryan's (2002) self-determination theory is a useful framework for understanding the influence of performance-contingent rewards (scholarship) on sport motivation.

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Table 1

Participants' demographic information

Variable	N
Age	
18-19	43
20-21	52
22-23	67
Gender	
Male	78
Female	84
Scholarship Status	
Yes	74
No	88
Classification	
Freshman	31
Sophomore	15
Junior	20
Senior	96

Table 2

Cronbach Alphas for Subscales of Sport Motivation Scale (SMS)

Subscale	Cronbach Alpha
Intrinsic Motivation: to know	.701
Intrinsic Motivation: to accomplish	.941
Intrinsic Motivation: to experience stimulation	.877
Extrinsic Motivation: identify	.897
Extrinsic Motivation: introjected	.980
Extrinsic Motivation: external regulation	.900
Amotivation	.721

Table 3

Follow up ANOVA's for Gender Comparing the Seven Subscales of the Sport Motivation Scale (SMS)

		Male		Female	
Gender Effect	F	Mean	SD	Mean	SD
Subscales					
Intrinsic Motivation: to know	22.511**	3.50	.689	3.93	.587
Intrinsic Motivation: to accomplish	5.738*	3.94	1.08	4.29	1.17
Intrinsic Motivation: to experience stimulation	32.811**	3.87	.939	4.5	.892
Extrinsic Motivation: identify	10.736**	4.46	.802	4.13	.903
Extrinsic Motivation: external regulation	11.095**	5.28	3.41	3.94	.912
Extrinsic Motivation: introjected	26.567**	4.22	.939	3.65	.982
Amotivation	8.817**	1.18	.275	1.07	.177

* denotes significance level at $p < .05$
** denotes significance level at $p < .01$

Table 4

Follow up ANOVA's for Scholarship Status Comparing the Seven Subscales of the Sport Motivation Scale (SMS)

Status Effect	F	Scholarship Mean	SD	Non-scholarship Mean	SD
Subscales					
Intrinsic Motivation: to know	47.513**	3.39	.611	4.01	.587
Intrinsic Motivation: to accomplish	234.66**	3.17	.587	4.92	.845
Intrinsic Motivation: experience stimulation	168.98**	3.47	.612	4.80	.764
Extrinsic Motivation: identify	283.06**	5.04	.523	3.66	.542
Extrinsic Motivation: external regulation	7.66**	5.19	.666	4.08	3.31
Extrinsic Motivation: introjected	215.29**	4.72	.741	3.25	.618
Amotivation	6.50*	1.08	.185	1.16	.265

* denotes significance level at $p < .05$
** denotes significance level at $p < .01$

Figure 1. Scholarship Status by Gender Interaction Effect for Intrinsic Motivation (to accomplish subscale)

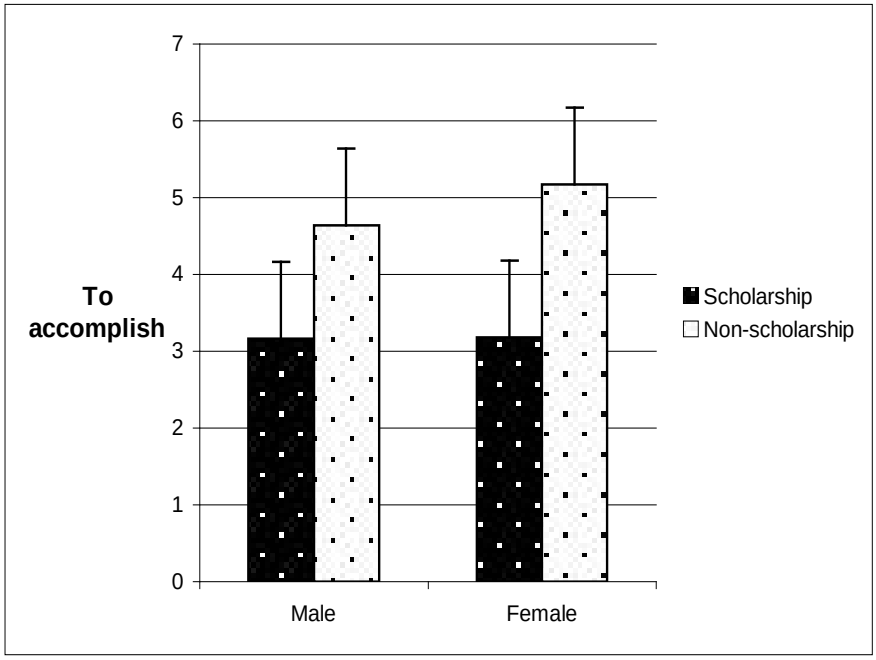
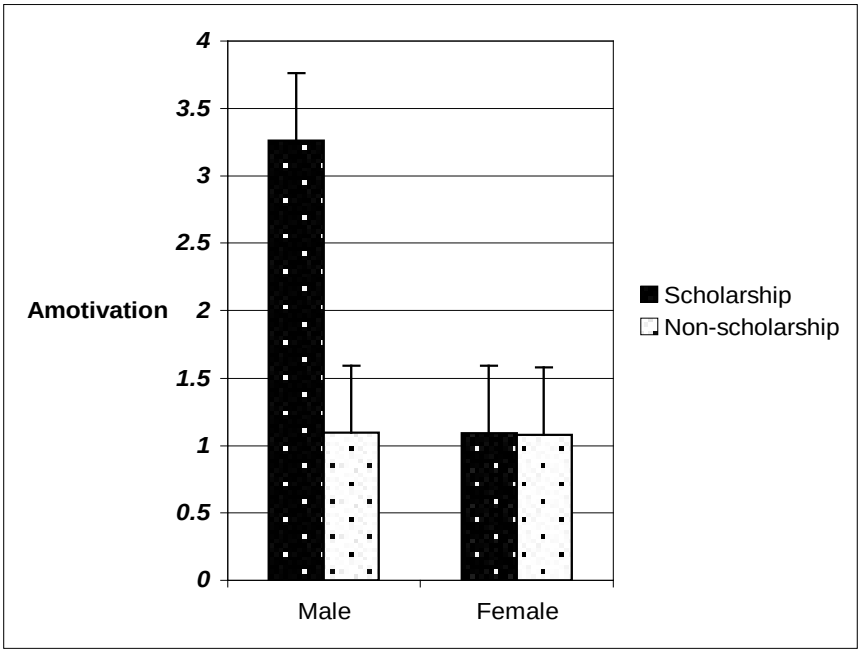


Figure 2. Scholarship Status by Gender Interaction Effect for Amotivation



APPENDIX A

Running Head: DIFFERENCES IN MOTIVATION

Differences in Motivation: Scholarship and Non-scholarship Collegiate Track and Field Athletes

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Abstract

The aim of the current study was to examine the differences in motivation (IM, EM, and amotivation) among scholarship and non-scholarship collegiate male and female track and field athletes. Participants consisted of one hundred sixty two collegiate track and field athletes from Division I track and field teams in the Colonial Athletic Association and the Mid-Eastern Athletic Conference. The participants consisted of scholarship males (n = 37), non-scholarship males (n = 41), scholarship females (n = 37), and non-scholarship females (n= 47). It was hypothesized that athletes on athletic scholarships will have lower levels of intrinsic motivation and therefore have higher levels of extrinsic motivation. The Sport Motivation Scale (SMS; Pelletier, Fortier, Vallerand, Tusson, Briere & Blais, 1995) was used to assess participant's motivation. A 2x2 MANOVA was used to assess the difference between scholarship and non-scholarship athletes. The results of the present study indicated there are significant differences in motivation (intrinsic, extrinsic, and amotivation) between scholarship and non-scholarship male and female athletes. Scholarship athletes had higher levels of EM, while non-scholarship athletes had higher levels of IM. Female athletes displayed higher levels of IM, while male athletes reported higher EM. The results further indicated that non-scholarship females had the highest level of IM: to accomplish and scholarship males had the highest level of amotivation.

Differences in Motivation: Scholarship and Non-scholarship Collegiate Track and Field Athletes

Motivational constructs play an important role in the sport domain. Motivation has been defined in a variety of ways, but most typically refers to an internal state or condition that activates, energizes and provides direction for behaviors (Bandura, 1986; Frederick & Ryan, l995). Motivation is often viewed within the framework of the self-determination theory (SDT). This theory suggests that human behavior be examined from that of a needs perspective. Furthermore, it also purports that individuals possess certain innate psychological needs, including autonomy, competence and relatedness (Ryan & Deci, 2000). Participation in sports comprises an arena of activities in which many people, both young and old, participate for the simple enjoyment of the physical activity. Simply put, the activity itself is intrinsically motivating.

Hundreds of articles have been published examining the relationship between intrinsic and extrinsic motivation (Deci, Ryan, & Koestner, 1999; Ryan & Deci, 2000; Vallerand & Rousseau, 2001; Henry, 1981). Researchers have identified intrinsic and extrinsic motivation as key components when investigating sports. Motivation may be further broken down into intrinsic motivation (IM), extrinsic motivation (EM) and amotivation. IM refers to “doing an activity for its inherent satisfactions and pleasures rather than for some separable consequences” (Ryan & Deci, 2000). While, EM refers to behaviors that are performed not for their own sake, but to achieve some separate goal (Ryan & Deci, 2000). Lastly, amotivation refers to the absence of IM or EM (Ryan & Deci, 2000).

Motivational processes are best described using a continuum of internalizations ranging from volitional to highly controlling forms of regulation, according to the self-

determination theory (Ryan & Deci, 2000). At one end of the continuum self-determined intrinsic motives underline behavior while on the other side non-self-determined regulations in the form of EM control behavior. Furthermore, four sources of EM have been identified in the sport motivation literature including: external regulation, introjected regulation, identified regulation, and integrated regulation (Vallerand & Rousseau, 2001). When external regulation is present, an individual engages in an activity for external rewards or constraints, such as social recognition and criticism from the social world (Tsorbatzoudis, Alexandris, Zahariadis, & Grouios, 2006). Introjected regulation refers to behaviors that are initiated and coordinated by internally controlling imperatives such as guilt and or anxiety (Blais, Sabourin, Boucher, & Vallerand, 1990). Lastly identified regulation suggests the individual judges the behavior as highly valued and therefore performs it out of choice even if it is not pleasurable (Tsorbatzoudis et al., 2006).

On the other hand, according to Vallerand and Rousseau (2001), three forms of IM have been identified including: IM to know which regulates activity for pleasure one receives from learning, exploring or trying to understand new concepts; IM to accomplish which refers to the pleasure and satisfaction one feels while striving to accomplish particular tasks or goals; and IM to experience stimulation which occurs when one engages in a behavior because of the pleasurable sensations this acts confers. According Tsorbatzoudis et al., (2006), this type of motivation might be particularly applicable to those who engage in outdoor and extreme sports.

Researchers have utilized the Sport Motivation Scale (SMS; Pelletier et al., 1995), which was adapted from the original version written in French (Briere, Vallerand, Blais,

& Pelletier, 1995). The scale consists of seven subscales to measure intrinsic motivation, extrinsic motivation, and amotivation. The SMS (Pelletier et al., 1995) was developed to test the cognitive evaluation theory (Deci & Ryan, 1985). Since the development of the SMS a vast majority of existing research measured athlete's motivation level through the use of this questionnaire (Tsorbatzoudis, et al., 2006).

Fortier, Vallerand, Briere, and Provencher (1995) assessed motivational levels and self-determination of recreational and competitive athletes who participated in basketball, badminton, volleyball, and soccer. Fortier et al. (1995) administered the SMS (Pelletier et al., 1995) to male and female athletes. They found that competitive athletes exhibited less intrinsic motivation than recreational athletes. Competitive athletes also demonstrated more extrinsic motivation as well as higher levels of amotivation. Female athletes exhibited more intrinsic motivation as well as more extrinsic motivation than male athletes. Males displayed more amotivation than female athletes.

In an effort to draw conclusions on the effects of extrinsic rewards on intrinsic motivation, Deci, Ryan, and Koestner (1999) conducted a meta-analysis of 128 studies and concluded that reward effects tended to have a substantially negative effect on intrinsic motivation. Even when tangible rewards are offered as indicators of good performance, they typically decrease intrinsic motivation for interesting activities. The evidence shows clearly when strategies focus primarily on the use of extrinsic rewards, there is a risk of lowering intrinsic motivation because it tends to undermine personal responsibility and impede self-regulation.

Another study, investigated the motivational levels of non-scholarship student athletes using a motivation questionnaire distributed to men and women basketball

players (Henry, 1981). The questionnaire was constructed to measure internal and external factors of motivation. Henry (1981) concluded that internal motivation was higher than external motivation for both male and female athletes. Therefore, both male and female non-scholarship athletes reported intrinsic factors as their primary source of motivation.

In other research, results of two studies by Ryan (1977, 1980) suggested that intrinsic motivation may be negatively influenced by athletic scholarships. Ryan (1977) indicated that male football players not on scholarship exhibited higher levels of intrinsic motivation. Ryan (1977) also found that female athletes on scholarship displayed higher levels of intrinsic motivation for their sport. In both studies, those athletes on scholarship showed a lower level of intrinsic motivation when compared to those non-scholarship athletes. Similarly Medic, Mack, Wilson and Starkes (2007) found confirming results in their study comparing collegiate athletes in Canadian universities with Division I collegiate athletes in the United States. The U.S. collegiate scholarship athletes were more motivated by extrinsic factors and experienced more guilt and pressure with regard to their performance.

However, in the replication of the Ryan study, Amorose and Horn (2000) found very different results. In this study, scholarship athletes reported higher levels of intrinsic motivation while the non-scholarship athletes in their study reported lower levels of intrinsic motivation. Amorose and Horn (2000) concluded that these athletes did not perceive the scholarship as having control over their behavior, but instead saw it as an indication of their skills. In addition, those athletes with higher levels of intrinsic motivation had coaches whose leadership styles tended to be more instructional and

democratic rather than punitive and autocratic, thus suggesting that coaching style might also impact the intrinsic motivation of athletes.

Research has found conflicting evidence when examining the motivation of scholarship and non-scholarship athletes. One of the major limitations in previous studies lies in the fact that only intrinsic motivation was investigated (Vallerand & Rousseau, 2001). Also Ryan (1977, 1980) only tested athletes from one institution, therefore the results are not conclusive. Based on previous research, non-scholarship athletes would be predicted to exhibit higher levels of intrinsic motivation, while scholarship athletes would exhibit higher levels of extrinsic motivation and amotivation (Ryan, 1977, 1980). Male athletes would also display higher levels of amotivation.

There are few studies in the motivational literature that have focused on direct comparisons of scholarship and non-scholarship athletes. Furthermore, even less literature exist using track and field athletes as participants. While Medic, Mack, Wilson and Starkes (2007) made direct comparisons between scholarship and non-scholarship athletes, track and field athletes were not included in their pool of participants. Also, this study compared Canada student athletes to United States athletes, which may have influenced the results. Also, research on motivation can promote a better understanding of individual's decision regarding their sport behavior. According to Vallerand (2001) the consequences of motivation can be categorized into three types: cognitive, affective, and behavioral. Thus practitioners in the field will gain insight on these outcomes. The study of motivation from an internal and external perspective will help researchers and sport participants understand the "why" of sport behavior (Tsorbatzoudis et al. 2006).

Motivation toward sport participation is the drive that attracts and keeps people bonded to a sport. Due to the progression of sports, much of the previous research findings may no longer be applicable to current student athletes. More research on the motivation of scholarship and non-scholarship athletes is necessary due to the conflicting research findings (Ryan, 1977; Amorose & Horn, 2000). The aim of this study was to examine the differences in motivation (intrinsic, extrinsic, and amotivation) between scholarship and non-scholarship collegiate track and field athletes, thus expanding on the work of Amorose and Horn (2000). Who speculated that scholarship athletes exhibited higher levels of intrinsic motivation, while non-scholarship athletes displayed lower levels of intrinsic motivation. Furthermore, some studies have suggested that scholarship athletes may exhibit higher levels of extrinsic motivation than non-scholarship athletes (Ryan, 1977 & Medic et al., 2007). Therefore, a study examining motivational levels in scholarship and non-scholarship athletes is necessary. Track and field athletes will provide a large diverse group of athletes, which will increase the applicability of the results. Also there are few studies that examined track and field athletes while comparing motivational constructs. This study will add to any existing literature examining track and field athletes. It was hypothesized the scholarship athletes would have higher levels of extrinsic motivation, while non-scholarship athletes would have higher levels of intrinsic motivation. It is further hypothesized that female athletes would display higher levels of intrinsic motivation than male athletes and scholarship males would have higher levels of extrinsic motivation. Lastly it was hypothesized that amotivation would be the lowest level among all the athletes.

Methods

Participants

One hundred and sixty-two participates were recruited for this study. Participants consisted of seventy-eight male and eighty-four female collegiate student athletes who participate in Division I track and field teams in the Colonial Athletic Association and the Mid-Eastern Athletic Conference. The participants consisted of scholarship males (n = 37), non-scholarship males (n = 41), scholarship females (n = 37), and non-scholarship females (n= 47). The participants included freshmen, sophomores, juniors, and seniors. The age range of the participants was typical of college athletes, 18-24 years.

Measures

Demographic and Athlete History Information

Participants provided their age, gender, academic level (freshmen, sophomore, etc.), events they participate in, and scholarship status. This information allowed the researcher to make additional comparisons of the data.

Sport Motivation Scale

The Sport Motivation Scale (SMS; Pelletier, Fortier, Vallerand, Tusson, Briere & Blais, 1995) was used to assess participant's motivation (Appendix B). The SMS contains seven subscales that measure three types of intrinsic motivation (IM - to know, IM - to accomplish things, and IM - to experience satisfaction), three types of extrinsic motivation (external, interjected, and identified regulation), and amotivation toward sport participation. Athletes responses was assessed on a 7-point Likert scale which is anchored by the following: 1 = does not correspond at all, 7 = corresponds exactly and with the middle being 4 = corresponds moderately.

Pelletier et al. (1995) provides support for the construct and discriminant validity, as well as internal consistency and temporal stability for SMS scores. The internal consistency reliability ranges from .67 to .86 (Pelletier et al., 1995). The SMS was originally constructed in French and preliminary and validation studies were conducted with approximately 600 athletes representing eight different sports (Ostrow, 2002). A mean cronbach alpha internal consistency coefficient of .82 was reported and a mean test-retest reliability coefficient of .69 was also found over a one-month interval.

Procedure

Flyers were posted in the athletic facilities on the college campuses. The flyer along with a brief description of the study was also emailed to coaches in order gain access to more participants. The flyer contained a link that allowed participants to gain access to the survey online. This link included a cover letter, the SMS, and the demographic and athlete history survey. The participants were given an introduction to the study and asked to participate. The participants were also informed that the surveys make take 20-30 minutes of their time, as indicated in the cover letter. The athletes who decided to participate in this voluntary study then completed the demographic and athlete history survey and the SMS. Lastly the participants were thanked for their participation. The survey and SMS was made available to student athletes for 4 weeks.

Design Analysis

The dependent variables for this study were intrinsic motivation, extrinsic motivation, and amotivation. The independent variable included scholarship status (scholarship or non-scholarship) and gender. The data was collected and entered into Statistical Package for Social Sciences (SPSS) and analyzed. Descriptive statistics were

calculated and comparisons between the variables were made. Data was also screened for out of range responses. A 2x2 MANOVA was used to compare the mean score from scholarship and non-scholarship male and female student athletes on the seven subscales of the SMS (Pelletier et al., 1995).

Results

Preliminary Analysis

Data was screened for out of range responses, as well as any systematic patterns of missing data. Individual item distributions were checked to ensure normal distribution. Z-scores were calculated and participant one hundred was deleted as an outlier. This participant was not an active member on their team due to an injury. Descriptive statistics were calculated on variables, which matched the assumptions of multivariate tests. Participants' demographic information was also calculated (see table 1). Cronbach's alphas (correlation co-efficient) were calculated for each of the subscales and ranged from .70 to .98, demonstrating the stability of the scale. The subscale EM: introjected included questions nine, fourteen, twenty-one, and twenty-six. Question fourteen was deleted to increase the cronbach alpha level over .70. The means of each subscale of the SMS was calculated for the types of motivation for male and female scholarship and non-scholarship athletes.

Main Analyses

A 2x2 (gender and scholarship status) multivariate analysis of variance (MANOVA) was conducted to examine the differences in motivation (3 types of IM, 3 types of EM, and amotivation) between male and female scholarship and non-scholarship

athletes. The dependent variables included the six SMS subscales, while the independent variables included gender and scholarship status.

It was hypothesized that scholarship athletes would have lower levels of intrinsic motivation and therefore higher levels of extrinsic motivation. A significant main effect was found for scholarship status (Pillai's trace (7, 152) =.828, $p < .01$, $\eta_p^2 = .659$). Follow up univariate ANOVAs indicated significant scholarship status main effect in EM: identify ($F(1, 158) = 283.066$, $p = .000$), EM: introjected ($F(1, 158) = 215.291$, $p < .01$), EM: external regulation ($F(1, 158) = 7.661$, $p < .01$), and amotivation ($F(1, 158) = 6.500$, $p < .05$). Results indicated that scholarship athletes had higher levels of extrinsic motivation than intrinsic motivation. See table 2 for the follow up ANOVA's.

It was also hypothesized that non-scholarship athletes would have higher levels of intrinsic motivation and lower levels of extrinsic motivation. A significant main effect was found for scholarship status (Pillai's trace (7, 152) =.828, $p < .01$, $\eta_p^2 = .659$). Follow up univariate ANOVAs indicated significant scholarship status main effect in IM: to know ($F(1, 158) = 47.513$, $p < .01$), IM: to accomplish ($F(1, 158) = 234.661$, $p < .01$) , and IM: to experience stimulation ($F(1, 158) = 168.982$, $p < .01$) . Non-scholarship athletes displayed higher levels of intrinsic motivation. See table 2 for the follow up ANOVA's .

It was hypothesized that female athletes would have higher levels of intrinsic motivation and lower levels of extrinsic motivation. A significant main effect was found for gender (Pillai's trace (7, 152) = .367, $p < .01$, $\eta_p^2 = .567$). Follow up univariate ANOVAs indicated significant gender main effect in IM: to know ($F(1, 158) = 22.511$, $p = .000$), IM: to accomplish ($F(1, 158) = 5.738$, $p < .05$) , IM: to experience stimulation

(F(1, 158) = 32.811 , p < .01), EM: identify (F(1, 158) =10.736, p < .01), EM: introjected (F(1, 158) = 26.567, p < .01), EM: external regulation (F(1, 158) = 11.095, p < .01), and amotivation (F(1, 158) =8.817, p < .01). Female athletes reported higher levels of IM: to know (m = 3.9345, SD = .58742), IM: to accomplish (m = 4.2976, SD: 1.17612), and IM: experience stimulation (m = 4.5000, SD = .89257) than males. Male athletes displayed higher levels of extrinsic motivation and amotivation. See table 3 for the follow up ANOVA's.

It was hypothesized that scholarship males would display the highest level of extrinsic motivation among all the athletes. A significant interaction effect was found for scholarship status and gender (Pillai's trace (7, 152) = .096, p < .05, η_p^2 = .123). Follow up univariate ANOVAs indicated a significant scholarship status by gender interaction effect in IM: to accomplish (F(1, 158) = 5.181, p < .05) (see figure 1). Results indicated non-scholarship females displayed the highest level of IM: to accomplish (m =5.17, SD = .600). Non-scholarship males reported higher levels of IM: to accomplish (m = 4.64, SD = .993) than scholarship females (m = 3.18, SD = .656). See figure 1.

It was hypothesized that amotivation would be the lowest level among all the athletes. A significant interaction effect was found for scholarship status and gender (Pillai's trace (7, 152) = .096, p < .05, η_p^2 = .123). Follow up univariate ANOVAs indicated a significant scholarship status by gender interaction effect in amotivation (F(1, 158) = 4.853, p < .05) (see figure 2). Scholarship males reported the highest level of amotivation (m= 1.09, SD = .198). Overall amotivation was the lowest level among all the athletes. See figure 2.

Discussion

The purpose of this study was to examine the differences in motivation (3 types of IM, 3 types of EM, and amotivation) between scholarship and non-scholarship collegiate track and field athletes. There were five hypothesizes for this study the first being, that scholarship athletes would have lower levels of intrinsic motivation and therefore have higher levels of extrinsic motivation. The results supported this hypothesis. Scholarship athletes reported having significantly lower levels of intrinsic motivation and significantly higher levels of extrinsic motivation compared to non-scholarship athletes. Much of previous research has found confirming results (Medic et al., 2007; Wagner et al., 1989; Ryan, 1977). Medic et al. (2007) investigated collegiate scholarship and non-scholarship athletes. They compared collegiate athletes in Canadian universities with Division I collegiate athletes in the United States. They discovered that collegiate scholarship athletes were more motivated by extrinsic factors and experienced more guilt and pressure with regard to their performance.

Furthermore, Wagner et al. (1989) revealed a significant relationship between being on scholarship and perception of participation in sport as work. Wagner et al. (1989) investigated the hypothesis that scholarship athletes would be more likely to view participation in basketball as work than non-scholarship athletes. A questionnaire was developed and completed by 310 male and female scholarship and non-scholarship collegiate basketball players. The participants were requested to respond to a series of questions to assess their perceptions of their sport participation. Only nine percent of the scholarship athletes viewed participation in their sport as leisure versus twenty-four percent of the non-scholarship athletes. Wagner et al. (1989) concluded scholarship

athletes perceived participation in their sport as being primarily work and scholarship athletes displayed significantly lower scores on the intrinsic motivation factor compared to the non-scholarship athletes. These findings are consistent with this study.

Moreover, Ryan (1977) hypothesized that most football college athletes on athletic scholarship would perceive themselves performing for the grant. To test this hypothesis, Ryan (1977) administered a questionnaire designed specifically for the study. The questionnaire was designed to indirectly assess intrinsic motivation. The questionnaire was distributed to athletes at two institutions that awarded scholarships to some athletes but not others. Results indicated scholarship athletes, compared to non-scholarship athletes, found little enjoyment in daily practices and found college athletics less enjoyable than they had expected (Ryan, 1977). Ryan's (1977) findings are consistent with the results from this study; scholarship athletes display higher levels of EM than non-scholarship athletes. Previous research supports the findings of scholarship athletes display higher levels of extrinsic motivation and lower levels of intrinsic motivation (Medic et al., 2007; Wagner et al., 1989; Ryan, 1977).

The second hypothesis was that non-scholarship athletes would have higher levels of intrinsic motivation and therefore lower levels of extrinsic motivation. The results also supported this hypothesis. Non-scholarship athletes displayed significantly higher levels of intrinsic motivation and lower levels of extrinsic motivation. These findings are consistent with previous research (Henry, 1981; Wagner et al., 1989; Ryan, 1980). Henry (1981) investigated the motivational levels of non-scholarship student athletes using a motivation questionnaire, which was distributed to male and female basketball players. The questionnaire was constructed to measure the importance placed by the athletes upon

particular sources of motivation. He concluded that internal motivation was higher than external motivation for both male and female athletes. Therefore, both male and female non-scholarship athletes reported intrinsic factors as their primary source of motivation. Also, Wagner et al. (1989) concluded that non-scholarship athletes displayed high levels of intrinsic and perceived their involvement in sport as leisure. Both studies support the findings of the current study.

Furthermore, Ryan (1977) conducted the first couple of studies examining motivation levels of athletic scholarship and non-scholarship athletes. In his second study, Ryan (1980) hypothesized that male athletes on scholarship would exhibit less intrinsic motivation for their sport than males not on scholarship. Ryan also hypothesized that females on scholarship would show more intrinsic motivation for their sport than females not on scholarship. The participants in this study were 424 male and 188 female intercollegiate competitive athletes. The males in the study participated in either football or wrestling, while the females were involved in one of seven sports (basketball, field hockey, swimming, tennis, track, volleyball, and cross-country). Ryan (1980) administered a questionnaire designed specifically for the study to assess intrinsic motivation in the athletes. Ryan (1980) revealed that football players, who received monetary rewards as incentives for sport performance, displayed less intrinsic motivation than football players not on scholarship. Football players on scholarship exhibited less intrinsic motivation than the wrestlers on scholarship. The football players perceived their scholarships as controlling, which undermined intrinsic motivation. Previous research (Henry, 1981; Wagner et al., 1989; Ryan, 1980) has found a confirming result; that is

non-scholarship athletes display higher levels of IM than scholarship athletes, which further supports the results from this study.

It was also hypothesized that female athletes would have higher levels of intrinsic motivation than male athletes. This hypothesis was also supported in the results. Female athletes reported higher levels intrinsic motivation and lower levels of extrinsic and amotivation than male athletes. These results are consistent with previous research (Fortier et al., 1995; Chantal et al., 1996; Ryan, 1980). Fortier et al. (1995) assessed motivational levels and self-determination of recreational and competitive athletes who participated in basketball, badminton, volleyball, and soccer. Fortier et al. (1995) administered the SMS (Pelletier et al., 1995) to male and female athletes. They found female athletes exhibited more intrinsic motivation as well as more extrinsic motivation than male athletes. The results from this study partly support Fortier et al. (1995) findings. Female athletes did not display higher levels of extrinsic motivation than male athletes in this current study.

Moreover, Chantal et al. (1996) analyzed sport motivation in relation to elite performance. It was expected that the best performing athletes would display lower levels of intrinsic motivation and higher levels of non-self determined extrinsic motivation and amotivation than the less successful athletes. The participants in the study were 35 female and 63 male Bulgarian national elite athletes from various sport teams. Each athlete completed the Bulgarian version of the SMS (Pelletier et al., 1995).

Chantal et al. (1996) found that in comparison with less successful athletes, the best performing athletes displayed higher levels of non self-determined types of motivation. Chantal et al. (1996) discovered female athletes exhibited higher levels of

intrinsic motivation than their male counterparts. Title and medal holders seemed more inclined to report external rewards as their primary source of motivation than less successful athletes. The results of Chantal et al. (1996) are similar to those of Fortier et al. (1995) regarding cognitive evaluation theory (Deci & Ryan, 1985). Both studies suggest female athletes tend to be more intrinsically motivated.

Also in Ryan ‘s (1980) investigation of intrinsic motivation among male and female athletes, he discovered the females showed more intrinsic motivation than the male athletes. The females were involved in one of seven sports (basketball, field hockey, swimming, tennis, track, volleyball, and cross-country). The female athletes conveyed a feeling of competence and worth for their respective sport. The results of this study are in alignment with previous research (Fortier et al., 1995; Chantal et al., 1996; Ryan 1980). Female athletes display higher levels of IM than male athletes.

The fourth hypothesis was that scholarship males would display the highest level of extrinsic motivation. This hypothesis was not supported by the results. There were no significant differences between scholarship (male and female) athletes and non-scholarship (male and female) athletes when comparing extrinsic motivation. Although the hypothesis was not supported, the results indicated that non-scholarship females reported the highest level of IM: to accomplish. Non-scholarship males also reported higher levels of IM: to accomplish than scholarship females. Previous research has found varying results (Ryan, 1980; Fortier, 1995; Wagner, 1989).

Ryan (1980) revealed that football players (males), who received monetary rewards as incentives for sport performance, displayed less intrinsic motivation than football players not on scholarship. The football players perceived their scholarships as

controlling, which undermined intrinsic motivation. This is consistent with this study's hypothesis, however these findings are not reflective in the current study's results. Ryan (1980) also revealed that wrestlers (males) on scholarship reported higher intrinsic motivation than the non-scholarship wrestlers. The wrestlers on scholarship perceived their scholarships as conveying a sense of competence, thus enhancing intrinsic motivation. These finding do not support the results of this study. Contrary to the males, the females on scholarship showed more intrinsic motivation than females not on scholarship, which is also not consistent with the results of this study. Non-scholarship females exhibited the highest level of IM: to accomplish in the current study.

Fortier et al. (1995) administered the SMS (Pelletier et al., 1995) to male and female athletes. Fortier et al. (1995) found that female athletes exhibited more IM: to accomplish and expressed more identified regulation than male athletes, while displaying less external regulation and less amotivation. These findings partly support the results; non-scholarship females displayed the highest level of IM: to accomplish. Also, Wagner et al. (1989) revealed a significant relationship between being on scholarship and perception of participation in sport as work. Wagner et al. (1989) concluded that scholarship athletes perceived participation in their sport as being primarily work. Furthermore, the scholarship male athletes displayed significantly lower scores on the intrinsic motivation factor compared to the non-scholarship (male and female) athletes. Wagner et al. (1989)'s findings are consistent with this study's hypothesis, however this study was not able to identify significant differences between scholarship and non-scholarship male and female athletes and extrinsic motivation. Although the hypothesis

was not supported several studies (Ryan, 1980; Fortier, 1995) supports the findings of non-scholarship females displaying highest level of intrinsic motivation.

Lastly, it was hypothesized that amotivation would be the lowest level of motivation among all the athletes. The results supported this hypothesis. Non-scholarship athletes (both male and female) and scholarship female athletes reported significantly low levels of amotivation. The results also indicated that scholarship males displayed the highest level of amotivation. In previous studies (Fortier et al., 1995; Chantal et al., 1996; Prong et al., 1992) there have been varying results of amotivation levels among athletes.

Fortier et al. (1995) examined sport motivation in competitive and recreational athletes. The participants studied by Fortier et al. (1995) were 399 French-Canadian athletes attending two junior colleges who participated in badminton, basketball, volleyball, and soccer. The participants consisted of 223 males and 176 females who completed the SMS (Pelletier et al., 1995). The scale was given to the competitive athletes before regular scheduled practice and before free gym time to the recreational athletes. It was revealed that competitive athletes exhibited less IM-to accomplish than recreational athletes, while demonstrating more identified regulation and more amotivation. In competitive sports, a great emphasis is place on winning. The pressure of winning possibly diminished the sense of self-determination within competitive athletes and therefore produced a feeling of amotivation. Both male and female competitive athletes displayed more amotivation (Fortier et al., 1995). These findings partly support the results of this study.

The results of Chantal et al. (1996) are similar to those of Fortier et al. (1995) regarding amotivation levels among athletes. Chantal et al. (1996) analyzed sport

motivation in relation to elite performance. Chantal et al. (1996) discovered male athletes exhibited higher levels of amotivation than their female counterparts. Also Prong et al. (1992) examined the practice of giving financial rewards for fitness testing performance and the effects of these awards on intrinsic motivation. The participants were 64 males from a southwestern university. Prong et al. (1992) administered a modified version of the IMI by Whitehead and Corbin (1991). Prong et al. (1992) indicated that the practices of offering rewards did not enhance intrinsic motivation associated with fitness activity. The participants were neither intrinsically motivated nor extrinsically motivated. Previous research (Fortier et al., 1995; Chantal et al., 1996; Prong et al., 1992) suggests that amotivation levels vary among athletes, however males tend to display higher levels than females.

These results suggest that scholarship status and gender effects motivation in collegiate track and field athletes. These results are consistent with previous studies (Medic et al., 2007; Pelletier et al., 1995; Ryan, 1977), which suggest that motivational differences were dependent on athletic scholarship status, with athletes on scholarship showing lower levels of IM.

The results from this study were similar to Deci et al. (1999), which proposed that only verbal praise enhanced IM and that different reward characteristics significantly undermined IM (i.e. when a reward was tangible). Although verbal praise was not investigated in the present study, both studies did find that scholarship athletes reported lower levels of IM than non-scholarship athletes. Previous research of Medic et al. (2007) also indicated that scholarship males report higher level of external motivation and

internal pressures. Furthermore, motivational difference was dependent on athlete scholarship status and gender only for non-self determined types of motivation.

Prior research has also suggested that more self-determined motives are positively associated with various cognitive, affective, and behavioral outcomes in sport settings (Ryan & Deci, 2000). The three forms of IM (IM to know, IM to accomplish, & IM to experience stimulation) identified by Vallerand and Rousseau (2001), reflect the most self-determined form of behavioral regulation. IM to accomplish was the only significant level of IM when comparing both scholarship status and gender in this study. IM to accomplish refers to the pleasure and satisfaction one feels while striving to accomplish particular tasks or goals. IM to know regulates engagement in activity for the pleasure one receives from learning. IM to experience stimulation occurs when one engages in a behavior because of the pleasurable sensations this act confers. The effect of rewards on IM has generated substantial interest form both motivational researchers and sport psychologist. Early research findings in laboratory settings suggested that rewards negatively affect free-choice behavior, resulting in decreased IM (Medic et al., 2007). The results from this study are consistent with previous research; non-scholarship athletes reported higher levels of IM (Henry, 1981; Wagner et al., 1989; Ryan, 1980).

The results of this study provide additional support for the connection between scholarship status and gender as well as motivation. This connection has relevance for both coaches and sport psychologists. Since IM: to accomplish was significantly high in non-scholarship athletes (both male and female) than EM in this study, coaches and sport psychologists should incorporate activities that stimulate intrinsic motivation when working with athletes. Since scholarship athletes had lower levels of IM than non-

scholarship athletes, it is safe to assume non-scholarship athletes are more intrinsically motivated. The quality of motivation (the athletes' sustained and positive engagement in the sport) plays an important role in the performance of an athlete. If an athlete is intrinsically motivated to participate in the sport for the inherent pleasure of doing the activity, coaches and sport psychologists may want to focus on increasing scholarship athletes' intrinsic motivation levels, which may help to improve performance. Previous research has indicated that being intrinsically motivated helps to improve performance, as well as the competence to meet the demands of the task at hand because they believe they have some control or autonomy (Medic et al., 2007).

Furthermore, the results indicated significant differences in amotivation among the athletes. Amotivation is the most non self-determined aspect of the continuum. Deci and Ryan (1985) have stated that, according to cognitive evaluation theory, when environments allow neither self-determined nor competence for a given behavior, people will become amotivated with respect to that behavior. The results from this study provide additional support for the connection of scholarship status and gender and amotivation.

In previous studies (Fortier et al., 1995; Chantal et al., 1996; Prong et al., 1992) amotivation level was usually the lowest among athletes, which is consistent with the results of this study. Amotivation has been linked to the concept of learned helplessness (Abramson, et al., 1978). Athletes perceived the outcomes of their actions as caused by forces out of their control. The coach's influence plays an important role in the level of amotivation among athletes. Amotivation typically occurs when athletes continuously receive negative feedback about their performance and when they repeatedly fail or when they believe that outcomes are non-contingently delivered. Based on the results of this

study, scholarship male athletes may be receiving negative feedback from their coaches, which is why they display the highest level of amotivation. Also Medic et al. (2007) discovered that collegiate scholarship athletes were more motivated by extrinsic factors and experienced more guilt and pressure with regard to their performance. These factors may also help explain why scholarship males exhibited the highest level of amotivation.

Although the results of this study have continued to add to the literature, certain limitations should be noted. One limitation to the study was the type of measure used, the SMS, which is a questionnaire. Questionnaires rely on self-report of participants and the truthfulness of their responses and therefore have the potential to be inaccurate. Also, the contextual variability was influenced. The time of the season the questionnaire was taken was towards the end of the season. Athletes may have been less motivated since the season was coming to an end. The questionnaire was completed either before or after practice and this may have impacted the results of the study. Another limitation may be related to the types of scholarships provided to athletes. Some athletes were receiving only partial scholarships, while others were receiving full scholarship, therefore possibly affecting the results. Additionally, this study only examined one sport (track and field). As a result, the findings from this study are limited to the sport of track and field collegiate athletes.

Moreover, future research should utilize a more diverse group of athletes including males and female athletes from various collegiate division levels and a wider range of sports should be represented. Additionally, a longitudinal approach could be implemented to examine the accuracy of motivation projection such that motivation level can be measured and compared over time. This approach could also identify whether

scholarship athletes are initially more extrinsically motivated and remain so throughout their athletic careers. Also, future research should examine different coaching styles and behaviors. Coaching style and behaviors have been shown to influence the motivational context in which athletes' development takes place. Coaches have a large impact on whether the sport experience of an athlete will be positive or negative. Furthermore, motivational tactics coaches could use with their teams should be examined. These tactics would assist in understanding ways to increase motivation among athletes.

This study did not find any significant results connecting the events the athletes participate in and motivational level. Future studies could further examine the variable of "events" as it may have an influence on an athlete's motivation. If an athlete only participates in relay events they may be more intrinsically motivated than athletes who participate solely in individual events. Relay athletes have the pressure and support of teammates, which may influence their motivational climate. Another variable that may influence an athlete's motivation is their performance. Chantal et al. (1996) found that in comparison with less successful athletes, the best performing athletes displayed higher levels of non self-determined types of motivation. Chantal et al. (1996) discovered title and medal holders seemed more inclined to report external rewards as their primary source of motivation than less successful athletes. Thus, future research should examine athlete's performance along with their motivation level and scholarship status.

Lastly, another variable that should be examined in future research with regards to motivational levels among athletes is positive feedback. Rutherford et al. (1992) discovered that performance information given to people with little to no sport experience immediately after the task performance increases the perceived competence and intrinsic

motivation. This information can be helpful in many sport domains. For example, giving positive feedback to beginning athletes will increase intrinsic motivation and increase opportunities for adherence to athletic programs.

In conclusion, non-scholarship athletes reported significant higher levels of intrinsic motivation than extrinsic motivation. Scholarship athletes displayed significantly higher levels of extrinsic motivation. Amotivation was the lowest type of motivation reported by the participants. The results indicated male athletes displayed the highest level of EM among the group of athletes and female athletes reported the highest level of IM. There were significant differences in IM: to accomplish between scholarship (male and female) athletes and non-scholarship (male and female) athletes. Non-scholarship athletes also reported higher levels of IM: to accomplish than scholarship athletes. There were also significant differences in amotivation between the groups of athletes. Scholarship males reported the highest level of amotivation, while non-scholarship athletes and scholarship females displayed similar levels.

The results of this study provide additional support for the connection between scholarship status and gender as well as motivation. These findings have relevance for coaches and researchers. One practical implication from these findings is coaches may want to focus on increasing scholarship athlete's and male athlete's intrinsic motivation, which may be beneficial to their performance. Both scholarship and male athletes displayed the highest levels of extrinsic motivation. Previous research has indicated that being intrinsically motivated helps to improve performance, as well as the competence to meet the demands of the task at hand because they believe they have some control or autonomy (Medic et al., 2007). Another implication may be for coach to create a practice

environment that fosters intrinsic motivation when working with female and non-scholarship athletes (positive feedback). These athletes displayed the highest level of intrinsic motivation. These levels of intrinsic motivation should be maintained throughout the entire season. In addition this study suggests that Deci and Ryan's (2002) self-determination theory is a useful framework for understanding the influence of performance-contingent rewards (scholarship) on sport motivation.

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Table 1

Participants' demographic information

Variable	N
Age	
18-19	43
20-21	52
22-23	67
Gender	
Male	78
Female	84
Scholarship Status	
Yes	74
No	88
Classification	
Freshman	31
Sophomore	15
Junior	20
Senior	96

Table 2

Follow up ANOVA's for Scholarship Status Comparing the Seven Subscales of the Sport Motivation Scale (SMS)

Status Effect	F	Scholarship Mean	SD	Non-scholarship Mean	SD
Subscales					
Intrinsic Motivation: to know	47.513**	3.39	.611	4.01	.587
Intrinsic Motivation: to accomplish	234.66**	3.17	.587	4.92	.845
Intrinsic Motivation: experience stimulation	168.98**	3.47	.612	4.80	.764
Extrinsic Motivation: identify	283.06**	5.04	.523	3.66	.542
Extrinsic Motivation: external regulation	7.66**	5.19	.666	4.08	3.31
Extrinsic Motivation: introjected	215.29**	4.72	.741	3.25	.618
Amotivation	6.50*	1.08	.185	1.16	.265

* denotes significance level at $p < .05$
** denotes significance level at $p < .01$

Table 3

Follow up ANOVA's for Gender Comparing the Seven Subscales of the Sport Motivation Scale (SMS)

		Male		Female	
Gender Effect	F	Mean	SD	Mean	SD
Subscales					
Intrinsic Motivation: to know	22.511**	3.50	.689	3.93	.587
Intrinsic Motivation: to accomplish	5.738*	3.94	1.08	4.29	1.17
Intrinsic Motivation: to experience stimulation	32.811**	3.87	.939	4.5	.892
Extrinsic Motivation: identify	10.736**	4.46	.802	4.13	.903
Extrinsic Motivation: external regulation	11.095**	5.28	3.41	3.94	.912
Extrinsic Motivation: introjected	26.567**	4.22	.939	3.65	.982
Amotivation	8.817**	1.18	.275	1.07	.177

* denotes significance level at $p < .05$
** denotes significance level at $p < .01$

Figure 1: Scholarship Status by Gender Interaction Effect for Intrinsic Motivation (to accomplish subscale)

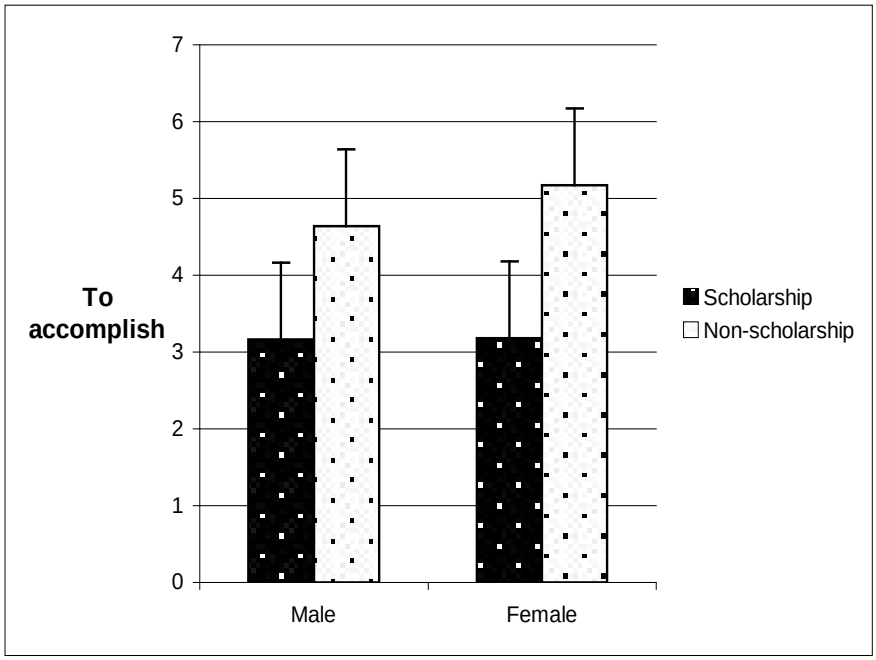
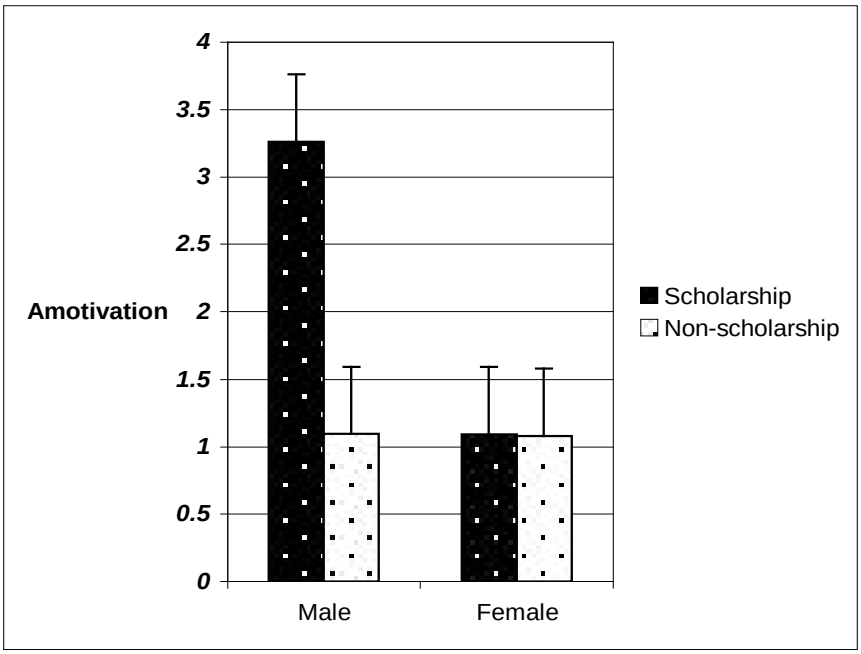


Figure2: Scholarship Status by Gender Interaction Effect for Amotivation



APPENDIX B

Demographic and Athlete History Information Questionnaire

Directions: Please choose the answer that best applies to you.

Gender: Male Female

1. What is your age?
   a. 18-19 years old
   b. 20-21 years old
   c. 22-23 years old
   d. 24 years old

2. Which year are you in college?
   a. Freshmen
   b. Sophomore
   c. Junior
   d. Senior

3. Are you receiving any athletic scholarship for your sport?
   a. Yes
   b. No

4. Are you not participating in track and field due to an injury?
   a. Yes
   b. No

5. What events do you participate in? (Please type answers)

APPENDIX C

Sport Motivation Scale

Instructions: The Sport Motivation Scale is a questionnaire designed to assess what sources of motivation drive you to practice your sport. It is very important that you answer the questions as truthfully as you can. This will ensure a reliable and valid assessment of the results. Please read each question and answer it solely pertaining to you. The questionnaire consists of seven responses (ranging from does not correspond at all, corresponds moderately, and corresponds exactly) that are measured on a scale from 1 to 7. There are no right or wrong answers. Choose the answer that closest represents one of the reasons for which you presently practicing your sport.

APPENDIX C (continued)

Sport Motivation Scale (SMS)

Why do you Practise your Sport?

Using the scale below, please indicate to what extent each of the following items corresponds to one of the reasons for which you are presently practising your sport.

Does Not Correspond at all **Corresponds a little** **Corresponds moderately** **Corresponds a lot** **Corresponds exactly**

1 **2** **3** **4** **5** **6** **7**

1. For the pleasure I feel in living exciting experiences.

1 2 3 4 5 6 7

2. For the pleasure it gives me to know more about the sport that I practice.

1 2 3 4 5 6 7

3. I used to have good reasons for doing sports, but now I am asking myself if I should continue doing it.

1 2 3 4 5 6 7

4. For the pleasure of discovering new training techniques.

1 2 3 4 5 6 7

5. I don't know anymore; I have the impression that I am incapable of succeeding in this sport.

1 2 3 4 5 6 7

6. Because it allows me to be well regarded by the people that I know.

1 2 3 4 5 6 7

7. Because, in my opinion, it is one of the best ways to meet people.

1 2 3 4 5 6 7

8. Because I feel a lot of personal satisfaction while mastering certain difficult training techniques.

1 2 3 4 5 6 7

9. Because it is absolutely necessary to do sports if one wants to be in shape.

1 2 3 4 5 6 7

10. For the prestige of being an athlete.

1 2 3 4 5 6 7

11. Because it is one of the best ways I have chosen to develop other aspects of myself.

1 2 3 4 5 6 7

12. For the pleasure I feel while improving some of my weak points.

1 2 3 4 5 6 7

13. For the excitement I feel when I am really involved in the activity.

1 2 3 4 5 6 7

14. Because I must do sports to feel good about myself.

1 2 3 4 5 6 7

15. For the satisfaction I experience while I am perfecting my abilities.

1 2 3 4 5 6 7

16. Because people around me think it is important to be in shape.

1 2 3 4 5 6 7

17. Because it is a good way to learn lots of things which could be useful to me in other areas of my life.

1 2 3 4 5 6 7

18. For the intense emotions that I feel while I am doing a sport that I like.

1 2 3 4 5 6 7

19. It is not clear to me anymore; I don't really think my place is in sport.

1 2 3 4 5 6 7

20. For the pleasure that I feel while executing certain difficult movements.

1 2 3 4 5 6 7

21. Because I would feel bad if I was not taking time to do it.

1 2 3 4 5 6 7

22. To show others how good I am at my sport.

1 2 3 4 5 6 7

23. For the pleasure that I feel while learning training techniques that I have never tried before.

1 2 3 4 5 6 7

24. Because it is one of the best ways to maintain good relationships with my friends.

1 2 3 4 5 6 7

25. Because I like the feeling of being totally immersed in the activity.

1 2 3 4 5 6 7

26. Because I must do sports regularly.

1 2 3 4 5 6 7

27. For the pleasure of discovering new performance strategies.

1 2 3 4 5 6 7

28. I often ask myself; I can't seem to achieve the goals that I set for myself.

1 2 3 4 5 6 7

APPENDIX D

Barry University

Help Understand the "WHY" Behind Sport Behavior!!

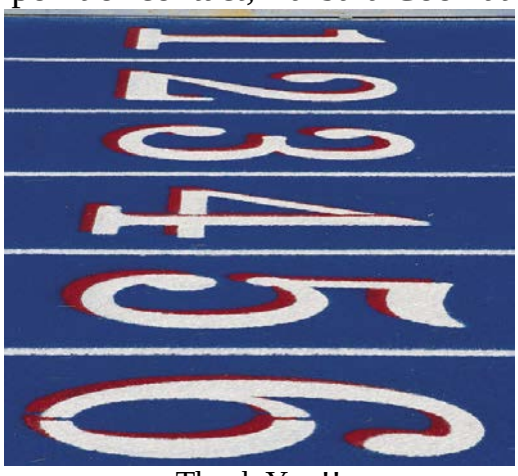
Are you a collegiate track and field athlete between the ages of 18-24??

You are wanted to participate in a thesis study examining the motivational differences between scholarship verses non-scholarship track and field athlete.

Simply follow the link to take a survey and questionnaire: The surveys will take approximately 20-30 minutes.

www.surveymonkey.com

Any questions, comments, and or concerns please contact the researcher, Brandice Flournoy at Brandice.flournoy@mymail.barry.edu or her supervisor Dr. Cremades at gcremades@mail.barry.edu or the Institutional Review Board point of contact, Barbara Cook at 305-899-3020



Thank You!!

APPENDIX E

COVER LETTER

Dear Research Participant:

Your participation in a research project is requested. The title of the study is Differences in Motivation: Scholarship and Non-scholarship Athletes. The research is being conducted by Brandice Flournoy, a graduate student in the Human Performance and Leisure Sciences department at Barry University, and is seeking information that will be useful in the field of sport psychology. The aims of the research are to investigate the differences in motivation between scholarship and non-scholarship collegiate male and female track and field athletes. In accordance with these aims, the following procedures will be used: After reading this cover letter you will be prompted to complete a survey and asked to invest twenty to thirty minutes of your time. Upon, completion of the survey you will be asked to complete an athlete history questionnaire. You may skip any question(s) on the survey and or questionnaire. The anticipated number of participants is 300.

Your consent to be a research participant is strictly voluntary and should you decline to participate or should you choose to drop out at any time during the study, there will be no adverse effects on your status with the team.

There are no known risks to those who participate in this study. Although there are no direct benefits to you, your participation in this study may help in the understanding motivation within collegiate student athletes, which will be beneficial for coaches and athletes in understanding the "why" of sport behavior.

As a research participant, information you provide will be kept anonymous, that is, no names or other identifiers will be collected on any of the instruments used. Data will be kept in a locked file in the researcher's office. All the data will be destroyed after 3 years. By pressing enter and continuing to the questionnaires, you attest to the fact that you are a track and field athlete, aged 18 years or older, and voluntarily agreeing to participate in this study.

If you have any questions or concerns regarding the study or your participation in the study, you may contact me, Brandice Flournoy, at (703)-244-0767, my supervisor, Dr. Cremades , at (305)-899-4846, or the Institutional Review Board point of contact, Barbara Cook, at (305) 899-3020.

Thank you for your participation.

Sincerely,

Brandice Flournoy
Barry University

APPENDIX F

Sample email sent to Head Track and Field Coaches

Dear (Coach's name),

My name is Brandice Flournoy and I am a graduate student at Barry University in Miami Shores, Florida. I am currently pursuing a Masters of Movement Science with a concentration in Exercise and Sport Psychology. I am a former ACC athlete and I am currently working on my thesis. My thesis research involves the investigation of motivational differences in scholarship and non-scholarship collegiate track and field athletes.

I am interested in investigating the athletes who are presently participating on the track and field team. I have attached a flyer to this email, which contains a link to complete the surveys online through survey monkey. The survey is called the Sport Motivation Scale and it is designed to measure an athlete's motivational level. The questionnaire will simply ask the athletes their age, gender, scholarship status, and the events they participate in. The survey and questionnaire will take approximately 20-30 minutes to complete. Since the data will colleted anonymously you will not receive any information regarding your athletes. Also athletes will not have the ability to denote their school or university. Can please forward the flyer to your athletes, explaining the study? If you have any question and or concerns, please contact me at (703)-244-0767 or at brandice.flournoy@mymail.barry.edu or my supervisor, Dr. Cremades at gcremades@mail.barry.edu. Thank you for your time, your involvement it is greatly appreciated.

Sincerely,

Brandice Flournoy