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An Exploration of Commitment in Walk-on Athletes

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An Exploration of Commitment in Walk-on Athletes

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Abstract

The purpose of this study was to examine two types of commitment with intercollegiate athletes as well as differences between walk-on (non-scholarship) athletes and scholarship athletes (partial/full) using the sport commitment model (SCM; Scanlan et al., 2016). Participants included 153 Division I athletes (54 males, 98 females, & 1 non-binary) from 12 different intercollegiate sports at the University of Northern Iowa. These participants were between the ages of 18 and 24 years of age (*M* = 20.26 years, *SD* = 1.31). Approximately 35% of the participants were on a full scholarship, 41.8% were on partial scholarship, and 22.9% of the participants did not receive any form of athletic aid (i.e., scholarship) for participating in their sport. Enthusiastic commitment was predicted by higher sport enjoyment, valuable opportunities, personal investments (amount), social constraints, perceived competence, informational social support, desire to master skills, athletic identity, and lower emotional social support. For constrained commitment, higher sense of loss of personal investments, higher social constraints, other priorities, perceived costs, and lower sport enjoyment, valuable opportunities, perceived competence, informational social support, and desire to master skills were the significant predictors. Scholarship athletes were found to have higher amounts of personal investments, desire to win (desire to excel-social), and athletic identity than walk-on athletes. Findings suggest predictors of enthusiastic and constrained commitment may be beneficial to understand in efforts to enhance the overall experience of intercollegiate athletes. Further research is needed to identify differences between walk-ons and scholarship athletes in terms of variables that may be most beneficial to focus on to increase their commitment.

This Study by: Clint Huemann

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has been approved as meeting thesis requirements for the

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Chapter I

Introduction

It is estimated that 33% of all intercollegiate sport participants quit or are asked to leave sport before graduation (NCAA, n.d.). Reasons for discontinued participation may vary: personal reasons, financial, time commitment, or other priorities. These reasons may have led to a loss or lack of sport commitment. The definition of sport commitment is “a psychological state representing the desire or resolve to continue sport participation” (Scanlan, Carpenter, Schmidt, et al., 1993, p. 6). Due to limited funding at universities, coaches can be hindered from awarding scholarships which could strengthen an athlete’s commitment, and in turn, continued participation. For the individuals who do not receive a scholarship (i.e., walk-ons), it is important to understand why they participate in order for them to continue participation. Walk-ons are an essential part of any given sport. They allow for roles and opportunities such as scout team players for the starters. Additionally, opportunities for recruitment arise as many universities do not have the funding to hand out many scholarships. The purpose of this study is to examine sport commitment with walk-on (non-scholarship) athletes versus scholarship athletes (partial/full) at the intercollegiate level using the sport commitment model (SCM; Scanlan et al., 2016).

The sport commitment model was created by Scanlan and colleagues (Scanlan, Carpenter, Lobel, & Simons, 1993; Scanlan, Carpenter, Schmidt, et al., 1993; Scanlan, Simons, Carpenter, et al., 1993). The SCM was originally introduced with five key predictors of commitment: sport enjoyment, involvement alternatives, personal investments, social constraints, and involvement opportunities (Scanlan, Carpenter, Schmidt, et al., 1993). Higher involvement alternatives, such as school, work demands, or family needs, has been theorized to lead to lower levels of commitment. Personal investments or what one has put into sport (e.g., effort, energy) was theorized to have a positive effect on commitment. Social constraints, such as feeling obligated to a parent to continue participation, was also theorized to have a positive relationship on commitment. Higher involvement opportunities or the benefits of participation, was theorized to lead to an increase in commitment.

Initially, the full SCM was tested with a diverse group of over 1,300 youth-sport athletes (Carpenter et al., 1993). Results revealed that the five constructs of the SCM were valid, the exception was involvement alternatives. Significant relationships emerged between sport commitment, sport enjoyment, and involvement opportunities. Additionally, findings consistently revealed that higher commitment levels were strongly predicted by higher sport enjoyment, involvement opportunities, and personal investments (Scanlan, Carpenter, Lobel, & Simons, 1993; Scanlan, Carpenter, Schmidt, et al., 1993; Scanlan, Simons et al., 1993). Sport enjoyment has been found in multiple studies to be the strongest predictor of commitment (e.g., Scanlan, Carpenter, Schmidt, et al., 1993; Scanlan et al., 2016). This body of research suggested that if an athlete enjoys sport, identifies the benefits involved in sport as significant, and has invested a significant amount of resources into sport, then that athlete will report higher levels of sport commitment. Researchers also examined ways to expand the model to provide a better understanding of athletic commitment.

Scanlan and colleagues (2016) presented an updated version of the SCM which included two types of commitment: enthusiastic commitment and constrained commitment. These researchers also introduced constrained commitment and two new predictors of commitment; desire to excel and social support. Constrained commitment was defined as having the expectation or obligation to continue participating in sport. Additional predictors of commitment have been included in research studies such as perceived competence (e.g., Scanlan et al., 2009; Weiss & Weiss, 2007) and athletic identity (e.g., Frayeh & Lewis, 2017; Raedeke, 1997). This suggested that if an individual thinks of themselves as having high ability, that individual is more likely to continue participation. Similarly, athletic identity has been revealed as a predictor because of the strength that individuals identify with the athlete role. If an individual identified strongly as an athlete, then they were also more likely to continue participation.

Perceived competence is how one feels about their own ability levels, whether that be physical competence, social competence, or cognitive competence (Harter, 1982). For the purpose of this study, perceived competence was examined in relation to perceived physical competence. Perceived competence has been hypothesized to lead to higher levels of commitment, in that if one believes they have high levels of ability, they are more likely to stay committed to the sport and continue participation (e.g., Weiss & Weiss, 2007).

Perceived competence has been shown to be a predictor of commitment both behaviorally and psychologically (Weiss et al., 2010). Along with commitment, evidence has revealed that perceived competence may also be a predictor of enjoyment (Scanlan et al., 2009), which was also a strong predictor of commitment (e.g., Scanlan, Carpenter, Lobel, & Simons, 1993). Based on this previous evidence (e.g., Weiss & Weiss, 2007; Weiss et al., 2010), perceived competence may be an important predictor of sport commitment. Additionally, there has been evidence that suggested another potential predictor of sport commitment, which would be athletic identity.

Athletic identity is how strongly someone identifies with the athlete role (Brewer et al., 1993b)). Frayeh and Lewis (2017) found evidence that supported if someone identifies strongly as an athlete, then they would likely have a higher level of sport commitment. Brewer et al., (1993a) introduced the Athletic Identity Measurement Scale (AIMS) as a means of assessing athletic identity. Results revealed that males had significantly higher athletic identity than females. Furthermore, those who thought being good at sport (i.e., perceived competence) was important, also reported higher athletic identity than those who deemed sport unimportant. Murphy et al. (1996) examined the AIMS further and examined other identity variables with a group of intercollegiate athletes. Results revealed that older student athletes had higher athletic identity than younger student athletes. One may wonder what role athletic identity has with specifically walk-on athletes' continued participation?

In summary, evidence has suggested that there are several significant predictors of commitment such as enjoyment (e.g., Scanlan, Simons, et al., 1993) or perceived competence (e.g., Weiss & Weiss, 2007). Previous research has examined variables such as athletic identity in similar populations (i.e., Division I athletes) to the walk-on athletes that was examined in this study (e.g., Griffith & Johnson, 2002). Questions remain as to what variables would be significant in predicting commitment in this specific population of walk-on athletes, and would they differ from the scholarship athletes? If there is a difference, coaches and other important roles, may gather a better understanding of what helps improve the athletes overall experience in the sport, and continue their participation.

Significance of the Study

The sport commitment model has been used to examine commitment in several different populations (e.g., elite or youth athletes), and one could argue that this model could be effective in examining Division I walk-on athletes. Since enjoyment has been revealed to be one of the most important positive predictors of commitment (e.g., Scanlan et al., 2016), perhaps walk-on athletes' enjoyment of sport or intrinsic motivation is higher than those who have extrinsic incentives to play (i.e., scholarships). Perceived competence has been revealed as a positive predictor of commitment (e.g., Weiss et al., 2010). One could argue that this may be the case for the walk-on athlete participants in this study as well because these perceptions of high ability may lead not only to continued participation but also higher commitment (e.g., Klint & Weiss, 1987). Athletic identity has been revealed as a significant predictor of both participation and commitment (e.g., Frayeh & Lewis, 2017).

Past research has examined elite level athletes (e.g., Scanlan, Russell, Beals, & Scanlan, 2003; Scanlan et al., 2009), and Division I athletes (e.g., Griffith & Johnson, 2002; Poux & Fry, 2015) using the SCM, however "walk-on" athletes are rather unexplored. It is important to understand commitment among these particular athletes because of the voluntary nature of participation. Why do walk-on athletes put in the time, the effort, the financial responsibility, and the risk of injury that is involved with participation in Division I athletics?

This information could be useful in practice as walk-ons are a critical part of any successful team. Walk-ons are essential for team numbers as practice players or "scout team" players. The walk-on status is also essential for recruitment because coaches, especially from smaller universities with less funding, can recruit athletes to come as "preferred walk-ons." The coach invites the athlete to play, but does not offer a scholarship, however, there is the possibility for one depending on athlete development. Thus, understanding walk-ons' commitment could be critical. For example, if a coach knows what strengthens the athletes' commitment to the sport, and understands why walk-ons continue participation, coaches could then use this evidence to engage in strategies that will help keep the walk-on athletes on the field or court. Therefore, if the coach is able to strengthen commitment in these athletes through enjoyment for example, then they may have a higher likelihood to make the athletic experience better for these athletes.

Research Questions and Hypotheses

1. What are the strongest predictors of enthusiastic sport commitment for intercollegiate athletes?
    a. It is hypothesized that sport enjoyment will be the strongest predictor of enthusiastic commitment (Carpenter & Coleman, 1998; Scanlan, Carpenter, Schmidt, et al., 1993).
2. What are the strongest predictors of constrained sport commitment for intercollegiate athletes?
    a. It is hypothesized that other priorities will be the strongest positive predictor of constrained commitment (Scanlan et al., 2016).

3. Do differences exist between walk-on athletes and scholarship athletes on sport commitment constructs, perceived competence, or athletic identity?
    a. It is hypothesized that walk-on athletes will report higher enthusiastic commitment than scholarship athletes.
    b. It is hypothesized that walk-on athletes will report higher sport enjoyment than scholarship athletes.
    c. It is hypothesized that walk-on athletes will report higher athletic identity than scholarship athletes based on evidence presented in Griffith and Johnson (2002).
    d. It is hypothesized that scholarship athletes will report higher constrained commitment than walk-on athletes.
    e. It is hypothesized that scholarship athletes will report higher social constraints than walk-on athletes.
    f. It is hypothesized that scholarship athletes will report higher perceived competence than walk-on athletes.

Delimitations

1. Only Division 1 athletes participated.
2. Age of participants was between 18 and 25 years of age.
3. Self-report questionnaires used to measure sport commitment constructs, perceived competence, and athletic identity.

Limitations

1. At the time of data collection, the competitive season varied (off-season/in-season).

Assumptions

1. All participants answered honestly.
2. All participants understood and followed instructions.
3. All participants fully understood how they felt about their sport.

Operational Definitions

1. Athletic Scholarship: An athletic scholarship is an amount of financial aid awarded to a student-athlete for playing their sport from the college athletic department (athleticscholarships.net), such as tuition, stipends, or books.
2. Walk-on: An athlete that does not receive any form of athletic aid (i.e., scholarship) from the university, and participates in intercollegiate sport.

Chapter II

Literature Review

The purpose of this study is to examine sport commitment for walk-on (non-scholarship) athletes in comparison to scholarship athletes (partial/full) at the intercollegiate level using the sport commitment model (SCM). The SCM is a theoretical model that examines the motivation underlying persistence in organized sports (Scanlan, Carpenter, Schmidt, et al., 1993). The SCM was initially introduced with five predictors of commitment, with enjoyment being the central component driving commitment (Scanlan, Carpenter, Schmidt, et al., 1993; Scanlan, Simons, Carpenter, et al., 1993; Scanlan, Carpenter, Lobel, & Simons, 1993). Since then, the SCM has evolved to include two types of commitment with seven predictors (Scanlan et al., 2016).

The Sport Commitment Model

The original SCM developed by Scanlan, Carpenter, Schmidt, and colleagues (1993) suggested five predictors of commitment: sport enjoyment, involvement alternatives, personal investments, social constraints, and involvement opportunities (Scanlan, Carpenter, Schmidt, et al., 1993; Scanlan, Simons, Carpenter, et al., 1993; Scanlan, Carpenter, Lobel, & Simons, 1993).

Sport enjoyment was described as how much the athletes had fun in the sport. For example, an athlete may mention excitement about practice tomorrow. Theoretically, higher enjoyment leads to higher commitment. Involvement alternatives were defined by having other activities or responsibilities that are important in life compared to sport participation. School, work demands, and family needs are examples of these involvement alternatives. A higher level of involvement alternatives was hypothesized to lead to lower commitment. Personal investments were described by the "blood, sweat, and tears," and financial contributions that the athlete has made to the sport that would not be returned if the athlete left the sport. Examples of personal investments may include purchasing apparel, attending extra practices, such as lifting or conditioning sessions, or the effort the athlete has put into each and every repetition. Higher levels of personal investments were hypothesized to lead to higher commitment levels.

Social constraints were described by the perceived social expectations from significant others for the athlete to continue participating in sport, or the feeling of an obligation to continue (Scanlan, Carpenter, Schmidt, et al., 1993). An increase in number or strength of social constraints was hypothesized to increase the level of sport commitment. For example, if the only friends the athlete has are in sport, then they may feel obligated to continue participating. Involvement opportunities were described by what an athlete gains or receives by continuing to participate, that they could not get if they were not participating. For example, if an athlete was on the travel squad for a team, then they may receive team apparel. An increase in involvement opportunities was hypothesized to lead to an increase in commitment.

Scanlan, Carpenter, Lobel, and Simons (1993) investigated sport enjoyment. The participants included 1,342 athletes (875 males, 467 females) from different sports, between the ages of 10 and 19 years. The researchers noted the most influential factor in predicting sport enjoyment was positive team interactions and support. Results suggested that an athlete's effort and striving to achieve perfection (i.e., mastery) was also a significant positive predictor of sport enjoyment. Additionally, positive social support from the coach was associated with higher sport enjoyment. For example, if an athlete is struggling with a skill and the coach offers advice and encouragement, then that athlete is more likely to show higher sport enjoyment. Based on these findings concerning the predictors of sport enjoyment, the SCM was further developed for future research.

Scanlan, Carpenter, Schmidt, and colleagues (1993) originally tested the SCM with 178 participants from a Little League suburban program (95 girls, 83 boys) with an average age of 13.6 years. Assessments were administered at mid-season to ensure sufficient experience in the sport. The results suggested that sport enjoyment, involvement opportunities, and personal investments were the strongest positive predictors of commitment. Thus, evidence suggested that higher enjoyment, involvement opportunities, and personal investments would lead to higher sport commitment.

In a follow up study, Scanlan, Simons, et al. (1993) examined athletes in the youth-sport domain with the goal of including different ethnicities and competitive levels to examine the generalizability of the SCM. Three groups of participants of different ages, sports, and ethnicities participated. Participants were gathered from six different sports of varying competitive and age levels. A total of 1,660 between the ages of 8 and 20 years participants were included (1,030 males, 629 females) respectively.

Results were primarily focused on if the model provided consistency, not necessarily the actual results of the model constructs. Results revealed that internal reliabilities were consistent and valid even with reduction of items on the questionnaire. In conclusion, the researchers were able to minimize the number of questions making the questionnaire more feasible to complete, while remaining reliable and generalizable across different populations.

The full SCM was then tested with a diverse group of over 1,300 youth-sport athletes (Carpenter et al., 1993). Participants included 1,342 youth-sport athletes (875 male, 467 female) involved in different sports, between the ages of 10 and 19 years. Results revealed that the constructs of the SCM were valid, with the exception of involvement alternatives. Significant relationships emerged between sport commitment, sport enjoyment, and involvement opportunities. Findings, consistent with past research (e.g., Scanlan, Carpenter, Schmidt, et al., 1993), revealed that higher commitment levels were strongly predicted by higher sport enjoyment, involvement opportunities, and personal investments (excluding financial items). This suggested that if an athlete enjoys sport, identifies the benefits involved in sport as significant, and has invested a significant amount of resources to sport, then that athlete would report higher sport commitment. These studies have examined youth sport athletes similar to this sample, however, one may wonder whether the predictors of commitment would change in elite youth sport athletes.

Carpenter and Coleman (1998) examined cricket players' commitment with youth athletes. Specifically, the researchers examined the relationships between the predictors and commitment over time. Participants included 78 adolescent males involved in an elite youth cricket program, between the ages of 9 and 17 years. Assessments were administered on two separate occasions, one at the beginning of the season, after the first match, and the other near the end of the season, which resulted in about three months' time. Surveys assessed perceived ability (i.e., perceived competence), sport commitment, sport enjoyment, personal investments, involvement alternatives, recognition and social opportunities (i.e., involvement opportunities), social support, and social constraints.

Negative affect (i.e., feelings) questions were also included, which pertained to aspects of sport that might make the participant unhappy or was unpleasant.

Three significant positive predictors of commitment emerged: enjoyment, recognition opportunities, and social opportunities. Negative affect was found to be a negative predictor of commitment, in that if negative emotions, such as anger or sadness, increased, then commitment decreased. Participants with higher perceptions of social support also reported higher commitment. Negative affect, social support, involvement alternatives, social constraints, perceived ability, and personal investments did not change significantly over time. With the exception of social constraints, all constructs predicted commitment in the expected direction. Social support, perceived ability, and personal investments were positive predictors of commitment.

Similar to Carpenter and Coleman (1998), Carpenter and Scanlan (1998) examined predictors of commitment over time, and the effect of those changes on commitment. Unlike the previous study, these participants included 103 high school soccer players (68 males, 35 females) between the ages of 14 and 18 years. Surveys were conducted on two separate occasions within a 5-7 week period. The first session occurred during mid-season, and the second at the end of the regular season.

Involvement opportunities and enjoyment were shown to increase over time, and in turn, commitment also increased. However, social constraints increased over time, which may have led to a decrease in commitment. Surprisingly, higher enjoyment at the end of the season did not predict an increase in commitment. If participants already had higher enjoyment at the beginning of the season, then they did report higher commitment at the end of the season and vice versa.

In summary, original tests of the SCM with young athletic samples (i.e., below the age of 18 years) revealed enjoyment to be the most significant predictor of commitment in the positive direction (e.g., Scanlan, Carpenter, Schmidt, et al., 1993). Support has also been shown for other positive predictors of sport commitment, such as personal investments (e.g., Carpenter et al., 1993) and involvement opportunities (e.g., Scanlan, Carpenter, Schmidt, et al., 1993). While these results were found in a population under the age of 18 years, additional research has also examined sport commitment with adult populations involving higher competitive levels (i.e., collegiate/professional). This additional research has been done in efforts to expand the SCM (e.g., Scanlan, Russell, Wilson, & Scanlan, 2003), examining different populations, new possible predictors of sport commitment (Weiss et al., 2010), and even a different model to examine commitment (Weiss et al., 2001).

Expansions of the Sport Commitment Model

Weiss et al. (2001) examined tennis sport commitment in youth athletes using the SCM. Participants included 198 youth tennis players (114 males, 84 females) between the ages of 10 and 18 years. Three models of commitment were tested: (1) the original SCM, (2) a model where enjoyment was a mediating variable between commitment and the other predictors of commitment, and (3) examined the direct and indirect relationships between the predictors and sport commitment.

The original SCM results revealed that all predictors, except social support, were significant predictors of commitment. However, enjoyment was a much stronger predictor than personal investments, social constraints, and attractive alternatives. Consistent with past research (e.g., Carpenter et al., 1993; Scanlan, Carpenter, Schmidt, et al., 1993), enjoyment and personal investments were strong positive predictors of commitment, and social constraints and involvement opportunities were strong negative predictors. The mediational model of sport commitment examined the other constructs' effects on enjoyment, then enjoyment's effect on commitment. Evidence suggested that personal investments and attractive alternatives related directly to enjoyment more strongly in comparison to the original model. However, in the original model social constraints significantly predicted commitment, but was not a significant predictor of enjoyment.

The third model was a combination of the two previous models, examining direct and indirect influences of the predictors. Enjoyment, personal investments, social constraints, and attractive alternatives were all significant direct predictors of commitment, with enjoyment being the strongest predictor. When examining constructs indirectly however, personal investments and attractive alternatives were stronger predictors of enjoyment in comparison to commitment. In conclusion, evidence suggests support for the mediational model demonstrating that enjoyment was significantly related to commitment. This evidence suggested that researchers may use other constructs to predict enjoyment, and in turn, predict commitment.

In previous studies, researchers examined the SCM with various samples of youth athletes (e.g., Carpenter & Coleman, 1998; Carpenter & Scanlan, 1998; Scanlan, Carpenter, Schmidt, et al., 1993; Scanlan, Simons, Carpenter, et al., 1993). But in order to expand the model and have a better understanding of sport commitment, the Scanlan Commitment Interview Method (SCIM) was developed with elite athletes (Scanlan, Russell, Wilson, & Scanlan, 2003). The SCIM was developed to work with diverse populations while providing substantial amounts of information and data through interactive interviews and discussion to further expand the SCM.

Scanlan, Russell, Beals, and Scanlan (2003) introduced the first of four articles that focused on elite athlete commitment titled Project on Elite Athlete Commitment (PEAK). The first article, PEAK I (Scanlan, Russell, Wilson, & Scanlan, 2003) discussed the methodology. The SCIM was first administered, and then revised. The researchers asked the athletes what they thought determined commitment in their own words, then were asked a series of questions related to SCM predictors of commitment (e.g., enjoyment). Next, athletes were asked if they agreed with the model's evaluation. Research was later conducted using the SCIM with the New Zealand All Blacks male rugby team in PEAK II (Scanlan, Russell, Beals, & Scanlan, 2003). Then, PEAK III examined the female Silver Ferns netball team using the SCIM along with perceived competence items (Scanlan et al., 2009). All participants were between the ages of 18 and 30 years, competing at a high level (e.g., professional).

Overall, this series of studies found evidence that suggests enjoyment was the strongest predictor of commitment. Personal investments, as well as encouragement and support (i.e., social support) were also reported to strengthen commitment. Perceived competence was a predictor of enjoyment, in that, if the participant thought he or she had higher ability, then he or she reported higher enjoyment. This suggested that perceived competence and social support may be viable additions to the model (e.g., Scanlan et al., 2009).

Scanlan and colleagues (2013) examined the completeness of the model and possible new sources of commitment based on these player responses. Four new sources of commitment emerged: desire to excel, team tradition, elite team membership, and worthiness of team membership. Researchers decided to include only the desire to excel as a new predictor of sport commitment because the other sources were specific to team sports, but not necessarily individual sports. Weiss et al. (2010) also expanded the SCM by including behavioral commitment as an outcome of sport commitment, with two additional predictors of commitment: perceived costs and perceived competence.

Weiss et al. (2010) included behavioral commitment such as effort, intensity, and perseverance as an outcome of sport commitment. Perceived costs were included as a potential predictor and were described by the downsides of participating in sport, such as injuries or missing out on other opportunities (e.g., other sports, family, etc.). Perceived competence was described as one's perceptions or view of their skill level in sport or ability. Participants included 304 female gymnasts between the ages of 8 and 18 years (Weiss et al., 2010).

Results suggested support for the expanded model, including perceived competence and costs. In relation to psychological commitment: sport enjoyment and involvement opportunities were the strongest positive predictors of commitment, whereas attractive alternatives and perceived costs were the strongest negative predictors. However, personal investments and perceived competence were significant predictors of both behavioral and psychological commitment, suggesting that perceived competence may be an important predictor of an athlete's commitment levels as well as effort. Surprisingly, behavioral commitment and psychological commitment had no significant relationship with each other in the final modified model. Perhaps other predictors could be used to expand the SCM, such as self-determination or autonomy (Zahariadis et al., 2006).

Zahariadis et al. (2006) tested the SCM while also examining the use of self-determination to gather a better understanding of young athletes' commitment. Participants included 343 athletes with an average age of 13.5 years, from different team sports. Researchers examined SCM constructs, intrinsic motivation, extrinsic motivation, and amotivation. The first model tested included intrinsic motivation as a predictor, and intrinsic motivation was a moderate positive predictor of sport commitment. Researchers also found an indirect effect of intrinsic motivation on enjoyment, in that those who reported higher intrinsic motivation, also reported higher commitment, and in turn, higher enjoyment. Extrinsic motivation was a negative predictor of commitment. Personal investments and enjoyment were significant positive predictors of commitment. In summary, results suggested that internal motivation was a positive predictor of commitment, and extrinsic motivation was a negative predictor of commitment. Additional research has explored sport commitment in relation to not only new predictors of commitment, but also differences in commitment based on age and competitive levels (e.g., Weiss and Weiss, 2007).

Weiss and Weiss (2007) included 304 female gymnasts which represented three different age groups and two competitive levels. Age groups included; 8-11, 11-14.5, and 14.5-18 years of age; and the two competitive levels were 5-6 (introductory or compulsory level) and 8-10 (higher optional levels). Results revealed that lower perceived costs and lower social constraints from best friends and parents were the significant predictors of strengthening commitment in the youngest age group. Higher personal investments, lower perceived costs and parental social constraints were the strongest predictors of strengthening commitment in the 11-14.5 years age group, whereas higher perceived competence and lower costs were the strongest predictors of commitment in the 14.5-18 age group. In regards to competitive levels, several differences were found: (a) gymnasts competing in levels 5-6 reported personal investments and coach social support as the strongest positive predictors of commitment, while perceived costs and social constraints from coach, best friend, and teammates were the significant negative predictors of commitment, and (b) gymnasts competing in levels 8-10 reported personal investments was the strongest positive predictor of commitment, and teammate social constraints were the strongest negative predictor of commitment.

Similarly, Weiss (2015) further examined sport commitment, and the differences between competitive levels and starter status. Participants included 491 athletes (247 males, and 244 females) between the ages of 14 and 24 years. A total of 284 were high school athletes between 14-19 years of age, and 207 participants were college athletes between the age of 17-24 years from various sports. Data was also measured to evaluate differences in starter status: starter, non-starter, or non-player.

High school athletes of non-starter and non-player status differed from college starter and non-starter on perceived investments and perceived competence, in that collegiate athletes held much higher perceptions than high school athletes. High school athletes also had higher perceptions of social constraints, mainly from parents. College athletes had higher perceptions of investments, involvement opportunities, perceived competence, costs, and perceptions of social support than high school athletes. Overall, differences were found in regards to the importance or significance of different predictors impacting commitment based on competitive level.

In conclusion, many different predictors of commitment may be viable additions to expand the SCM, such as perceived competence (e.g., Weiss et al., 2010), perceived costs (Weiss et al., 2010), social support (Scanlan et al., 2009), desire to excel (Scanlan et al., 2013), and self-determination (Zahariadis et al., 2006). These predictors can be an effective way of predicting commitment in many different sports and competitive levels. Different classifications or types of commitment also exist (e.g., Raedeke, 1997; Schmidt & Stein, 1991; Weiss & Weiss, 2003).

Types of Commitment

Schmidt and Stein (1991) proposed that three different types of commitment exist in sport: commitment based on enjoyment (i.e., attraction-based), commitment based on burnout (entrapment-based), and dropout or low commitment. These three types were based on perceptions of one's rewards, costs, satisfaction, attractiveness of alternatives, and personal investments. For example, if an athlete's commitment was based on enjoyment or attraction-based commitment, then higher rewards, satisfaction, and personal investments; lower costs and alternatives would be reported. Entrapment-based commitment was described by lower enjoyment, rewards, and satisfaction, and higher costs and alternatives. The low commitment profile was hypothesized to have low to moderate levels of enjoyment, rewards, satisfaction, and personal investments, then moderate to high costs and alternatives. Differentiation of these types of commitment may accurately portray the experiences of athletes in competitive sport.

Raedeke (1997) examined Schmidt and Stein's (1991) contentions with a sample of competitive swimmers. A dual purpose of this study was to examine if athlete burnout differed based on type of commitment. Athlete burnout can be defined from a psychological perspective: exhibiting emotional exhaustion, depersonalization, and feelings of reduced personal accomplishment. Participants included 236 male and female swimmers, between the ages of 13 and 18 years. These athletes were classified as "senior swimmers" by coaches, which is the highest skill level for their age group. Athlete burnout, SCM constructs, athletic identity, self-determination, and perceived control were assessed. Perceived control is an individual's feelings of self-control over their own actions in reference to sport participation. Athlete burnout was measured in three dimensions: emotional/physical exhaustion, swim devaluation, and reduced swim accomplishment. Cluster analyses were conducted to create the commitment profiles of these swimmers.

Results from the cluster analysis revealed that one cluster reported that their involvement in swimming was more negative than the other participants. Specifically, this group reported lower enjoyment, benefits, investments, viewed their identity in swimming as unimportant, and viewed other activities or sports as more attractive than swimming. This group also had higher costs than the other groups. This first cluster was labeled the "malcontented" swimmers and had the highest burnout scores and greater reduced swim accomplishment than the other groups of swimmers. Cluster two was the largest group, and these athletes reported higher enjoyment, benefits, personal investments, personal control; and lower costs, attractive alternatives, and social constraints. This group also viewed their identity in swimming as important. Cluster two was labeled “enthusiastic” swimmers because they experienced more positive aspects than negative from swimming, such as higher enjoyment levels. Additionally, this group had the lowest levels of burnout. Cluster three reported average enjoyment and benefit levels, slightly higher costs, higher social constraints and personal investments, with lower perceived control. Additionally, this group identified moderately strong with their sport, and viewed swimming as an attractive opportunity. Cluster three, labeled “obligated swimmers”, had burnout levels of moderately high to high, higher swim devaluation, reduced swim accomplishments, and higher emotional/physical exhaustion. Cluster four reported low to average levels in all of the variables. This group also had average burnout scores on the three dimensions and was labeled “indifferent” swimmers.

In summary, the results from this study revealed that swimmers, for the most part, viewed their sport participation as a positive experience. Benefits and cost analysis revealed that more participants viewed their sport as having higher benefits and medium costs than those who did not, as well as viewing other activities or sports as less attractive than swimming. Swim identity (i.e., athletic identity) was viewed as moderately high importance by the athletes, along with high personal investments. This evidence suggested that more than one type of commitment exists. The attraction-based commitment had higher levels of the positive aspects of sport thought to predict commitment (e.g., enjoyment), and lower levels of the negative aspects of sport thought to predict commitment (e.g., attractive alternatives). This suggested that in the SCM, one may be able to determine how committed someone is, but not necessarily how they feel about their sport. Weiss and Weiss (2003) expanded on Raedeke (1997) and examined attraction and entrapment-based commitment with young gymnasts.

Weiss and Weiss (2003) included 124 high level (i.e., 9, 10, & elite) competitive female gymnasts, with ages ranging between 10 and 18 years. Competitive female gymnasts were chosen because in gymnastics, athletes move up competitive levels based on skill level, not age like other sports (e.g., American football, basketball). This group of gymnasts represented the highest competitive levels in women's gymnastics. Enjoyment, benefits, costs, personal investments, attractive alternatives, sport commitment, social constraints, social support, motivational orientation, and training behaviors were assessed.

Results revealed three profiles of commitment: attracted, entrapped, and vulnerable gymnasts. Attracted-committed gymnasts exhibited positive perceptions of their experience as a gymnast: higher enjoyment of the sport, experienced higher benefits, with little downside or costs. The alternatives to gymnastics were not appealing to them. These gymnasts also reported the highest sport commitment levels. Entrapped athletes had strong negative perceptions of their sport. Entrapped athletes reported lower enjoyment, fewer rewards, higher costs, and attractive alternatives compared to attracted gymnasts. Vulnerable gymnasts had average (i.e., mid-range) scores on all variables besides personal investments. These gymnasts enjoyed the sport less than the attracted athletes, but more so than entrapped athletes. The researchers noted that these athletes may be in a "tug of war" battle between attraction and entrapment (Weiss & Weiss, 2003). That is, if an athlete has a positive influence on their commitment, such as winning a championship, then they may become more attracted, whereas a negative influence, such as sustaining an injury, may cause them to become more entrapped. All athletes in this sample reported high personal investments. These commitment profiles were then compared on sport commitment.

Results revealed that attracted gymnasts had the highest sport commitment, then vulnerable gymnasts, and entrapped the lowest sport commitment. Additionally, groups were compared on social support and social constraints. The entrapped gymnasts had the lowest parent and coach social support, compared to the other two groups. The vulnerable gymnasts also had lower coach social support than the attracted group. Attracted gymnasts had the lowest parental social constraints. For teammate social constraints, vulnerable gymnasts had the highest of the three groups, and entrapped and attracted had similar levels. Along with social support and social constraints, these profiles were also compared on motivational orientation (e.g., intrinsic motivation).

Results revealed that attracted gymnasts had the highest intrinsic motivation, as well as effort and persistence behaviors, but had the lowest amotivation and introjected and external regulation. External regulation was described as an external reward for performing a behavior or skill. Introjected regulation was defined as moving past that external reward and now performing the task at hand for a personal reason, meaning they have internalized the reward. Vulnerable gymnasts had the highest introjected regulation and external regulation, the second highest intrinsic motivation, amotivation, effort behaviors, and persistence behaviors. Entrapped gymnasts had the lowest intrinsic motivation, persistence behaviors, effort behaviors, and had the highest amotivation.

In summary, attracted gymnasts reported the most positive aspects of sport (e.g., enjoyment, motivation, etc.), vulnerable gymnasts reported some positive aspects and some negative, and entrapped reported the most negative aspects of sport (e.g., poor training behaviors, low enjoyment, etc.).

Weiss and Weiss (2006) conducted a follow up of this study, examining the different commitment types in these female gymnasts over time. The participants included 63 of the 124 female gymnasts that participated in Weiss and Weiss (2003), from the same competitive levels (Level 9, 10, and elite), between the ages of 11 and 18 years. Data was collected during the middle of the competitive season with identical measures as Weiss and Weiss (2003). Results revealed that commitment did change over time. One cluster was found to be the “attracted” group, who reported higher enjoyment and benefit levels, moderately lower costs, and saw other alternatives as less attractive than gymnastics compared to the other cluster groups. The second cluster group was labeled the “entrapped” group. This group reported lower enjoyment and benefit levels, higher costs, and saw alternatives as more attractive than gymnastics. The third cluster was labeled the “vulnerable” group. This group reported slightly lower enjoyment levels, lower benefits, average costs, and saw other alternatives as more attractive than gymnastics. Cluster four was labeled as the “uninterested” group. This group reported lower enjoyment and benefit levels, relatively lower investment levels, higher costs, and felt other alternatives as more attractive than gymnastics. In comparison to one year prior, 40 of the gymnasts remained in the same commitment group one year later, while 23 gymnasts changed commitment type.

Commitment types were then compared on perceived social support and social constraints. Attracted gymnasts reported higher parental support than the entrapped athletes. The entrapped athletes reported lower coach support than both vulnerable athletes and attracted athletes. The entrapped athletes also reported higher social constraints from teammates and parents than attracted athletes. More of the entrapped athletes dropped out one year later than of the other three groups. The attracted gymnasts reported significantly higher enjoyment than the entrapped and the vulnerable gymnasts. Overall, these results suggested that commitment can change over time. If an athlete has more positive experiences, then this is likely to increase enjoyment and shift commitment type from "vulnerable" to "attracted", and possibly increase overall sport commitment. Since different types of commitment have been shown to be associated with different characteristics, Weiss (2020) examined different commitment profiles with other predictors, such as achievement behaviors.

Weiss (2020) examined different commitment profiles and compared these profiles on success expectancy beliefs. Participants included 183 female gymnasts from competitive levels 7-10, and between the ages of 8 and 18 years. Variables measured included: sport commitment, enjoyment, perceived investments, attractive alternatives, benefits, costs, expectancies for success, and attainment value (i.e., intrinsic or utility). Attainment value was an individual's desire to perform well. Intrinsic value referred to one's feelings, such as enjoyment or satisfaction, and utility value was how activity could be useful for future paths or plans.

First, the predictors of commitment were assessed. Expectancies of success, which could also be referred to as perceived competence, and task value were positive predictors of commitment. More specifically, enjoyment, investments, attainment and utility value, were all significant positive predictors of commitment, and attractive alternatives was a strong negative predictor. During the cluster analysis, five different commitment profiles were found. Cluster one, which represented the “attracted” group, was comprised of 64 gymnasts who reported higher perceived enjoyment and benefits, slightly higher investments, and lower perceived costs and attractive alternatives. Cluster two, which represented the “vulnerable” group, was comprised of 25 gymnasts, who reported average benefits, moderately higher enjoyment and investments, and higher perceived costs and attractive alternatives. Cluster three, which represented the “average commitment” group, was comprised of 61 gymnasts, who reported average to moderately lower scores on all constructs. Cluster four, which represented the “entrapped” group, was comprised of 13 gymnasts who reported lower enjoyment and benefits, higher attractive alternatives, costs, and investments. Cluster five, which represented “low commitment” gymnasts, was comprised of 20 gymnasts who reported lower benefits, enjoyment, and investments. This group also had moderately higher perceived costs and attractive alternatives.

“Attracted” gymnasts reported higher perceptions of success expectancy than all groups except the “vulnerable” group. The vulnerable gymnasts also had higher perceptions than the entrapped and low commitment groups. The attracted, vulnerable, and average commitment gymnasts had significantly higher perceptions for attainment value than the entrapped and low commitment gymnasts. Attracted gymnasts also had the highest utility value than the other groups, however the vulnerable group reported about the same levels. Overall, higher commitment was reported by the individuals who reported higher enjoyment, perceived investments, attainment and utility value, and lower perceptions of attractive alternatives.

In conclusion, evidence supports that other types of commitment, such as attracted or entrapped commitment (e.g., Weiss & Weiss, 2003) exist. Other predictors of commitment were also suggested to help create a better understanding of the commitment picture, such as: costs (e.g., Schmidt & Stein, 1991); athlete burnout, athletic identity, and perceived control (e.g., Raedeke, 1997); and attainment and utility value (Weiss, 2020). Support was even found for a mediational model (Weiss et al., 2001), identifying the SCM constructs that directly affect enjoyment, and in turn commitment. Additional predictors of sport commitment may strengthen the model, as well as continued investigation of commitment types. Based on previous research, Scanlan et al. (2016) included additional predictors and types of sport commitment in efforts to expand the model to reach a wide variety of sports, ages, and genders.

Scanlan and colleagues (2016) presented a culminating paper evaluating the SCM, which presented evolved names of the original constructs, as well as names and definitions of new constructs (i.e., predictors of commitment) in the SCM, some of which aligns with Weiss and Weiss (2003). Sport commitment was altered to enthusiastic commitment, which was defined as having the passion or desire to continue participating in sport. Additionally, a second type of commitment was included: constrained commitment. Constrained commitment was defined as having the expectation or obligation to continue participating in sport, whether that be peer pressure from others, or other psychological and environmental factors. Both types of commitment have similar predictors, however the direction of influence may differ (i.e., positive or negative). Enthusiastic commitment refers to the “want to” side of commitment in comparison to the “have to” side of commitment (i.e., constrained). Constrained commitment has been referred to as entrapped commitment in some of the literature (e.g., Weiss & Weiss, 2003).

Scanlan et al. (2016) also included two additional predictors: social support and desire to excel. Social support is the emotional, informational, and/or instrumental support from someone else (e.g., friend, family member, or coach). An example of emotional social support is a friend or family member providing encouragement, whereas informational social support could be advice or feedback on a performance. Instrumental support is related to more tangible types of support, such as the football team provides their players with cleats for practice and competition. Another new predictor was desire to excel which is the want or need to achieve mastery and/or receive social achievements (e.g., NCAA National Champion).

These new predictors were included to encompass a broader picture and better understanding of sport commitment (Scanlan et al., 2016). Phase 1 was conducted with 753 athletes (295 male, 458 female), from different sports, with an age range of 13-19 years. Phase 2 had 982 athletes (339 males and 643 females) from five different sports, between the ages of 13 and 19 years. Results revealed that sport enjoyment and valuable opportunities were the strongest positive predictors of enthusiastic commitment, and desire to excel emerged as a viable positive predictor of enthusiastic commitment. Sport enjoyment and valuable opportunities were also found to be negative predictors of constrained commitment, with other priorities and social constraints as positive predictors.

This evidence suggested that enthusiastic and constrained committed athletes reported different levels of sport commitment constructs, such as higher and lower enjoyment, and may also feel differently about the sport. The SCM has been used to examine several different populations over time, and one may wonder if a difference exists between competitive samples and recreational athlete samples. Higher competitive levels, especially professional, tend to involve more time involvement. However, little is known regarding recreational athletes' sport commitment.

Commitment in Recreational Athletes

The term "recreational athlete" is traditionally described as someone who is physically active, but does not train specifically for competition, but rather trains for the enjoyment of the activity (Laquale, 2009). At the collegiate level, some sports are both recreational and competitive, sometimes known as "club" sports. Club sports are traditionally identified as more competitive than intramural sports as they tend to travel to compete against other clubs or universities, whereas intramural sports are commonly seen competing with other teams from the same university. For example, the University of Northern Iowa sport club website mentioned club sports as being competitive student-led teams/organizations developed to "bridge the gap" between intramural sports and intercollegiate athletics (University of Northern Iowa, 2022). Recreational sport may differ from club sports and highly competitive sports because of the entirely voluntary nature of each activity (e.g., pick-up game at the gym). Perhaps sport commitment differs when examining this population versus elite athletes (e.g., Scanlan et al., 2009).

Casper et al. (2007) wanted to expand the SCM with a sample of recreational sport athletes. Participants included 537 recreational tennis players (290 female, 247 male), with an average age of 47.5 years. Enjoyment and personal investments were the strongest positive predictors of commitment with involvement opportunities also contributing. Researchers also examined participation frequency, which was found to be significantly positively impacted by commitment. Results revealed that personal investments was the strongest positive predictor of commitment. Higher enjoyment, involvement opportunities, and social support also predicted higher commitment. Researchers then decided to examine the influence of involvement opportunities, personal investments, involvement alternatives, and social constraints on enjoyment. Involvement opportunities and personal investments were the strongest predictors of enjoyment. However, higher involvement alternatives and social constraints were found to predict lower enjoyment. Thus, the higher enjoyment, personal investments, social support, and involvement opportunities predicted higher commitment.

Similarly, Casper and Andrew (2008) examined recreational athletes and their differences or similarities to college tennis players. Casper and Andrew (2008) examined a total of 760 athletes between the ages of 18 and 84 years participated in this study: 515 recreational and 245 NCAA collegiate athletes. The researchers examined sport enjoyment, social constraints, and involvement opportunities from the SCM in relation to level of participation (i.e., collegiate or recreational) and skill level (i.e., beginner, intermediate, advanced). The National Tennis Rating Program was used to evaluate the recreational skill levels, and collegiate players had various skill levels.

Collegiate athletes reported higher sport commitment, involvement opportunities, and social constraints, but lower levels of sport enjoyment than recreational athletes. Advanced skill level athletes had lower levels of sport enjoyment than both beginner and intermediate athletes. Involvement opportunities and social constraints were revealed to be much higher in advanced athletes than the other groups. However, there are differences in the competitive level in recreational sport, such as club sport (e.g., Masters Swimming) possibly being more competitive than intramural sport respectively.

Santi et al. (2014) examined a population of Italian Masters swimmers. The purpose of this study was to examine the influence of the coaches and teammates on sport commitment with recreational swimmers. Participants included 523 Italian masters swimmers (330 males, 193 female) between the ages of 8 and 83 years.

Social support from coaches and teammates strengthened functional (i.e., enthusiastic) commitment, but did not influence obligatory (i.e., constrained commitment) (Santi et al., 2014). Higher perceived pressure and obligation to others (e.g., coaches or teammates) was related to higher levels of constrained commitment, and in turn, lower enthusiastic commitment, especially if the pressure perceived was from the coach. Athletes that had higher levels of enthusiastic commitment also reported a higher number of voluntary hours trained. Thus, enthusiastic commitment was positively affected by social support, and a higher level of enthusiastic commitment was found to predict greater involvement.

Frayeh and Lewis (2017) also examined recreational athletes, although this study included additional predictors, such as athletic identity, in efforts to expand the SCM. Frayeh and Lewis (2017) examined an expanded model of the SCM with recreational soccer players, including the importance of athletic identity and its role as a mediator between commitment and time spent in sport. Participants included 352 recreational soccer players (196 males, 156 females), between the ages of 18 and 51 years. Higher athletic identity revealed a direct positive relationship with sport participation, and in turn, commitment. In that, if an athlete identified strongly with the athlete role, then they were more likely to increase the number of hours they participated (e.g., training or competition), and in turn be more committed to sport. In the test of an expanded model, sport enjoyment and personal investments were the strongest predictors of commitment. Sources of commitment (i.e., predictors) may differ depending on athlete developmental factors and competition levels. Thus, athletic identity was revealed to be a positive contributor to sport participation, and in turn, commitment to recreational soccer players.

Recreational athletics has many forms (e.g., pick-up game, club sport, etc.), one of the forms seen at the collegiate level is termed intramural sports. Baghurst et al. (2014) examined a group of female athletes' sport commitment. Researchers examined commitment with female intramural sport participants which included 109 female basketball players. This sample was between the ages of 18 and 29 years from both co-recreational and female only teams. Sport enjoyment, social support, and involvement opportunities were the strongest positive predictors of commitment for both groups of females, even though co-recreational females had much lower levels of commitment than the athletes who played on the female only teams. In conclusion, for the most part, sport enjoyment and involvement opportunities has been revealed as the strongest predictor of sport commitment in recreational athletes (e.g., Casper et al., 2007; Frayeh & Lewis, 2017).

Perceived Competence

Previous research has shown a strong relationship between perceived competence and other motivational constructs (e.g., Roberts et al., 1981). Perceived competence has multiple dimensions: (1) physical perceived competence, (2) cognitive perceived competence, and (3) general self-worth. For the purpose of the current study, researchers were primarily concerned with perceived physical competence. Perceived physical competence is how one feels about their own ability level. Roberts et al. (1981) investigated the relationship of sport participation and multiple dimensions of perceived competence. Participants included 143 children (73 males, 70 females), between the ages of 9 and 11 years. Researchers measured perceived competence in the form of 35 minute interviews, and participants were asked what they thought about their competence compared to teammates (are they better or worse than their teammates), as well as their own ability levels in general (high or low ability).

Results revealed that children involved in organized sports were more likely to hold higher physical competence, cognitive competence, and general self-worth than nonparticipants. Males were more likely to compare themselves to teammates on physical competence than females. Females tended to compare themselves using sources of information that in relation to their own levels of competence (i.e., physical, social, and/or cognitive) as opposed to comparing their ability level to others as a source of information.

Klint and Weiss (1987) expanded on perceived physical competence further in examining motives for participation. Klint and Weiss (1987) examined perceptions of competence and the motives children have for sport participation. Participants included 67 gymnasts (40 females, 27 males) between the ages of 8 and 16 years of age. Researchers measured perceived physical competence and motives for participation such as: skill development, affiliation, success/status, energy release, fitness, excitement, and challenge.

Results revealed that perceived physical competence was one of the strongest overall motives for gymnastics participation. Individuals who reported higher perceived physical competence were more likely to be motivated to participate for skill development reasons, such as learning new skills or improving current skills, as well as team aspects of gymnastics. Those who reported higher social perceived competence were more likely to rate affiliation motives, such as friends or team atmosphere, as their primary motivator for participating than those with lower social perceived competence. However, those who reported lower levels of social perceived competence were more likely to rate excitement or challenge as their most important reason for participating. In summary, perceptions of competence in various domains and the actual level of competence (i.e., higher or lower) may affect why an individual would continue participating in gymnastics or have continued motivation to participate. If the individual had higher social perceived competence, then that individual was motivated by affiliation, such as friends or teammates. In contrast, those higher in perceived physical competence were more motivated by competition or the challenge of gymnastics.

While having reviewed motives for participation in gymnasts, Papaioannou (1997) examined motives of physical education students differing on level of sport experience and age. With a sample of 1,393 male and female physical education students, between 12 and 19 years of age, Papaioannou (1997) examined perceived physical competence, perceived learning orientation, perceived performance orientation, preference for challenge, interest in the lesson, and perceived usefulness of the lesson. Students were placed in four groups based on sport participation: no sport participation, only recreational sport, only organized sport, or both types of sport. Results revealed that physical competence had a positive relationship with sport activity level, meaning that students who participated in both organized and recreational sport had the highest perceived physical competence, however these levels were similar to organized sport. Additionally, minor differences were found between the students who participated in both, and just organized or just recreational. In summary, perceived physical competence was found to have a significant positive relationship with activity level, however, the role of perceived competence and motivation was still relatively unexplored.

Ferrer-Caja and Weiss (2000) examined perceived physical competence as a predictor of intrinsic motivation among physical education students. Participants included 407 male and female physical education students from multiple schools, between the ages of 14 and 19 years. These participants were examined on self-determination, perceived physical competence, goal orientations (i.e., task or ego), class motivational climate, teaching directiveness, which measured whether the teachers were more “hands on” or “laid back” in the lesson, as well as examined these students’ intrinsic motivation, and motivated behaviors (e.g., choosing challenging tasks).

Results revealed that students who reported higher perceived physical competence also reported higher self-determination (Ferrer-Caja & Weiss, 2000). Higher reported self-determination led to higher intrinsic motivation and motivated behaviors, such as effort and persistence. perceived physical competence also played a role in higher task orientation, which was found to indirectly influence intrinsic motivation via perceived competence and self-determination. In summary, intrinsic motivation was most positively influenced by task orientation and perceived physical competence. This suggested that if a student had higher task orientation and thought of themselves as high ability, then that student would be more likely to have higher intrinsic motivation.

Kipp and Amorose (2008) examined predictors of perceived physical competence, autonomy, relatedness, and then those influences on self-determined motivation. Participants included 200 female high school-aged athletes from various sports. Researchers measured self-determined motivational orientation, perceived physical competence, perceived autonomy, perceived motivational climate, and relatedness. Self-determined motivation was the primary reason for an athlete's motivation or participation. Three types of self-determined motivation were used: intrinsic motivation, extrinsic motivation, and amotivation. Intrinsic motivation, which is the highest form of self-determined motivation, refers to motivation from within oneself, such as enjoyment or love of the game. Extrinsic motivation refers to motivators that come from outside of oneself that provide a means to an end, such as a scholarship to pay for schooling. Amotivation refers to the lowest form of self-determined motivation, which is described by a lack of motivation or reasons to continue participating. Consistent with past research (e.g., Weiss & Weiss, 2007), perceived physical competence and autonomy were shown to be significant positive predictors on motivational orientation.

Mouratidis and Michou (2011) examined perceived physical competence and dimensions of perfectionism, self-determined motivation (i.e., autonomous vs. controlled motivation), with coping and effort during training. Perfectionism refers to when an individual sets significantly high standards of performance and is more concerned or critical about evaluating one's performance. This particular research study examined two separate groups of athletes using similar measures and procedures. The first sample included 333 Greek adolescent athletes (226 male, 107 female) from various sports, with an average age of 15.59 years. This sample was examined using perfectionism (i.e., personal standards and concerns over mistakes), perceived physical competence, self-determined motivation, and coping skills related to sport. Coping skills were referred to as how well the individual could handle adversity, performing well under pressure, and goal setting or preparation.

Results from the first sample revealed that perceived physical competence was positively related to personal standards, autonomous motivation, and coping. Findings suggested that if an athlete reported higher perceived physical competence, then they also reported that they hold themselves to a higher standard, had more motivation by choice (i.e., autonomous), and higher ability to cope with aspects of sport (e.g., adversity). Gender differences were also reported, in that, males reported higher personal standards, perceived physical competence, and both types of motivation: autonomous and controlled. In this sample, high perceived physical competence was found in athletes who reported high personal standards, autonomous motivation, and held high coping skills.

Sample two included 63 male and female adolescent basketball players, with an average age of 14.40 years. This sample was examined on perfectionism, perceived physical competence, self-determined motivation, situational self-determined motivation which was measured after daily training sessions, and effort. Similar results were found relating to perfectionism, perceived physical competence, and self-determined motivation amongst one another. For example, perceived physical competence was positively related to autonomous motivation. In summary, perceived physical competence was found to be more prominent in males than females (i.e., sample one). Personal standards were found to be positively related to perceived physical competence in both samples, which suggested that an athlete may have a higher personal standard because they perceive their ability to be higher.

Similarly, Rottensteiner et al. (2015) used perceived physical competence as a predictor of self-determined motivation with persistence. Rottensteiner et al. (2015) examined Finnish athletes and their persistence in various sports. The second sample included 1,962 young male and female athletes as participants, and all were either 14 or 15 years of age. Researchers measured perceptions of success, perceived physical competence, self-determined sport motivation, and persistence. Persistence was measured using playing license records, researchers used this to identify persistent and withdrawn players.

Results revealed that persistent players reported higher intrinsic motivation and perceived physical competence compared to withdrawn players. This evidence suggested that factors that can increase intrinsic motivation, such as enjoyment, were found more often in persistent players than those who withdrew. Players with higher perceived physical competence reported higher motivation toward sport than the players who had lower competence. This finding presented an interesting argument, would an increase in perceived physical competence also increase sport commitment?

Some studies have already included perceived physical competence as a predictor of sport commitment (Carpenter & Coleman, 1998; Roberts et al., 1981; Scanlan et al., 2009; Scanlan et al., 2013; Weiss, 2015, 2020; Weiss & Weiss, 2007; Weiss et al., 2010). Perceived competence has been found to be a predictor of commitment both behaviorally and psychologically with a sample of competitive gymnasts (Weiss et al., 2010).

Evidence has revealed that perceived physical competence may also be a predictor of enjoyment (e.g., Scanlan et al., 2009), which then predicts commitment (Scanlan, Carpenter, Lobel, & Simons, 1993). Thus, perceived physical competence may be an important predictor of sport commitment. Overall, perceived physical competence was shown to increase motivation, which positively predicted persistence in organized sport (Rottensteiner et al., 2015). Perhaps perceived physical competence adds understanding to the picture of why someone would choose to persist in sport (e.g., commitment, motivation). Another "piece of the puzzle" may provide an even more well-rounded approach to examining athletes and their levels of commitment, athletic identity (Brewer et al., 1993b).

Athletic Identity

Athletic identity is how strongly someone identifies with the athlete role (Brewer et al., 1993b). Frayeh and Lewis (2017) found evidence that supported if someone identifies strongly with being an athlete, then they would likely have a higher level of sport commitment. Thus, athletic identity may factor into walk-on athletes' continued participation and commitment.

Brewer, Van Raalte, and Linder (1993b) introduced the Athletic Identity Measurement Scale (AIMS) as a means of assessing athletic identity. Three groups of participants completed measures, which were examined as three different studies; and researchers wanted to determine which set of measures would be the most effective. The initial validation group for the AIMS, included 243 students (124 females, 119 males). Participants completed the questionnaire for a second time 14 days after initial assessment to obtain test-retest reliability. Researchers measured athletic identity, level of physical activity (i.e., highly or lowly active), and importance of: sport competence, physical conditioning, attractive body, and physical strength. Results found that each item contributed effectively to the total AIMS, as well as demonstrated internal consistency. The test-retest reliability was found to be stable over a 14-day period. Males scored significantly higher on athletic identity than females, which researchers thought this may stem from a greater focus on male sport compared to female sport.

The second group examined had a total of 449 students enrolled in an introductory psychology course (Brewer et al., 1993b). Participants completed questionnaires that measured: athletic identity, involvement level in sport (i.e., very involved or not), sport achievement (i.e., competitiveness, goal orientation), and self-esteem. Results demonstrated that males reported higher athletic identity scores than females. The AIMS was also found to have adequate reliability and validity for assessing athletic identity.

In the third group, similarities and differences in athletic identity and sport competence were examined. Participants included 90 male varsity football players. Questionnaires administered in pre-season, which examined athletic identity and importance of sport competence. Results revealed those who thought being good at sport (i.e., perceived competence) was important to them, also reported higher athletic identity than those who deemed sport unimportant. In summary, preliminary support was found for the AIMS across the three groups, but further research was needed.

Brewer, Petipas, et al. (1993a) specifically examined athletic identity and identity foreclosure with participants from different levels of athletic involvement. Identity foreclosure was described as closing off other identities or having a lack of experiences due to identifying with one role early on. Participants included 502 students (301 females, 201 males) from a variety of intercollegiate and intramural sports, as well as some non-athletes. Foreclosure increased directly with athletic involvement, which suggested that the longer an individual remains in a sport the more "engulfed" in the sport they become. This could possibly be the result of a lack of experiences outside of sport, causing an increased level of identity foreclosure. Results revealed that the male underclassmen had significantly higher athletic identity than male upperclassmen. For intercollegiate and intramural athletes, no significant relationship emerged for gender and athletic identity. Athletic identity was positively related to athletic involvement, thus the more one is involved in athletics, the higher the athletic identity. Athletic identity and identity foreclosure were positively related to one another.

Murphy et al. (1996) also examined similar variables including career maturity. The purpose of this study was to examine self-identity variables, such as athletic identity and identity foreclosure, and their relationship to each other as well as career maturity (Murphy et al., 1996). Career maturity can be described as potential to achieve or pursue other professions outside the realm of sport, such as graduating and becoming an accountant. Participants included 124 intercollegiate athletes (99 males, 25 females) from different sports, between 18 and 24 years of age. An inverse relationship emerged between athletic identity and identity foreclosure with career maturity. That is, higher athletic identity tended to be related to lower career maturity. Similar relationships emerged for identity foreclosure and career maturity. Results from the different age levels revealed that older student athletes had higher athletic identity and identity foreclosure than younger student athletes.

Similar to previous studies (e.g., Brewer, Petipas, et al., 1993a), males and females did not differ on athletic identity. However, females had higher career maturity than males, which suggested that females may be more likely to pursue another profession outside of sport. Researchers also assessed different types of sport based on revenue the team generates for the university and found that athletes competing in revenue producing sports had higher identity foreclosure and lower career maturity (Murphy et al., 1996). Overall, about 65% of participants reported an impairment or delay in career development. Individuals may struggle with exploring other opportunities or careers outside of sport. Similarly, higher identity foreclosure was associated with lower career maturity scores. Thus, if an individual identifies too strongly with the athlete role, that individual may not explore other careers or opportunities outside of sport. Athletic identity has also been found to be a motivational influence (e.g., Tušak et al., 2005).

Tušak et al. (2005) examined relationships between personality and athletic identity in 330 male and female elite athletes. Personality dimensions, sport attitude, self-motivation (i.e., intrinsic motivation), sport orientation, athletic identity, state anxiety, and trait anxiety were assessed. Personality dimensions included energy, acceptability, conscientiousness, emotional stability, and openness. Sport attitude referred to motives to compete, such as achieving success, avoiding failure, and motive for power (e.g., desire to impact others). Sport orientation was measured via level of competitiveness, desire to win, and desire to achieve goals. State anxiety refers to feelings in the moment as a direct effect of some action, versus trait anxiety which refers to one's personality as being more anxious in the first place.

Results revealed that those who reported higher athletic identity also had higher energy, conscientiousness, and were more competitive. In regards to motivation, those who reported higher athletic identity also had higher intrinsic motivation and were more likely to strive for success. Those who reported higher goal and win orientation also had higher athletic identity. Researchers noted that surprisingly, those who reported higher athletic identity were more likely to try to avoid failure. Win orientation, positive competitive motivation, and negative competitive motivation were the strongest positive predictors of athletic identity.

Poux and Fry (2015) examined Division I intercollegiate athletes on athletic identity. However, this study examined the motivational climate and career exploration of 101 Division I athletes between the ages of 18 and 23 years. Researchers measured perceived motivational climate, athletic identity, career exploration and engagement, caring climate, and career decision self-efficacy. Career exploration and engagement referred to how much an individual is preparing for the future (e.g., occupation, training, etc.). Caring climate referred to how much the athletes' perceived that coaches and teammates care about them or how well they are treated (e.g., respect or disrespect). Career decision self-efficacy referred to the confidence level of an individual, thus they can decide on a career path and how confident they feel about it.

Most of the athletes reported high athletic identity, career self-efficacy, and exploration. If individuals identified strongly with the athlete role, then they also reported confidence about their future career, and were more likely to explore opportunities outside of sport. This evidence contradicted Brewer, Petipas, et al. (1993b). Athletes who reported higher perceived task-involving and caring climate also had higher athletic identity, career self-efficacy, and career engagement than those who had lower perceptions of a task-involving climate. Thus, athletic identity was positively associated with task-involving climate, and in turn, higher career self-efficacy and exploration.

Griffith and Johnson (2002) made an interesting argument concerning potential differences between Division I athletes and Division III athletes on the basis of athletic identity. Griffith and Johnson (2002) included 234 male and female track and field athletes, from Division I and Division III athletic teams, between the ages of 18 and 22 years. Researchers measured athletic identity, life role, and self-concept. Life role referred to the level of identification or importance that they placed on different areas, such as academics. Results revealed that those who reported higher athletic identity found the athletic life role as significantly more important than those with lower athletic identity. Interestingly, Division III athletes reported higher athletic identity, scholastic importance, global competence, and found that athletic competence was the most important competence domain compared to others. Division I athletes, however, reported that the athletic role was more important to them than Division III. Division I athletes also reported similarly to Division III in that athletic competence was the most important competence domain compared to others. Thus, differences (e.g., athletic identity) and similarities (e.g., athletic competence) were found between Division I and Division III athletes. Overall, Division I athletes had lower athletic identity than Division III athletes, which was an unexpected finding. Perhaps Division I athletes differ in athletic identity based on scholastic compensation (i.e., scholarship vs. walk ons/non-scholarship).

Conclusion

The SCM has been used successfully and effectively to analyze many different types and ages of athletes (e.g., Scanlan et al., 2016). Perceived competence has also been used successfully to examine various athletes and competitive levels, which suggested that perceived competence may be a predictor of commitment (e.g., Weiss et al., 2010) and motivation (e.g., Klint & Weiss, 1987). Athletic identity has also been revealed to be a predictor of commitment (e.g., Frayeh & Lewis, 2017), and athletes can exhibit high athletic identity regardless of competitive level (e.g., Brewer et al., 1993b).

For the current study, the purpose is to examine sport commitment with walk-on (non-scholarship) athletes vs. scholarship athletes (partial/full) at the intercollegiate level using the sport commitment model (SCM), including perceived competence and athletic identity as potential influences on walk ons' commitment. Does perceived competence serve as a predictor for commitment with walk-on athletes? Differences between non-scholarship athletes and scholarship athletes on athletic identity is relatively unexplored. In summation, do walk-ons participate for different reasons and/or motives than scholarship athletes?

Chapter III

Method

Participants

Participants included 153 Division I athletes (54 males, 98 females, & 1 non-binary) from 12 different intercollegiate sports at the University of Northern Iowa. A total of 161 athletes participated, but information from 8 participants were not included due to incomplete data. These participants were between the ages of 18 and 24 years of age (M = 20.26 years, SD = 1.31). With regards to ethnicity, 82.4% of the participants identified as Caucasian, 7.8% African American, 6.5% Bi-Racial, and 3.3% Hispanic or Latino. Approximately 35% of the participants were on a full scholarship, 41.8% were on partial scholarship, and 22.9% of the participants did not receive any form of athletic aid (i.e., scholarship) for participating in their sport.

Measures

Sport Commitment

The sport commitment questionnaire (SCQ-2; Scanlan et al., 2016) was used to evaluate two types of sport commitment (SCM; Scanlan, Carpenter, Schmidt et al., 1993). Enthusiastic commitment is a subscale of sport commitment is measured by six items. An example item of enthusiastic commitment is, "I am dedicated to keep playing this sport." Constrained commitment was measured by five items. An example item is, "Staying in this sport is more of a necessity than a desire." Athletes responded using a 5-point Likert scale, with answers of 1 (strongly disagree) to 5 (strongly agree). This measure has demonstrated acceptable reliability and validity in past studies (e.g., Scanlan et al., 2016). For each subscale, a mean score was calculated.

Sport Enjoyment

This construct was evaluated with five items (SCQ-2; Scanlan et al., 2016), score was calculated to determine its relationship with the two types of sport commitment. An example item is, “Playing this sport is fun.” Athletes responded using a 5-point Likert scale, with answers ranging from 1 (strongly disagree) to 5 (strongly agree). This scale has demonstrated adequate validity and reliability in past studies (SCQ-2; Scanlan et al., 2016).

Personal Investments

This construct was evaluated by a total of nine items, which includes two subscales: personal investments-loss (PI-L), and personal investments-quantity (PI-Q). An example item for PI-L is, “The mental effort I have put into this sport makes it difficult to stop playing.” An example item for PI-Q is, “I have spent a lot of time in this sport.” A mean score for each subscale was calculated. This scale has demonstrated adequate validity and reliability in past studies (SCQ-2; Scanlan et al., 2016).

Valuable Opportunities

This construct was evaluated by four items (SCQ-2; Scanlan et al., 2016). An example item is, “There are future events in this sport that I would really miss experiencing if I no longer played.” Athletes responded using a 5-point Likert scale, with answers ranging from 1 (strongly disagree) to 5 (strongly agree). This scale has demonstrated adequate validity and reliability in past studies (SCQ-2; Scanlan et al., 2016).

Social Constraints

This construct was evaluated by four items (SCQ-2; Scanlan et al., 2016). An example item is, "People would be upset if I didn't keep playing this sport because they have invested so much." Athletes responded using a 5-point Likert scale, with answers ranging from 1 (strongly disagree) to 5 (strongly agree). This scale has demonstrated adequate validity and reliability in past studies (SCQ-2; Scanlan et al., 2016).

Other Priorities

This construct was evaluated by five items, then the average score was calculated and determine its relationship to the two types of sport commitment. An example item is, "Other things in my life make it difficult to play this sport." Athletes responded using a 5-point response scale, with answers ranging from 1 (strongly disagree) to 5 (strongly agree). This scale has demonstrated adequate validity and reliability in past studies (SCQ-2; Scanlan et al., 2016).

Social Support

This construct was evaluated by a total of nine items (SCQ-2; Scanlan et al., 2016), and has two subscales: social support-emotional, and social support-informational. Social support-emotional included a total of four items. An example item is, "People who are important to me attend the majority of my competitions in this sport." Social support-informational includes a total of five items. An example item is, "I have a mentor who provides guidance in this sport." Athletes responded using a 5-point response scale, with answers ranging from 1 (strongly disagree) to 5 (strongly agree). A mean score was calculated for each subscale. This scale has demonstrated adequate validity and reliability in past studies (SCQ-2; Scanlan et al., 2016).

Desire to Excel

This construct was evaluated by a total of 11 items (SCQ-2; Scanlan et al., 2016), and has two subscales: desire to excel-mastery achievement and desire to excel-social achievement. Desire to excel-mastery included a total of six items, an example item is, “In this sport, I am constantly trying to improve my skills.” Desire to excel-social achievement includes a total of five items. An example item is, “I try to dominate in this sport.” Athletes responded using a 5-point response scale, with answers ranging from 1 (strongly disagree) to 5 (strongly agree). Mean scores was calculated. This scale has demonstrated adequate validity and reliability in past studies (e.g., Scanlan et al., 2016).

Perceived Costs

This variable was evaluated by four items about negative feelings or responses associated with the athlete’s sport from Raedeke (1997). An example item is, “To what extent are there unpleasant things associated with participation?” Athletes responded using a 5-point response scale, with answers ranging from 1 (strongly disagree) to 5 (strongly agree). Mean scores was calculated. This scale has demonstrated acceptable validity and reliability in past studies (e.g., Raedeke, 1997).

Perceived Competence

Perceived physical competence was measured via Harter’s (1982) subscale for perceived physical competence using 7 items. Athletes responded using a 4-point scale using "structure alternative format". Participants answered one of two descriptions and answer whether that description is “really true for me” or “sort of true for me”. An example item is, “I have a tendency to do well at sports.” This subscale has demonstrated acceptable reliability and validity in past studies (i.e., Harter, 1982).

Athletic Identity

Athletic identity was measured via the Athletic Identity Measurement Scale (AIMS; Brewer et al., 1993b), which was composed of 10 items. Items was scored and presented on a 5-point Likert scale, with answers ranging from 1 (strongly disagree) to 5 (strongly agree). An example item is, “I consider myself an athlete.” This measurement has demonstrated adequate reliability and validity in past studies (i.e., Brewer et al., 1993b). A mean score was calculated.

Procedures

After receiving approval from the Institutional Review Board (IRB), recruitment of participants was conducted. Strength and conditioning coaches for each of the participating sports were asked permission to recruit and administer questionnaires to the athletes before or after a training session. Once the coach agreed, a time was scheduled to meet with potential participants, invite them to participate, and complete informed consent and questionnaires. After consent was given, questionnaires were administered. The primary researcher administered questionnaires in person for each of the sessions, except for sports with which the primary researcher has influence over as a strength and conditioning coach, in which a proxy (i.e., colleague) was asked to assist. The questionnaires took between 10 and 20 minutes to complete.

Data Analysis

All data was entered into SPSS Version 24. Following data entry and verification, preliminary descriptive analyses were conducted: descriptives, reliabilities, and correlations. In order to determine the most salient predictors of enthusiastic and constrained commitment for intercollegiate athletes, a series of simultaneous multiple regressions ($p \lesssim .05$) was conducted. The predictor variables included: sport enjoyment, personal investments, valuable opportunities, social constraints, other priorities, social support, desire to excel, perceived costs, perceived competence, and athletic identity. The criterion variable was: (a) enthusiastic commitment, and (b) constrained commitment.

In order to determine if walk-on and scholarship athletes differed on sport commitment constructs, perceived competence, and athletic identity, several MANOVAs (multivariate analysis of variance) were conducted. The independent variable for each analysis was group (i.e., walk-on and scholarship), and the dependent variables were: enthusiastic commitment, constrained commitment, sport enjoyment, personal investments, valuable opportunities, social constraints, other priorities, social support, desire to excel, perceived costs, perceived competence, and athletic identity. If the MANOVA was significant ($p \lesssim .05$), then an evaluation of the mean scores was used to determine which group was significantly higher on each significant construct.

Chapter IV

Results

Preliminary Analyses

Reliabilities

Alpha coefficients were computed to determine scale reliabilities for all constructs. Table 1 presents the alpha coefficients for all constructs along the diagonal. All measures demonstrated adequate to good reliability, with alphas ranging from .66 to .91.

Correlations

Correlations were calculated among all constructs (See Table 1). Examination of the correlations revealed that valuable opportunities, informational social support, desire to excel-mastery, and desire to excel-social achievement were strongly and positively related with enthusiastic commitment ($r \geq .51$). Thus, higher enthusiastic commitment was related to higher valuable opportunities, informational social support, and both desire to excel-mastery and social achievement. Sport enjoyment was strongly, positively related to valuable opportunities, informational social support, and desire to excel-mastery. Therefore, higher enjoyment was related to higher valuable opportunities as well as informational social support and exhibit a desire to excel and master skills in sport. Valuable opportunities was also strongly and positively related to desire to excel-mastery ($r = .58$). Thus, higher valuable opportunities was related to higher desire to excel-mastery. Desire to excel-mastery was strongly and positively related to informational social support ($r = .51$), in that, higher informational social support was related to higher desire to excel-mastery. Strong correlations were found in the negative direction for constrained commitment and sport enjoyment (*r* = -.57). Thus, higher sport enjoyment was related to lower constrained commitment. Next, a series of multiple regression analyses were conducted in to determine the strongest predictors of enthusiastic and constrained commitment.

Table 1

Correlations, means, standard deviations, and alpha coefficients.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Perceived Competence	**0.69**														
2. Enthusiastic Commitment	0.30	**0.89**													
3. Constrained Commitment	-0.28	-0.36	**0.83**												
4. Sport Enjoyment	0.40	0.71	-0.57	**0.91**											
5. Valuable Opportunities	0.31	0.63	-0.31	0.51	**0.67**										
6. Other Priorities	-0.15	-0.43	0.48	-0.44	-0.34	**0.85**									
7. Personal Investments-Loss	0.02	0.38	0.23	0.14	0.35	-0.07	**0.85**								
8. Personal Investments-Quantity	0.19	0.3	-0.03	0.14	0.19	-0.17	0.31	**0.66**							
9. Social Constraints	-0.04	0.18	0.43	-0.11	0.13	0.11	0.45	0.24	**0.81**						
10. Social Support-Emotional	0.28	0.17	-0.25	0.19	0.29	-0.21	0.15	0.23	0.03	**0.73**					
11. Social Support-Informational	0.27	0.56	-0.41	0.52	0.43	-0.41	0.19	0.27	0.11	0.39	**0.81**				
12. Desire to Excel-Mastery	0.26	0.71	-0.38	0.55	0.58	-0.43	0.32	0.34	0.06	0.35	0.51	**0.89**			
13. Desire to Excel-Social Achieveme	0.36	0.61	-0.17	0.41	0.45	-0.39	0.37	0.49	0.23	0.31	0.41	0.69	**0.76**		
14. Athletic Identity	0.05	0.46	0.17	0.14	0.31	-0.16	0.46	0.3	0.50	0.01	0.16	0.31	0.47	**0.76**	
15. Perceived Costs	-0.14	-0.34	0.45	-0.49	-0.15	0.31	0.1	0.004	0.03	-0.07	-0.35	-0.23	0.11	0.02	**0.72**
M	2.91	4.15	2.58	4.4	4.39	2.63	4.17	4.85	3.74	4.42	4.02	4.55	4.46	3.63	2.83
SD	0.51	0.81	1.01	0.67	0.6	0.9	0.79	0.32	0.97	0.64	0.78	0.51	0.52	0.58	0.81

Note: Alpha coefficients are along the diagonal

Predictors of Enthusiastic and Constrained Commitment

A series of simultaneous multiple regression analyses were conducted. The first analysis was conducted with predictor variables that were included in the original SCM (Scanlan, Carpenter, Schmidt, et al., 1993): enjoyment, valuable opportunities, other priorities, personal investments (both quantity and loss), social constraints, and costs. The criterion variable was enthusiastic commitment. This regression was significant: $F(7, 143) = 42.95$, $\rho \leq .001$; $R = .82$. The effect size showed that 68% of the variance in enthusiastic commitment was accounted for by these predictors. The significant predictors of enthusiastic commitment included sport enjoyment, valuable opportunities, personal investments-loss, and social constraints. Higher sport enjoyment ($\beta = .50$), valuable opportunities ($\beta = .26$), personal investments-loss ($\beta = .13$), and social constraints ($\beta = .14$) predicted higher enthusiastic commitment.

A second multiple regression analysis was conducted with perceived competence, emotional social support, informational social support, desire to excel-mastery, desire to excel-social achievement, and athletic identity as predictor variables. The criterion variable was again enthusiastic sport commitment. This regression was also significant: $F(6, 137) = 41.26$, $\rho \leq .001$; $R = .80$. The effect size showed that 64% of the variance in enthusiastic commitment was accounted for by these predictors. The significant predictors of enthusiastic commitment were perceived competence, emotional social support, informational social support, desire to excel-mastery, and athletic identity. Higher perceived competence ($\beta = .11$), informational social support ($\beta = .31$), desire to excel-mastery ($\beta = .43$), and athletic identity ($\beta = .24$) predicted higher enthusiastic sport commitment. Additionally, lower emotional social support (β = -.18) also predicted higher enthusiastic commitment.

The third and fourth regressions were conducted with constrained commitment as the criterion variable. A third multiple regression analysis was conducted with predictor variables that were included in the original SCM (Scanlan, Carpenter, Schmidt, et al., 1993): enjoyment, valuable opportunities, other priorities, personal investments (both quantity and loss), social constraints, and costs. This regression was significant: $F(7, 143) = 28.00$, $\rho \leq .001$; $R = .76$. The effect size showed that 58% of the variance in constrained commitment was accounted for by these predictors. The significant predictors of constrained commitment were: sport enjoyment, valuable opportunities, personal investments-loss, social constraints, other priorities, and perceived costs. Higher other priorities (β = .21), personal investments-loss (β = .19), social constraints (β = .32), and perceived costs (β = .20), and lower sport enjoyment (β = -.28) and valuable opportunities (β = -.16) predicted higher constrained commitment.

A fourth multiple regression analysis was conducted with perceived competence, emotional social support, informational social support, desire to excel-mastery, desire to excel-social achievement, and athletic identity as predictor variables. This regression was also significant: $F(6, 137) = 10.36$, $\rho \leq .001$; $R = .56$. The effect size showed that 31% of the variance in constrained commitment was accounted for by these predictors. The significant predictors of constrained commitment were perceived competence, informational social support, desire to excel-mastery, and athletic identity. Higher athletic identity (β = .28), and lower perceived competence (β = -.17), informational social support (β = -.29), and desire to excel-mastery (β = -.31) predicted higher constrained sport commitment.

Differences Between Full Scholarship and Non-Scholarship athletes

A series of MANOVAs were conducted to compare scholarship and non-scholarship athletes on the predictors of commitment. In the first MANOVA, groups were compared on enthusiastic and constrained commitment. The MANOVA was not significant: Wilk's $\lambda = 1.0$, $F(2, 85) = .01$, $\rho = .99$. Therefore, scholarship and non-scholarship athletes did not differ on enthusiastic nor constrained commitment. In the second MANOVA, groups were compared on sport enjoyment, valuable opportunities, and costs. The MANOVA was not significant: Wilk's $\lambda = .98$, $F(3, 84) = .60$, $\rho = .62$. Scholarship and non-scholarship athletes did not differ on sport enjoyment, valuable opportunities, or costs. In the third MANOVA, groups were compared on social constraints, emotional social support, and informational social support. The MANOVA was not significant: Wilk's $\lambda = .97$, $F(3, 84) = .93$, $\rho = .43$. Therefore, scholarship and non-scholarship athletes did not differ on social constraints, emotional social support, or informational social support.

In the fourth MANOVA, groups were compared on personal investments-loss, personal investments-quantity, and other priorities. The MANOVA was significant: Wilk's $\lambda = .85$, $F(3, 84) = 5.03$, $\rho \leq .003$. The effect size showed that 15% of the variance was accounted for by group. Scholarship and non-scholarship athletes differed significantly on personal investments-quantity. Scholarship athletes were found to have higher personal investments-quantity ($M = 4.95$) than non-scholarship athletes ($M = 4.73$).

In the next MANOVA, groups were compared on desire to excel-mastery achievement and desire to excel-social achievement. The MANOVA was significant: Wilk's $\lambda = .90$, $F(2, 85) = 4.52$, $\rho \leq .01$. The effect size showed that 10% of the variance was accounted for by group. Scholarship and non-scholarship athletes differed significantly on desire to excel-social achievement. Scholarship athletes had higher desire to excel-social achievement ($M = 4.55$) than non-scholarship athletes ($M = 4.33$).

In the last MANOVA, groups were compared on athletic identity and perceived competence. The MANOVA was significant: Wilk's $\lambda = .93$, $F(2, 81) = 3.25$, $\rho = .04$. The effect size showed that 7% of the variance was accounted for by group. Scholarship and non-scholarship athletes differed significantly on athletic identity. Scholarship athletes were revealed to have higher athletic identity ($M = 3.72$) than non-scholarship athletes ($M = 3.46$).

Chapter V

Discussion

The purpose of this study was to examine sport commitment with walk-on (non-scholarship) athletes in comparison to scholarship athletes (partial/full) at the intercollegiate level using the sport commitment model (SCM; Scanlan et al., 2016). Researchers were primarily interested in differences in commitment levels between scholarship athletes and walk-ons. Additionally, the present study investigated original and new predictors of both enthusiastic and constrained commitment.

Enthusiastic Commitment

Enthusiastic commitment has been found in previous research to be predicted by sport enjoyment, valuable opportunities, and the desire to excel (Scanlan et al., 2016). That is, if athletes reported higher feelings of enjoyment for sport, saw their opportunities and chances available to them as valuable, and strived for excellence through mastering skills and achieving social status, then they also reported greater feelings of attraction and love for the sport. In the present study, sport enjoyment, valuable opportunities, personal investments-quantity, and social constraints were all significant positive predictors of enthusiastic commitment. Therefore, if athletes reported higher feelings of enjoyment for sport, saw sport involvement as beneficial, reported putting forth higher resources, and felt a higher social obligation to continue participating, then athletes also reported greater feelings of attraction and love for the sport.

Additionally, perceived competence, social support-emotional and informational, desire to excel-mastery, and athletic identity were found to be strong predictors of enthusiastic commitment. That is, if athletes reported high perceived personal skill/ability level, coaching or critique from significant others, focus on mastering skills, and they identified strongly with the athlete role, then athletes also reported greater attraction-based commitment. Additionally, lower emotional social support also predicted higher enthusiastic commitment. That is, if the athlete reported lower encouragement or empathy from significant others, then they also reported higher attraction-based commitment.

For intercollegiate athletes, it stands to reason high levels of sport enjoyment would lead to higher enthusiastic commitment in their sport. Enthusiastic commitment refers to a positive outlook or feeling that the athlete has for sport. The love or enjoyment for sport has consistently been shown to be the strongest positive predictor of sport commitment (e.g., Carpenter & Coleman, 1998; Scanlan, Carpenter, Schmidt et al., 1993). This makes intuitive and theoretical sense in that, to have a positive outlook on sport, one would need to have a sense of passion and love for the sport, which is similar to the definition of enthusiastic commitment. Not surprising, this sample consisted of Division I athletes who compete in both practice and competition almost year-round. One could theorize that due to the time, energy, and effort that these athletes put in every day, it could be difficult to sustain without some sort of joy or love for the sport.

Similarly, in order to enjoy sport, the athlete should see their experiences and opportunities as valuable, which could also increase enjoyment levels, and in turn, commitment. Valuable opportunities, formerly known as involvement opportunities, has been another strong positive predictor of sport commitment in previous research (e.g., Baghurst et al., 2014; Carpenter & Scanlan, 1998). If an individual perceives the unique opportunities for participating in sport as valuable, then they will most likely continue to participate because they will not be able to partake in those opportunities without sport. For this sample, opportunities may include travel, running youth camps for kids, or team dinners. It is not surprising that valuable opportunities emerged as a strong positive predictor of commitment.

Personal investments has been found to be a significant positive predictor of commitment to sport (Weiss et al., 2010; Zahariadis et al., 2006). For the current study, the sense of loss from personal investments was a significant predictor of enthusiastic commitment. The amount of "blood, sweat, and tears" that athletes put into sport will impact their commitment, especially for highly competitive athletes at the Division I level. The more that someone has invested in sport, the more likely they are to continue investing and participating in that sport in order to gain some type of "return" on these investments.

Perceptions of competence emerged as a positive predictor of enthusiastic commitment. This makes intuitive and theoretical sense, in that, when one thinks they are good at a skill or activity, then the athlete tends to enjoy and be more motivated to work hard at the skill/activity (Klint & Weiss, 1987). Not surprising, this sample consisted of high ability athletes competing at the Division I level. Perhaps these athletes are using multiple sources of information to evaluate competence, such as status on campus, media coverage, playing time, and winning. Taken in combination, it is not surprising that perceived competence led to greater enthusiastic commitment (Carpenter & Coleman, 1998; Roberts et al., 1981; Scanlan et al., 2009; Scanlan et al., 2013; Weiss, 2015, 2020; Weiss & Weiss, 2007; Weiss et al., 2010).

Along that same line, if someone is good or even thinks they are good at something, they often will continue to participate in more mastery attempts in efforts to "perfect" that skill, and may even begin to enjoy the challenge, thus increasing enthusiastic commitment (Scanlan, Carpenter, Lobel, & Simons, 1993). Perhaps these athletes enjoy embracing new challenges. Specifically, for this sample of highly competitive athletes, it is not surprising that the desire to master and develop skills leads to higher enthusiastic commitment. It is also possible that in this highly competitive environment, the athletes feel they have no choice to try and master skills due to other athletes competing for the same position.

In order to engage in mastery attempts, their needs to be some sort of feedback from a significant other such as a coach or teammate in order to correct skills and behaviors to increase overall quality of the next attempt. This critique or form of coaching could be considered informational social support. Mastery attempts generally are enhanced or improved through practice and coaching. The more an individual does a certain skill or movement, the better they usually become through kinesthetic sense and coaching critique. Previous research has shown social support to be a strong predictor of commitment (e.g., Casper et al., 2007). Thus, if an athlete receives support in the form of information, then they will have a more positive view of sport, and in turn higher enthusiastic commitment. If the athlete feels they are being supported and not left struggling to figure it out on their own, then they will most likely have more positive emotions. This group of Division I athletes are constantly surrounded by coaches and teammates, who may be coaching or giving them constructive criticism to increase overall skill.

Athletic identity was also a positive predictor of enthusiastic commitment. Past studies have examined athletic identity and its impact on motivation (e.g., Klint & Weiss, 1987; Tušak et al., 2005), as well as a predictor of commitment (e.g., Frayeh & Lewis, 2017). If an athlete identifies strongly as an athlete, then the athlete will most likely also feel more positively about their commitment to sport. It is possible that identifying as an athlete creates a sense of pride, which may bring these athletes a sense of happiness, and in turn, increase love of the sport.

Emotional social support negatively predicted enthusiastic commitment. This is inconsistent with past research (Scanlan et al., 2016). Additionally, past research has compared social support between entrapped, vulnerable, and attracted athletes (Weiss & Weiss, 2003, 2006). In these studies, athletes who were more attracted to their sport reported greater social support from significant others compared to athletes with lower attraction to sport. Further research is needed to clarify this finding.

Lastly, social constraints was found to be a positive predictor of enthusiastic commitment. This result is consistent with past research in that, Scanlan, Carpenter, Schmidt et al. (1993) hypothesized that an increase in strength or number of social constraints would lead to a higher overall sense of commitment. However, at that time there was no differentiation between enthusiastic and constrained commitment. This finding is surprising because one could theorize that since social constraints were described by the perceived social expectations to continue participating or the feeling of an obligation to continue, then these athletes may view that as more negative than positive.

Constrained Commitment

For constrained commitment, previous literature has shown that athletes' enjoyment and the value of opportunities were found to be negative predictors, with other priorities and social constraints as positive predictors (Scanlan et al., 2016). The present study had similar findings for predictors when compared to previous literature (e.g., Carpenter et al., 1993; Scanlan et al., 2016). Sport enjoyment, valuable opportunities, the sense of loss of personal investments, and social constraints were all significant predictors of constrained commitment in the present study. Additionally, other priorities (involvement alternatives; Scanlan, Carpenter, Schmidt, et al., 1993), athletic identity, and perceived costs were also significant positive predictors of constrained commitment. That is, if athletes saw other opportunities outside of sport as more appealing, as well as viewed the downsides of sport as salient, felt they have invested a large amount of effort and energy into sport that they will not get back if they quit, and identified strongly with the athlete role, then they also reported greater entrapment-based commitment to sport. Schmidt and Stein (1991) theorized that entrapment-based commitment was associated with more negative feelings toward sport.

Constrained commitment was also strongly predicted by perceived competence, informational social support, and desire to excel in mastering skills. However, these significant predictors were found to be negative predictors of constrained commitment. That is, if athletes view own ability level as low, they received very little feedback from significant others such as coaches, and does not possess the desire to master skills, then athletes reported they felt that they “have to continue in sport”. Furthermore, lower enjoyment in sport, and a lack of perceptions of the opportunities and benefits of sport also predicted greater obligation to continue in sport.

Other priorities was a strong positive predictor of constrained commitment. This makes intuitive and theoretical sense. If the athlete sees other opportunities outside of sport as more appealing or require the athletes’ attention and effort, then that athlete may develop negative feelings towards sport. Casper et al. (2007) found that higher involvement alternatives (other priorities) led to lower enjoyment. In this case, it may even lead to an overall lower sense of commitment and may fall in a gap between constrained and enthusiastic similar to “vulnerable” gymnasts in Weiss and Weiss (2003). For this sample of Division I athletes, it is not surprising that other priorities led to higher constrained commitment. An intercollegiate athlete has many pressing concerns in life, including that be time constraints, financial, school, or family. Most intercollegiate athletes are at college to earn a degree and graduate, not necessarily to further their sport career. So, one could theorize that school may be one of the most important aspects of their life and may compete with the athletes sport involvement for time, energy, focus, and attention.

Social constraints was a strong positive predictor of constrained commitment. This is consistent with past research in terms of commitment (e.g., Scanlan, Carpenter, Schmidt, et al., 1993). The sense of obligation to continue participation to important people in the lives of these athletes may lead to feelings of being entrapped in sport (Weiss & Weiss, 2003). For this sample of athletes, it is not surprising that higher social constraints led to higher constrained commitment due to the emphasis placed on team performance at the collegiate level. A sense of obligation to continue may form through relationships with teammates, coaches, or parents. For example, if an athlete is on a scholarship, that athlete may perceive pressure from parents to continue as a means of earning their degree.

Perceived costs emerged as a significant positive predictor of constrained commitment. Perceived costs have been shown to have an inverse relationship with enthusiastic commitment (e.g., Weiss et al., 2010). If athletes were aware and perceived many downsides about sport, then they reported lower commitment (Weiss & Weiss, 2003, 2006). Raedeke (1997) found that "malcontented" swimmers had higher perceived costs than "enthusiastic" swimmers. Previous research has also shown higher perceived costs was associated with more negative perceptions of sport, such as being malcontented (e.g., Raedeke, 1997), or feeling entrapped (e.g., Weiss & Weiss, 2003). Consistent with past research, this study also found that perceived costs was associated with higher negative perceptions of sport. That is, if athletes see the downsides of sport as salient, then they may feel more negatively about sport or more obligated to continue participation. For this sample, it is not surprising that higher perceived costs led to more negative emotions and feelings about sport. Intercollegiate athletics is demanding, stressful, time consuming, and at times, boring and monotonous. If athletes feel that sport is too stressful, then it would not be surprising if they reported higher negative feelings for sport and less joy.

The sense of loss of personal investments was a significant positive predictor of constrained commitment. This makes sense, in that, if athletes feel like they have put a large amount of "blood, sweat, and tears" into sport, then they are more likely to continue participating because they will never get those resources back. Personal investments has been shown to be a positive predictor of commitment in past research (e.g., Carpenter & Coleman, 1998; Scanlan, Carpenter, Schmidt et al., 1993). A sense of loss of personal investments was a significant predictor of both enthusiastic and constrained commitment in the present study, which is consistent with past research (e.g., Scanlan, Carpenter, Schmidt et al., 1993). Intercollegiate athletes put a lot of effort into sport. This requires high amounts of focus and energy that they will never get back. Perhaps personal investments are a "double edged sword". If athletes believe they have put a large amount of effort and energy into their sport, then this may act as a barrier to leaving, regardless of the athletes positive or negative feelings about sport overall.

Similarly, athletic identity positively predicted both enthusiastic and constrained commitment. Athletic identity has been shown in past research to predict intrinsic motivation (e.g., Tušak et al., 2005), which one could argue aligns with enthusiastic commitment. This finding in the present study may suggest that athletic identity is similar to personal investments, in that, higher athletic identity increases commitment overall, regardless of if the athlete sees their sport participation positively or negatively. It is plausible that athletes may feel like they have to stay in because they have identified with this role for so long, thus they may feel they do not have any other choice. Maybe athletes who feel this way have put so much focus on this area that they never developed in other areas of their life. For example, if sport is all an athlete has ever done, that may create a barrier to leaving because they never explored other opportunities, and now they feel entrapped or constrained and have to continue because they received a scholarship offer and an opportunity to play at the next level. On the other hand, maybe an athlete would identify strongly with the athlete role because they genuinely enjoy the sport they are in. For example, if an athlete identifies strongly with the athlete role due to a lifelong dream of being a professional athlete such as a basketball player, that individual may feel like putting all of their soul, focus, and energy into that goal because they find joy in the activity and being a part of a team.

Other predictors of constrained commitment were significant as well, but in the negative direction. Constrained commitment as mentioned previously is associated with negative feelings and emotions toward their sport. It makes sense that sport enjoyment would be a significant negative predictor of commitment. Not surprising that this sample of athletes who experienced low enjoyment, also had more feelings of obligation or negative associations with sport. Similarly, Weiss and Weiss (2003), found that attracted athletes had higher levels of enjoyment, and entrapped athletes had lower enjoyment. This makes intuitive and theoretical sense, in that, athletes who feel less enjoyment from their sport may experience higher negative emotions about sport. Perhaps these athletes are experiencing a lack of enhancing or challenging opportunities, such as competing. If athletes are frustrated with being on practice squad for a long period of time, this may lead to less joy for the sport as competition against other teams is one of the main focuses of sport.

Valuable opportunities was a significant negative predictor of constrained commitment. Valuable opportunities, formerly known as involvement opportunities, has been found to predict of sport commitment (positive/enthusiastic) in previous research (e.g., Baghurst et al., 2014; Carpenter & Scanlan, 1998). This finding makes intuitive sense, in that, if the athlete feels like the opportunities and perks that they receive for participation are highly beneficial and valuable, then they might not feel as if they "have to continue" but rather "want to continue". The lack of benefits or perceived perks could lead an athlete to question "why continue competing", and potentially create feelings of entrapment. Perhaps these athletes felt that if they do not have access to these opportunities, they may wonder why they are even still participating in sport. These feelings may be similar to Weiss and Weiss (2003) findings in that, entrapped athletes had lower rewards (benefits) in comparison to attracted athletes.

Perceptions of competence also emerged as a significant negative predictor of constrained commitment. Thus, higher perceived ability was related to lower feelings of obligation to continue. Perceptions of competence have been shown to be a significant predictor of motivation (Klint & Weiss, 1987). Not surprising, especially in this sample of Division I athletes, those who felt they were not good at skills or activities, also felt less love or joy for the sport, and more negative perceptions of sport. Perhaps these athletes use only one or two sources of competence information, such as coach feedback, or playing status, and that could cause athletes to interpret their skill as poor if they are not a starter and receive only negative feedback from coaches.

Desire to excel in mastering skills was found to be a negative predictor of constrained commitment. If athletes engaged in less mastery attempts, then they are potentially less likely to succeed, and more likely to have negative perceptions of sport. Previous research has found desire to excel to be a significant positive predictor of enthusiastic commitment (Scanlan et al., 2013; Scanlan et al., 2016). In that regard, it is not surprising that a lack of desire to engage in mastery attempts was found to lead to higher feelings of constrained commitment.

Informational social support was found to be a significant negative predictor of constrained commitment, which is consistent with past research (Weiss & Weiss, 2006). Entrapped athletes were found to report lower social support than the attracted athletes. This makes intuitive and theoretical sense, in that, if an athlete feels like they are not receiving enough feedback from coaches on their performance, then that athlete may be more likely to feel left out or unimportant, which may lead to negative feelings towards sport. However, further research is needed in regards to informational social support in relation to both enthusiastic and constrained commitment.

However, interesting findings concerning social support emerged during preliminary analyses, specifically correlations for social support and desire to excel. Even though the “encouragement, caring, and empathy received from significant others”, or emotional social support (Scanlan et al., 2016) was found to be a significant negative predictor of enthusiastic commitment, the correlation was insignificant (r = .17). This suggested that emotional social support may not be significantly important to intercollegiate athletes. Additionally, informational social support was found to be a positive predictor of enthusiastic commitment, and a negative predictor of constrained commitment (r = .56, -.41, respectively). This suggests that intercollegiate athletes prefer information such as coaching or critique, in comparison to encouragement or compassion. In other words, athletes may not need emotional support from the coach. Furthermore, desire to excel-mastery was also found as a significant positive correlation to enthusiastic commitment (r = .71), and a moderate negative correlation to constrained commitment (r = -.38). This information suggests that it is important for intercollegiate athletes to have a desire to get better and increase their skill level. This is not surprising due to the highly competitive nature of intercollegiate athletics where everyone is constantly “fighting for a spot”.

Differences in Commitment based on Scholarship Status

Results from this study revealed that scholarship athletes reported significantly higher personal investments in terms of quantity, desire to win, and identified more strongly with the athlete role than non-scholarship athletes. Scholarship and non-scholarship athletes did not differ on any other constructs. It was hypothesized that non-scholarship athletes would report higher athletic identity than scholarship athletes, however the opposite occurred. Past research has found differences in athletic identity between athletes of various competitive levels, such as Division II and Division III athletes (e.g., Griffith & Johnson, 2002). For example, Division III athletes had higher athletic identity than the Division II athletes.

Scholarship athletes were revealed to have higher athletic identity than non-scholarship athletes. Athletic identity is characterized by the strength that an individual identifies with the athlete role. If that individual has a scholarship for their ability to play a sport, then they may identify more strongly as an athlete due to the reinforcement provided by the scholarship. The scholarship may tell them this is where they belong, and they are good at what they do. Perhaps the scholarship athletes put all their “eggs into one basket”, all they know, all they do is sport. This may not be the case for walk-ons (non-scholarship athletes), perhaps walk-on athletes had more freedom throughout their career to try other activities such as other sports, band, or other extracurricular activities or hobbies.

Differences also emerged between scholarship and non-scholarship athletes with regards to how much they have invested in sport (i.e., quantity). Perhaps scholarship athletes felt they have higher personal investments because of the expectations placed on scholarship athletes in order to keep their scholarship. For example, scholarship athletes may perceive extra pressure from coaches to put in extra time (e.g., practice, lifting, etc.), to show the coaches that they deserve the scholarship. Additionally, scholarship athletes may have a higher skill level in comparison to non-scholarship athletes. This may be a result of extra time being put forth over the course of their career (both high school and college), which they may attribute to investments. Furthermore, it is plausible that perceived “playing time”, or the expectation of how much they will play in season, may be a factor in how much time, energy, effort an athlete invests in sport. It makes intuitive sense that if an athlete has an expectation to play, that athlete would also be more likely to work harder in the weight room, or on their skills to further develop to then take those skills onto the field of play to compete. Whereas, if an athlete did not expect to play, perhaps that individual would put less time and energy into their sport and “do just enough to get by”.

Scholarship athletes reported a higher desire to win and establish superiority over opponents in sport than non-scholarship athletes. Perhaps scholarship athletes have higher desire to win because typically full scholarship athletes are the starters or the experienced athletes on the team. Non-scholarship athletes may be the new recruits or less experienced. Perhaps the scholarship athletes have a higher desire to win because they are actually competing on the field versus watching and cheering from the sidelines.

For the most part, more similarities than differences emerged between scholarship and non-scholarship athletes in regards to sport commitment constructs. The lack of significant findings between scholarship and non-scholarship athletes may be due the participants competitive level, participating in sport at the same school, and going through similar experiences and situations which affects how they feel about their sport.

Limitations and Future Research

One limitation of this study is the sample size. This study had data from 153 participants from a few sports from the same university. Additionally, limitations were found among alpha coefficients in terms of low alpha scores. This may be due to the low sample size or the interpretation of the questions. This data was also collected in varying times of the season (i.e., in-season, off-season, etc.). Future research may want to include a larger sample size, from different colleges, and possibly even different competitive levels such as comparing DI and DIII schools. Division III schools tend to have no athletic scholarships. Additionally, future researchers may want to stipulate the time of season for data collection, such as only in season.

Furthermore, future researchers may want to add comparisons among intercollegiate athletes in terms of playing status or perceived playing time, and/or compare different sports to one another, and/or males and females. For example, researchers could add the question: “How much do you plan to play in the following season”. This could be measured on a 5-point Likert scale: (1) No games, (2) a few games, (3) about half the games, (4) most games, (5) every game. Future researchers may conduct a longitudinal study to examine athletes’ commitment over time. For example, researchers may want to conduct four separate data collections: pre-season, mid-season, championship/post-season, and then during the off season.

If possible, researchers may want to investigate experimental studies. This would allow researchers to create plans or strategies to increase or decrease variables by modifying the athlete's environment or the feedback the athlete receives. For example: If the goal of the experiment is to decrease constrained commitment, researchers could choose a variable that significantly predicted constrained positively or negatively, such as other priorities which was a positive predictor of constrained commitment. Once the variable is chosen, researchers may experiment ways of decreasing that variable to improve the overall experience of the athlete by decreasing constrained commitment. The scenario could be implementing strategies to help mitigate the salient effects of other priorities such as school or family by providing a structured plan or time management plan, to address those priorities on a daily/weekly basic. Such as calling home once a week to talk with family or taking 20 minutes twice a day to study or work on homework. Data collection would be questions related to other priorities from the SCQ-2 (Scanlan et al., 2016) which would be administered before and after the intervention which would be implementing the structured plan. Time in between could be 2-3 weeks to give athletes' time to "find a groove" and get into the routine and see if a change in other priorities occurs over time.

Practical Implications

These findings revealed that athletes reported different feelings about their commitment. Commitment has been seen as a versatile component in sport psychology, athletes can feel negatively, positively, or anywhere in between. Regardless of type of commitment, athletes still engage commitment behaviors, such as working hard, persevering, and investing vast amounts of energy and time. Significant positive predictors of enthusiastic commitment were sport enjoyment, valuable opportunities, personal investments, social constraints, perceived competence, informational social support, desire to master skills, and athletic identity. Thus, increasing or enhancing these aspects would be beneficial.

For coaches, it may be beneficial to take some time to increase focus on athletes enjoying their sport and give athletes new opportunities. For example, running a youth sport camp with the rest of their team, to increase team social cohesion or also provide them with a valuable opportunity that they may not be able to get anywhere else. Similarly, providing athletes with opportunities, such as extra time on drills that athletes' enjoy. Practicing these skills could enhance their perceived ability level along with their desire to master skills. Additionally, coaching critique or assistance during drills and activities could provide the athlete with important informational support, that they deem valuable, and even enhance their perceived ability level as well. Since social constraints and athletic identity were positive predictors for both enthusiastic and constrained commitment, further research is needed to determine recommendations for coaches to include in their regime or team culture.

Similarly, coaches typically want what is best for their athletes. In essence, that can come down to increasing positive and decreasing negative experiences. In the present study, constrained commitment was positively predicted by the sense of loss of personal investments, social constraints, other priorities, athletic identity, and perceived costs. For coaches, in efforts to increase an athlete's positive experiences, they would want to decrease the positive predictors of constrained and increase the negative predictors. For example, say an athlete feels that school is being affected negatively by their participation in sport, as well as does not see the opportunities in sport as valuable. To mitigate this, the coach may want to cut down on practice time the week before finals (if possible), or schedule an extra day off during the week of midterms. This would decrease the effect of other priorities on the athlete, and possibly even lessen the saliency of perceived costs of sport being too stressful due to the impact of school. Additionally, lowering the amount of energy and mental effort towards sport using days off or shortened practices during stressful periods of the school year could also decrease constrained commitment, and in turn, their negative experience or feelings towards sport.

For the athletes themselves, this study's findings may help them understand more about their own commitment, and possibly identify strategies to increase enthusiastic commitment. For example, if a basketball player enjoys participating in extracurricular activities with their teammates, then this athlete may meet up with his team for a scrimmage such as a 3 on 3 or 5 on 5, to be in an unstructured environment playing the sport they all most likely enjoy. Similarly, if an athlete enjoys performing certain skills or abilities, such as the jump shot for the basketball player, then that athlete may be more likely to increase the number of repetitions, exhibiting a desire to master that skill, and in turn, increase perceived ability.

An athlete may want to identify the opportunities they have by being in sport that they could not get anywhere else that they find valuable to them. For example, if athletes have a separate weight room from the general population of college students, then the athletes may consider that a valuable opportunity. Furthermore, if athletes' enjoy lifting in the weightroom, then they may be more likely to spend more time working on strength and conditioning, thus increasing the amount of personal investments. Each of these strategies could be used in efforts to increase an athlete's enthusiastic commitment.

Additionally, this study may help identify strategies to decrease athletes' constrained commitment. For example, if an athlete feels that their family time is a salient part of their life, and sport is keeping them from spending time with their family, then that athlete may want to find ways to be involved or communicate with family more often. If the athlete lives farther away from family, then they may communicate a few times a week to keep in touch or have family time via video phone calls. This may decrease the impact of the other priorities, and possibly decrease the saliency of the costs associated with sport, such as being too stressful or time consuming. Additionally, if the athlete is struggling to keep up with school and sport, then that athlete may set time aside on the weekends when possible to focus on schoolwork while still having time for hobbies or activities they enjoy. This may provide the athlete with less sense of loss of energy and effort to put towards school for playing their sport.

Specifically, this study found evidence that scholarship athletes perceived more investments (e.g., amount of time), identify more strongly with the athlete role, and had a higher desire to win in comparison to non-scholarship athletes. This evidence suggests that these qualities or characteristics may be important to emphasize or enforce, specifically by coaches for scholarship athletes. However, further research is needed in order to determine trends of which variables may be the most impactful for walk-ons or non-scholarship athletes, and more importantly, why are they impactful. This is needed in order to develop strategies to increase the experience of these athletes.

Conclusion

The purpose of this study was to examine two types of commitment with intercollegiate athletes as well as differences between walk-on (non-scholarship) athletes and scholarship athletes (partial/full) using the sport commitment model (SCM; Scanlan et al., 2016). Sport commitment is how likely an individual is to continue participation (Scanlan, Carpenter, Schmidt et al., 1993). In order to improve athletes' commitment, it is important to know what can improve commitment, and possibly more importantly, what can cause a decrease in commitment. In the present study, several constructs were significant predictors of both enthusiastic and constrained commitment. With intercollegiate athletes, higher sport enjoyment, valuable opportunities, personal investments (amount), social constraints, perceived competence, informational social support, desire to master skills, athletic identity, and lower emotional social support lead higher enthusiastic commitment. Additionally, higher sense of loss of personal investments, athletic identity, social constraints, other priorities, perceived costs, and lower sport enjoyment, valuable opportunities, perceived competence, informational social support, and desire to master skills lead to higher constrained commitment. Coaches have a responsibility to their athletes to understand these patterns and use this knowledge to improve the overall experience of their athletes. Walk-ons are a key part of any team, further investigation is needed to find evidence of what best predicts commitment for these athletes in comparison to scholarship athletes.

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Appendix A

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Perceived Competence	**0.69**														
2. Enthusiastic Commitment	0.30	**0.89**													
3. Constrained Commitment	-0.28	-0.36	**0.83**												
4. Sport Enjoyment	0.40	0.71	-0.57	**0.91**											
5. Valuable Opportunities	0.31	0.63	-0.31	0.51	**0.67**										
6. Other Priorities	-0.15	-0.43	0.48	-0.44	-0.34	**0.85**									
7. Personal Investments-Loss	0.02	0.38	0.23	0.14	0.35	-0.07	**0.85**								
8. Personal Investments-Quantity	0.19	0.3	-0.03	0.14	0.19	-0.17	0.31	**0.66**							
9. Social Constraints	-0.04	0.18	0.43	-0.11	0.13	0.11	0.45	0.24	**0.81**						
10. Social Support-Emotional	0.28	0.17	-0.25	0.19	0.29	-0.21	0.15	0.23	0.03	**0.73**					
11. Social Support-Informational	0.27	0.56	-0.41	0.52	0.43	-0.41	0.19	0.27	0.11	0.39	**0.81**				
12. Desire to Excel-Mastery	0.26	0.71	-0.38	0.55	0.58	-0.43	0.32	0.34	0.06	0.35	0.51	**0.89**			
13. Desire to Excel-Social Achieveme	0.36	0.61	-0.17	0.41	0.45	-0.39	0.37	0.49	0.23	0.31	0.41	0.69	**0.76**		
14. Athletic Identity	0.05	0.46	0.17	0.14	0.31	-0.16	0.46	0.3	0.50	0.01	0.16	0.31	0.47	**0.76**	
15. Perceived Costs	-0.14	-0.34	0.45	-0.49	-0.15	0.31	0.1	0.004	0.03	-0.07	-0.35	-0.23	0.11	0.02	**0.72**
M	2.91	4.15	2.58	4.4	4.39	2.63	4.17	4.85	3.74	4.42	4.02	4.55	4.46	3.63	2.83
SD	0.51	0.81	1.01	0.67	0.6	0.9	0.79	0.32	0.97	0.64	0.78	0.51	0.52	0.58	0.81