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ATHLETIC IDENTITY, NEED SATISFACTION, AND BURNOUT IN COLLEGIATE ATHLETES

BY

RACHEL DANIELS

THESIS APPROVED:



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BY

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Submitted to the Faculty of the Graduate School of
Eastern Kentucky University
in partial fulfillment of the requirements for the degree of

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DEDICATION

This thesis is dedicated to my siblings.

Elijah Daniels

Cainan Daniels

Chloe Daniels

Seth Daniels

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First and foremost, I would like to recognize Dr. Joel Cormier for his guidance and constant support throughout the entire process of my research, from beginning to end. This absolutely could not have been possible without you.

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I thank you all sincerely.

ABSTRACT

PURPOSE: The relationship between need satisfaction and burnout has been well defined in literature, but studies of the relationship between athletic identity and burnout have produced varying results. The purpose of this study is to examine the factors that may contribute to burnout in athletes by determining the direction and strength of a relationship between burnout, athletic identity, and need satisfaction.

METHODS: In this study, an online survey was distributed to a population of NCAA Division I varsity and club student-athletes. The survey consisted of demographic questions, the Athletic Identity Measurement Scale (AIMS), the Basic Need Satisfaction in Sport Scale (BNSSS), and the Athlete Burnout Questionnaire (ABQ). AIMS, BNSSS, and ABQ score results were compared through various statistical analysis methods to determine the significance of their relationship.

RESULTS: Participants (N=60) consisted of 43 male (71.67%) and 17 female (28.33%) athletes. Individuals were aged 18-22 (M=19.40, SD=1.06). Correlation analysis and comparison of means were conducted. No significant correlation was found between athletic identity and autonomy, relatedness, competence, or burnout. Autonomy, relatedness, and competence each had statistically significant relationships of varying degrees when compared. Autonomy and competence produced significant relationships with burnout. A significant difference between the means of autonomy scores was found in varsity versus club athletes.

DISCUSSION: Results of this study suggested five key findings: (1) there is no relationship between athletic identity and burnout, (2) there is no significant

relationship between athletic identity and need satisfaction, (3) there is a significant and positive relationship between the three components of need satisfaction, (4) there is a significant and negative relationship between the autonomy and competence components of need satisfaction and burnout, and (5) autonomy scores were significantly higher in club athletes than varsity athletes. To manage or prevent burnout, sports professionals should focus on supporting autonomy and competence rather than reinforcing athletic identity. Creating a team culture of group decision-making and abundant opportunities to demonstrate athletic ability could effectively combat developing burnout symptoms in athletes.

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I. Introduction

Burnout in an athlete is most evident when the individual voluntarily withdraws themselves from a sport or steps down from their current level of play. However, symptoms of burnout can linger in even the most dedicated and resilient athletes. While many factors can play into the development and onset of burnout symptoms, the role of athletic identity has not yet been definitively identified in research. Athletic identity is the degree to which an individual self-identifies with their role as an athlete (Vissek, et al, 2008). Regardless of an individual's strength of athletic identity, it serves as a psychological lens through which they will view all aspects of their life – and particularly the ups and downs related to sport participation. The Self Determination Theory suggests that individuals view themselves through their perceptions of autonomy, relatedness, and competence (Deci & Ryan, 2000). The degree to which an individual feels that these three components are met is called need satisfaction. The relationships between need satisfaction components and burnout have been previously determined in literature, but studies of the relationship between athletic identity and burnout have produced varying results.

The purpose of this study is to examine the factors that may contribute to burnout in athletes by determining the direction and strength of a relationship between burnout, athletic identity, and need satisfaction. A study of this type is significant in part because the mental health of athletes is often overlooked. Athletes cannot perform at their highest and healthiest potential unless their psychological well-being is made a priority. In this study, athletic identity, need satisfaction, and

burnout were measured in a population of collegiate student athletes, with a goal of better understanding the psychological factors that could contribute to preventing and managing burnout.

II. Literature Review

Defining Burnout

In the world of athletics, mental health is often considered a taboo and off-limits subject. Instead, athletes, coaches, and fans alike choose to focus on the positive aspects of the hard work, like performance, winning, and personal gain. Pushing oneself to the upper limits of exhaustion in the name of being an athlete is regularly glamourized. However, behind the scenes of the exhaustion and dread, deeper problems begin to occur. This phenomenon is otherwise known as burnout.

More psychologically complex than a typical bout of stress, burnout is generally defined as a syndrome of emotional exhaustion, depersonalization, and a sense of reduced personal accomplishment that can occur among individuals who work with people in some capacity (Maslach & Jackson, 1984). As can be gathered from this definition, burnout is often considered a workplace or occupational condition, and many times results in the affected individual quitting or giving up on their job. Healthcare careers, like nursing, are known for some of the most prevalent cases of burnout. Until the late 1970s, there was a shortage of research into the concept of burnout, as it was not typically recognized as an ailment separate from everyday stress. Research into the concept began to pick up steam as psychologists and researchers began to recognize that burnout is a problem, and something needed to be done about it (Maslach & Jackson, 1984).

Burnout in athletes remains relatively unresearched in comparison, but is similar to the phenomenon that can be observed in workplace careers. To properly

study athlete burnout, Maslach and Jackson's original definition needed modification for the contextual differences that exist between the role of an athlete and the role of a provider in human services. Researchers in 1997 did just that (Raedeke). Athletes do experience this provider-recipient relationship with their coaches, but they are on the receiving end of the relationship. The core element of sport is performance, and as such, the burnout dimensions were redefined in an appropriate manner (Raedeke, 1997).

The first dimension, emotional exhaustion, has been widened to include the physical exhaustion commonly associated with athletics. Both types of exhaustion stem from the psychological and physiological demands of overtraining and competing at a high level (Raedeke, 1997). Though this kind of stress is typically intensified as one moves towards a higher level of competition, exhaustion can occur in younger and more inexperienced athletes as well. Physical exhaustion can be easy for an observer to spot. An athlete may become lethargic or sloppy in technique. Emotional exhaustion, however, is more difficult to detect. Because there are no obvious physical signs, many athletes choose to keep mental issues hidden from their peers. Athletes using language like "draining" and "wearing" to describe their participation in sport may be suffering symptoms of emotional exhaustion.

The second dimension of burnout is a reduced sense of personal accomplishment, which can be applied to athletics in terms of perceived athletic ability and achievement (Raedeke, 1997). For example, an athlete experiencing a reduced sense of personal accomplishment may express that the wins do not feel as gratifying

as they used to, or that they are no longer good enough to deserve a spot on the starting line-up of their team. The athlete will not feel the same level of investment in practicing and improving their skills that they once had.

The final dimension of burnout, depersonalization, may seem on the surface to be the least connected to athletics (Raedeke, 1997). Because athletics are based on personal performance, “depersonalizing” a sport appears to be impossible without ceasing participation. Though, when depersonalization is viewed instead as devaluation or cynicism of the athlete’s particular sport, it can represent the development of negative attitudes or lack of care for their own physical performance (Raedeke & Smith, 2001). The athlete may ask themselves why they invest so much time and energy in a sport when they could be doing other things that they deem to be more valuable or important. Depersonalization, in this way, becomes arguably the most telling and detrimental factor in detecting burnout in athletes.

As the three dimensions of burnout are reframed to better suit the athletic domain, the similarities and differences between occupational burnout and athlete burnout are highlighted. This working definition of burnout is attractive because it enables researchers to differentiate between the athletes who withdraw from participation in athletics due to burnout and those who withdraw for reasons unrelated (Raedeke & Smith, 2001). True athlete burnout includes all three dimensions, and as such, should be viewed less like a typical reaction to stress and more like a mental health issue to be treated (Raedeke, 1997).

Measuring Burnout

The creation of adequate measurement tools has allowed for more informative and beneficial studies of burnout in athletes to be designed in recent years. Two common ways to measure burnout in this population are the Athlete Burnout Questionnaire (ABQ) and the Maslach Burnout Inventory General Survey (MBI-GS) (Cresswell & Eklund, 2006). These methods of measuring burnout are similar in that they are both self-reported surveys. The athlete in question completes the items of the survey and in turn is assigned a score that is used to determine if they are experiencing burnout.

The ABQ was developed specifically with athletes in mind in 2001. It contains 15 total items, each presenting a statement that corresponds with one of the three dimensions of burnout. For example, statements may be “It seems like no matter what I do, I don’t perform as well as I should” or “I am exhausted by the mental and physical demands of my sport” (Raedeke & Smith, 2001; Maslach, Jackson, & Leiter, 1997). Participants respond to these items on a Likert scale with denotations from “does not correspond at all” to “corresponds exactly”. This Likert scale exists in both 5- and 7-point formats. Scores are calculated based on the athlete’s responses to each item. The higher the overall score, the higher the incidence of burnout in the individual athlete. This score can be compared to teammates scores, or the athlete can be retested over time to monitor the development of burnout symptoms. The ABQ is beneficial in part due to its adaptability, as the administrator of the questionnaire can easily change the language to fit a specific sport. For example, the phrase “my sport

activity” can be modified to read “lacrosse practice”, or any other appropriate substitution.

The MBI-GS is less specific to sport, but is sometimes used as an athlete burnout screening tool. Developed for human care workers in 1996, it was later adapted for general working burnout. Similar to the ABQ, the MBI-GS contains 16 items that are measured on a 7-point Likert scale response format, with anchors ranging from “never” to “every day” (Cresswell & Eklund, 2006). Each item is linked to one of three subscales that mirror the dimensions of general burnout: efficacy, cynicism, and exhaustion (Maslach, Jackson, & Leiter, 1997). These dimensions are then equated to their athlete burnout counterparts.

In a study by Cresswell and Eklund (2006), the ABQ and MBI-GS were compared to determine construct validity. Each of the burnout measures displayed limitations, but overall both displayed satisfactory discriminant and convergent validity. However, because of the workplace language and incompatibility with the sport domain, the MBI-GS warrants further modification. Cresswell and Eklund suggest that researchers may be more confident in the use of the ABQ as a tool used to screen for burnout – therefore, for the purposes of research in this study, the ABQ is used as the standardized screening method.

Managing Burnout

Once an athlete has been positively identified as experiencing burnout symptoms of any degree, it is essential to take immediate action to preserve the

longevity of their athletic career. Unfortunately, a conclusive or “best” method of preventing or managing burnout symptoms has not yet been explicitly defined. Time away from the sport is typically the first step (Dolan, 1998). A complete shutdown of activity is not recommended, especially in peak seasons of performance, as competition and conditioning levels need not be compromised. Instead, the athlete should participate in activity at a rate that is beneficial for their own psychological and physical needs, while still keeping with their coach’s reasonable insight to their training. In addition to time off, an athlete should work with their athletic trainer, sports psychologist, or trusted peers to develop a system of optimal nutrition, adequate sleep, healthy balance between activity and personal life, and time management skills (Dolan, 1998). Though the process may be lengthy or difficult, it is possible for an athlete to recover from burnout and rediscover the passion and excitement they had once associated with their participation in sport.

Burnout prevention, alternatively, can be just as delicate in execution as burnout treatment. Sports professionals may attempt to prevent burnout by cultivating a culture of gratitude. Expressing gratitude and thankfulness among teammates and coaching staff via team discussions and writing exercises may increase perceived social support and trust in one another, which may provide a necessary basis to cope with the physical and mental demands of participation (Gabana, et al, 2019).

Athletic Identity

Many connotations are attached to the word “athlete”, both positive and negative. Some athletes embrace the lifestyle fully. Others branch out and explore other means of individuality in addition to their status as an athlete. The degree to which a person adheres to and identifies with their athletic role is known as athletic identity (Vissek, et al, 2008).

Understanding athletic identity begins with understanding the idea of self-concept. Self-concept is a multi-dimensional approach to the way that a person makes judgements about themselves (Brewer, Van Raalte, & Linder, 1993). Instead of judging oneself as a whole and complete person, domain-specific judgements are made. For example, a person may feel that they excel when it comes to academics but are lacking in social skills. Athletic performance and status can be viewed as one of these domains. Individuals who place a high value on their judgement of self in reference to the domain of athletic ability have a high athletic identity.

There are many consequences of having a high athletic identity, both positive and negative. Because of this, a high athletic identity is often referred to as both Hercules’ muscles and Achilles’ heel. Athletes with strong athletic identity tend to be more self-aware when it comes to their performance (Brewer, Van Raalte, & Linder, 1993). They will be able to judge (relatively accurately) what skills they performed incorrectly and how they can improve next time. This leads to a boost in confidence. As a result, individuals with a high athletic identity are often better athletes. Studies have also shown that there are general health and fitness benefits to having a higher

athletic identity (Brewer, Van Raalte, & Linder, 1993). These findings do not come as a surprise; when an athlete lives and breathes their sport, being physically fit is merely a side-effect.

Conversely, there are some risks that come with possessing a high athletic identity. First, these individuals are more susceptible to emotional and stressful reactions when changes in their athletic careers occur (Brewer, Van Raalte, & Linder, 2018). If an athlete with a high athletic identity is injured or removed from a starting line-up, their mental health should be monitored with an emphasis on controlling grief and easing into the role transition (Heird & Steinfeldt, 2013). These individuals are also susceptible to emotional disturbance with the termination of their careers. They may be less likely to want to explore other career, education, and lifestyle options because of their dedication to life as an athlete. Finally, an individual with a high athletic identity may engage in sport or athletic activity to the extent that their health is in jeopardy (Brewer, Van Raalte, & Linder, 2018). It is easy for an athlete with a strong athletic identity to overwork themselves, which may lead to overuse injuries.

Measuring a person's magnitude of athletic identity is most often performed by use of the Athletic Identity Measurement Scale (AIMS). Developed in 1993, the AIMS has been modified over time, but the premise has remained the same. A Likert-type scale of 1 (strongly disagree) to 7 (strongly agree) is used in conjunction with 7 items, containing statements such as "Sport is the most important part of my life" and "I would be very depressed if I were injured and could not compete in sport". Each of the items fall under one of three factors that are commonly associated with a high athletic

identity: social identity, exclusivity, and negative affectivity (Brewer & Cornelius, 2001). Across various studies and tests, AIMS has been proven to be a reliable, cross-culturally consistent, and psychometrically sound measure of athletic identity (Brewer & Cornelius, 2001; Visek, et al, 2008). Because of the numerous examples of supporting research, the AIMS was used as the standard athletic identity test in this study.

Existing Literature

Studies of the link between an athlete's strength of athletic identity and presence of burnout symptoms have produced inconclusive and conflicting results over the years. For example, Gustafsson & cohorts' 2018 study showed that high athletic identity scorers were less likely to display a high burnout profile, while Garinger, Chow, and Luzzi's study in 2018 showed a positive and direct effect of perfectionistic tendencies on burnout in athletes. Chang, Wu, Kuo, & Chen (2018) also demonstrated a link between athletic identity and emotional exhaustion – a key component of burnout – for individuals with a low psychological flexibility. Interestingly, Verkooijen & coauthors (2012) concluded that strength of athletic identity did not have a relationship with subjective well-being, but that some other factor was in play to produce the higher rates of burnout being shown in their participants. There must be some other variable that is producing such contradictory results between these studies. Perhaps this variable is need satisfaction.

Need Satisfaction

The Self Determination Theory is a theory of motivation that establishes six types of self-regulation: intrinsic motivation, integrated regulation, identified regulation, introjected regulation, extrinsic motivation, and amotivation (Deci & Ryan, 2000; De Francisco, Arce, Sanchez-Romero, & Vilchez, 2018). Within this theory exists a subtheory of Basic Psychological Needs. This subtheory presents three basic needs in the way that humans view themselves: people want opportunities to demonstrate competence, to feel a sense of relatedness with other individuals, and to have a degree of autonomy in their activities (Deci & Ryan, 2000). The degree to which these needs are met is called need satisfaction. This information is useful in the context of sport because it provides a basis for understanding athlete's motivational, cognitive, and affective processes (De Francisco, Arce, Sanchez-Romero, & Vilchez, 2018; Mendez-Gimenez, Fernandez-Rio, & Cecchini, 2012).

The relationship between need satisfaction and burnout has been previously studied. All three need components have been negatively correlated with athlete burnout symptoms (Perreault, Gaudreau, Lapointe, & Lacroix, 2007). Additionally, athletes who drop out of sport have shown low levels of need satisfaction as a whole (Joesaar & Hein, 2011). Autonomy and competence measurements, specifically, are factors that have been shown to be significant predictors of burnout behaviors (Lonsdale, Hodge, & Rose, 2009). Having autocratic or laissez-faire style coaches and being involved in aesthetic or weight-dependent sports have previously been labeled as characteristics with high-risk for burnout (Granz, Schnell, Mayer, & Thiel, 2019).

Both autocratic and laissez-faire coaching styles have a significant impact on the autonomy of the athletes. Additionally, competence may be more difficult to achieve in sports that are dependent upon aesthetic or weight factors that are out of the athlete's control.

Relatedness with other individuals possesses a link to burnout as well. In a review of literature examining the relationship between social constructs and athlete burnout, Pacewicz, Mellano, and Smith (2009) concluded that tangible support from peers may raise perceptions of personal accomplishment – a key dimension of burnout. However, Lonsdale, Hodge, and Rose (2009) suggest that relatedness may be more linked to the dimension of exhaustion rather than to burnout overall.

The degree to which these basic needs are satisfied in athletes can be assessed through the Basic Needs Satisfaction in Sport Scale (BNSSS) (Johan, 2008). The BNSSS is a 15-item, Likert-scale assessed survey that presents statements such as “In my sport, I have a say in how things are done” and “I have the ability to perform well in my sport”. In this study, the BNSSS was used as the standardized method of measuring need satisfaction in participants.

Need satisfaction has been shown to have a negative relationship with athlete burnout. Athletic identity, however, has a relationship that is less defined. Does athletic identity have a more significant relationship with burnout than need satisfaction? Answering this question may provide valuable insight to sports professionals seeking to prevent and manage burnout in athletes. The purpose of this study is to examine the factors that may contribute to burnout in athletes by

determining the direction and strength of a relationship between burnout, athletic identity, and need satisfaction.

III. Methods

Participant Population

This study took place at an NCAA Division I University. Following approval by the university's Institutional Review Board and the Assistant Athletic Director for Compliance and Student Success, the population for recruitment consisted of varsity and competitive club athletes, ages 18 and older. There are 14 total varsity athletic teams at the university. Varsity athletics features 374 athletes total - of which 242 are male (64.70%), while 132 are female (35.29%) ("Official Athletics Website", n.d.). There are 13 total club sports, but updated roster counts and demographics are not publicly provided on the university's sport clubs web page ("Sport Clubs", n.d.).

Recruitment

Participants were openly recruited by the principal investigator. At the time of recruitment, potential participants were informed that the research requires status as a student athlete. Further screening to ensure that the participants fit the inclusion criteria was determined at the beginning of the survey with the cover and consent page. Athletes were contacted directly through a verbal recruitment script [See Appendix A] via one of two methods.

First, athletes were contacted through coach, instructor, or athletic trainer referral. Second, athletes were contacted through the Bratzke Student-Athlete Academic Success Center. Regardless of the method of recruitment, the procedures for the study remained the same.

Procedures

Following initial recruitment, the survey was presented to participants in an online format via SurveyMonkey on a smartphone, tablet, or computer. The survey consisted of five sections.

First was a cover text and consent page. This page functioned to ensure anonymity, assure that the participant fit the proper population to be included in the study, guarantee voluntary participation, and provide researcher contact information [See Appendix B].

Next, a demographic section collected data for age, class, gender, ethnicity, type and name of competitive sport, years spent participating in the sport at a competitive level, injury status, and season status.

Finally, the survey presented participants with the Athletic Identity Measurement Scale, Basic Need Satisfaction in Sport Scale, and Athlete Burnout Questionnaire. To achieve consistency throughout the survey, the AIMS, BNSSS, and ABQ were all measured on one 7-point Likert scale with denotations from (1) Strongly Disagree to (7) Strongly Agree. In total, the survey featured 47 questions and was completed in an average of 5 minutes [See Appendix C].

Participants were able to exit the survey or skip questions at any time without consequence. Only members of the research team were granted access to the collected data. All individual answers remained anonymous in a password protected database, and were exported to an Excel worksheet on a hard drive. This data will be destroyed at 12 months following the conclusion of the study. Name, IP address, or

email address were not stored. There were no benefits or compensation that coincided with participation in the study.

Once the participants had submitted their survey online, the primary researcher transferred the individual answers into an Excel worksheet. Answers from the Likert Scale questions in the AIMS, BNSSS, and ABQ sections were given scores from 1 (Strongly Disagree) to 7 (Strongly Agree). Individual answers to each question were added to produce one athletic identity score, three need satisfaction scores representing autonomy, relatedness, and competence, and one burnout score. Questions 33 and 46 in the survey were reverse scored, as per ABQ instruction. Potential AIMS scores ranged from 7 to 49. Potential autonomy, relatedness, and competence scores ranged from 5 to 35. Potential ABQ scores ranged from 15 to 105.

Using IBM SPSS Statistics software, bivariate correlation analyses and independent samples t-tests were conducted to determine correlation and relationships among variables.

IV. Results

Participants (N=60) consisted of 43 male (71.67%) and 17 female (28.33%) athletes. Individuals were aged 18-22 (M=19.40, SD=1.06). Freshmen (n=18), sophomores (n=18), juniors (n=16), seniors (n=7), and fifth year (n=1) students were represented. Participants identified as white or Caucasian (n=40), Black or African American (n=15), Asian (n=1), Hispanic (n=1), Mixed Race (n=2), and another unnamed race (n=1). These athletes represented 11 varsity sports (n=49) and 1 club sport (n=11). 13 athletes were experiencing a sport participation-limiting injury at the time of survey completion. 5 participants skipped questions in the BNSSS statement set, therefore those participants' BNSSS scores were excluded, leaving N=55. For all other variables, N=60.

Correlation analysis and comparison of means were conducted to examine the factors that may contribute to burnout in athletes. This served to determine the direction and strength of the relationship between burnout, athletic identity, and need satisfaction in the sample of participants.

Correlations

A bivariate correlation analysis produced the following results. Pearson correlation and p-value significance can be found in Table 1.

Athletic Identity

No significant correlation was found between athletic identity and autonomy (p=0.750), relatedness (p=0.149), competence (p=0.131), or burnout (p=0.317).

Need Satisfaction

Autonomy, relatedness, and competence each had statistically significant relationships of varying degrees when compared. There were positive correlations found between autonomy and relatedness (p=0.001), autonomy and competence (p=0.027), and relatedness and competence (p=0.008).

Burnout

A statistically significant negative correlation between burnout and autonomy was found (p=0.010). A statistically significant negative correlation was also found between burnout and competence (p=0.010).

Table 1: Bivariate Correlation Analysis

	Autonomy	Relatedness	Competence	Burnout
Athletic Identity	-0.044	0.197	0.206	-0.131
Autonomy		0.444**	0.297*	-0.344*
Relatedness			0.354**	-0.224
Competence				-0.343*

Pearson correlations between variables are displayed above. ** represents a significant correlation with a p-value <0.01 (2-tailed). * represents a significant correlation with a p-value <0.05 (2-tailed). Lack of added symbol represents a correlation with a p-value >0.05 (2-tailed).

Comparison of Means

Using independent sample t-tests, mean athletic identity, need satisfaction, and burnout scores were compared between demographic groups. No significant differences were found between variable means in male versus female athletes, as well as injured versus non-injured athletes. However, a significant difference between the means of autonomy scores was found in varsity versus club athletes. The mean autonomy score in varsity athletes was 24.00, while mean autonomy score in club athletes was 29.30 ($p < 0.05$). No other variable means produced statistically significant results between varsity and club athletes.

V. Discussion

Significant Findings

The purpose of this study was to examine the factors that may contribute to burnout in athletes by determining the direction and strength of a relationship between burnout, athletic identity, and need satisfaction. Five major findings were produced.

First, the results of this study suggest that there is no significant relationship between athletic identity and burnout. This outcome is very similar to results that can be found in existing literature. In a particularly comparable study of both elite and non-elite athletes, researchers found no support for the contention that athletic identity held any significant relationship with burnout (Verkooijen, van Hove, & Dik, 2012). This non-existent relationship may be due to the many highs and lows associated with athletic identity. Athletes with a high athletic identity can experience both the beneficial aspects and detrimental aspects associated with their self-concept simultaneously. Perhaps neither the benefits or detriments are significant enough to push athletes with various levels of athletic identity towards or away from burnout symptoms.

Second, the results of this study show no significant relationship between athletic identity and any aspect of need satisfaction. This could reflect the internal versus external nature of the two variables. Athletic identity is highly internal and is determined by the athlete alone. However, athletes have no control over the sport

environment, team dynamic, or coaching style that will be provided to them, and thus cannot control whether their needs will be satisfied. Athletic identity and need satisfaction are two entirely different concepts with little overlap at the psychological level, and thus, the lack of a significant correlation between the two is not unexpected.

Third, the results of this study showed a significant positive correlation among all three components of need satisfaction: autonomy, relatedness, and competence. If an athlete experiences a high need satisfaction in one component, it is likely that they will be satisfied in the other two components as well. This may be due to the culture created within a team. In other words, if a team is exceeding or failing in one component of need satisfaction, they may also be exceeding or failing in other components by association. For example, a coach that shows great concern for creating a sense of autonomy within a team is likely also going to be concerned about his or her athletes developing relationships with each other and feeling competent in their sport. The positive or negative culture of a team could be the cause of the direct relationship among the need satisfaction components of its athletes.

Fourth, a significant negative relationship was found between burnout and the autonomy and competence components of need satisfaction. If an athlete feels autonomous and competent in their sport, they may be less likely to experience symptoms of burnout. Similar results were found in a study by Lonsdale, Hodge, and Rose (2009): autonomy and competence were significant predictors of burnout. The Self Determination Theory posits that autonomy and competence are important factors in the way that humans view themselves (Deci & Ryan, 2000). If these two

needs are being fulfilled through sport, it is reasonable to conclude that symptoms of exhaustion, reduced sense of personal accomplishment, and devaluation would be less likely to develop. Relatedness, however, was not determined to have a significant correlation with burnout. Lonsdale, Hodge, and Rose (2009) determined that relatedness was likely to have a more significant relationship with exhaustion than with burnout as a whole. In the present study, scores for the individual dimensions of burnout were not calculated. Because of this, the same conclusions made about relatedness by Lonsdale, Hodge, and Rose (2009) cannot be made here, but perhaps could explain why relatedness did not have a significant relationship with overall burnout scores.

Fifth, the average autonomy score in club athletes was found to be significantly higher than the average autonomy score in varsity athletes. Overall, club athletes felt like they had more of a say in team decisions than varsity athletes. This may be due to the organization of club sports. While club sports do experience many of the same team dynamics of varsity sports, they are still what their name suggests – a club. Club athletes are often more likely to play a role in decision making processes like practice times, uniform choices, and travel plans. Though this finding is interesting, only one club team was included in this study. To gain the ability to generalize these results, more club athletes from other teams should be surveyed.

No significant differences were found between variables in male versus female athletes, as well as injured versus non-injured athletes. The lack of difference between male and female athletes may be due to the similar experiences between genders.

Both male and female athletes are student-athletes at the same University who experience similar circumstances on a daily basis. There may be no differences in the way that they interpret and react to the variances between athletic identity, need satisfaction, and burnout. The lack of significant differences in variables between injured and non-injured athletes is more surprising. The degree that an individual identifies with being an athlete may not drastically change with the occurrence of an injury. The individual is still a part of the team, and may still be able to participate in sport-related activity in a limited capacity until the injury has been rehabilitated.

Implications for Managing Burnout

Because athletic identity was shown to have no significant relationship with burnout symptoms, sports professionals (coaches, athletic trainers, sports psychologists, and others) will not likely find success in attempting to manage burnout by strengthening or weakening athletic identity within a team. Encouraging athletes to dedicate all their time and energy to their sport will not manage burnout, and neither will encouraging athletes to spend more time focusing on their identity as a student, sibling, or socialite. Instead, sports professionals should focus on meeting the autonomy and competence needs of the athletes that they work with. This study, in combination with many others, suggests that an athlete whose basic needs are satisfied through sport is less likely to experience high rates of burnout. Creating a team culture of group decision-making and abundant opportunities to demonstrate athletic ability could be key in preventing and managing burnout.

Limitations & Future Studies

When interpreting these results, several limitations should be kept in mind. The nature of this study is correlational; therefore, causation cannot be assumed. Theories as to why relationships exist between variables should be interpreted as speculation rather than fact. Additionally, all data gathered was in the form of a self-reported survey. It was assumed that each participant considered each item carefully and answered accurately. Though point in competitive season was gathered in the demographic section of the survey, this data was excluded because of the variation in answers among even athletes of the same sport. This item should have been more clearly defined and articulated on the survey or should have been determined by the researcher to provide consistency.

Because of the cross-sectional design of this study, more athletic identity, need satisfaction, and burnout research should be done before large-scale generalizations can be made. This study was limited to one NCAA Division I university. Future studies should include other divisions, as well as youth and professional athletes. Larger sample sizes are ideal. In studies that compare varsity and club athletes, a more equal ratio of club athletes to varsity athletes could be beneficial.

Overall, this study served to provide an important examination of the relationships between athletic identity, need satisfaction, and burnout in athletes. These results suggest significant findings to sport professionals who seek to combat burnout within athletes, and also provide a significant insight and direction to future sport psychology research. Athletes cannot perform at their highest and healthiest

level unless mental health is made a priority. The phenomenon of burnout is only one of many mental health issues that athletes must face, but it is a great place to start as researchers look towards the future of mental health in athletics.

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Appendices

Appendix A: Oral Recruitment Script

Appendix A: Oral Recruitment Script

I would like to invite any student athletes – varsity or club – to participate in a web-based survey aiming to examine the relationship between athletic identity, need satisfaction, and burnout in collegiate athletes. This is a research project being primarily conducted by Rachel Daniels, a graduate student at Eastern Kentucky University. The survey should take a maximum of 10-15 minutes to complete. Participation is completely voluntary. You may refuse to take part in the research or exit the survey at any time without penalty. Names and IP addresses are not collected and providing an email address to receive a link to the survey is optional. All answers to the survey questions will be kept anonymous and confidential. There are no foreseeable risks associated with participation in the study other than those encountered in day-to-day life.

While you'll receive no direct benefits from participation in this research, your responses may help us learn more about the factors that relate to burnout in athletes and contribute to the field of sport psychology as a whole. At this time, you may *(depending on the setting)*:

- Take this link to the online survey and participate at your own leisure.
- Take a few moments with this tablet to complete the survey now.

I am available to answer any other questions you may have. Thank you.

Appendix B: Cover Text and Informed Consent

Appendix B: Cover Text and Informed Consent

1. You are being invited to take part in a research study on athletic identity, need satisfaction, and burnout in collegiate athletes. This study is being conducted by Rachel Daniels, a graduate student at Eastern Kentucky University.

If you decide to participate in the study, you will be asked to complete a survey featuring a short demographic section and three question sets. Your participation is expected to take no more than 10-15 minutes.

This study is anonymous. You will not be asked to provide your name or other identifying information as part of the study. No one, not even members of the research team, will know that the information you give came from you. Your information will be combined with information from other people taking part in the study. When we write up the results of the study, we will write about this combined information.

We will make every effort to safeguard your data, but as with anything online, we cannot guarantee the security of data obtained via the Internet. Third-party applications used in this study may have terms of service and privacy policies outside the control of Eastern Kentucky University.

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

This study has been reviewed and approved for exemption by the Institutional Review Board at Eastern Kentucky University as research protocol number 2695. If you have any questions about the study, please contact Rachel Daniels at [redacted] or [redacted]. If you have questions about your rights as a research volunteer, please contact the Division of Sponsored Programs at Eastern Kentucky University by calling [redacted].

By clicking “Agree” and completing the activity that begins on the next screen, you agree that you:

- (1) are at least 18 years of age
- (2) have read and understand the information above
- (3) are a varsity or club athlete at ECU
- (4) voluntarily agree to participate in this study

Agree Disagree

Appendix C: Survey

Appendix C: Survey

Your Demographic Information

Please answer the following questions to the best of your ability. You may skip a question that you do not feel comfortable answering at any time. If you participate in more than one sport, please choose one to focus on for the purposes of this survey.

2. Age: _____

3. Class (choose one):
Freshman Sophomore Junior Senior Year 5+

4. Gender (choose one):
Male Female Prefer not to respond

5. Ethnicity (choose all that apply):
 - a. White/Caucasian
 - b. Black/African American
 - c. Hispanic/Latino
 - d. Native American/American Indian
 - e. Asian/Pacific Islander
 - f. Other
 - g. Prefer not to respond

6. Are you a varsity or club athlete? (choose one):
Varsity Club I am not an athlete

7. Name of sport: _____

8. For how many years have you been participating in your sport at a competitive level? (choose one):

- a. 1-3 years
- b. 4-6 years
- c. 7-9 years
- d. 10+ years

9. Is your participation in your sport currently limited in any way due to injury? (choose one):

Yes No

10. What is your current season status? (choose one):

- a. Off season
- b. Pre-season
- c. First half of competitive season
- d. Second half of competitive season
- e. Post-season/championship play

Statement Set 1 of 3

Choose the option that best describes how strongly you agree or disagree with each statement.

11. I consider myself an athlete.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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12. Sport is the most important part of my life.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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13. I feel bad about myself when I do poorly in sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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14. I have many goals related to sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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15. I spend more time thinking about sport than anything else.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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16. I would be very depressed if I were injured and could not compete in sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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17. Most of my friends are athletes.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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Statement Set 2 of 3

Choose the option that best describes how strongly you agree or disagree with each statement.

18. In my sport, I feel close to other people.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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19. In my sport, I get opportunities to make choices.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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20. I can overcome challenges in my sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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21. I show concern for others in my sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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22. In my sport, I have a say in how things are done.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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23. There are people in my sport who care about me.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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24. I am skilled at my sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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25. In my sport, I feel free to express my ideas.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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26. I feel I am good at my sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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27. In my sport, I can take part in the decision-making process.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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28. I get opportunities to feel that I am good at my sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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29. I have the ability to perform well in my sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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30. In my sport, there are people who I can trust.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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31. I have close relationships with people in my sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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32. In my sport, I get opportunities to make decisions.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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Statement Set 3 of 3

Choose the option that best describes how strongly you agree or disagree with each statement.

33. I'm accomplishing many worthwhile things in my sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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34. I feel so tired from my training that I have trouble finding energy to do other things.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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35. The effort I spend in my sport would be better spent doing other things.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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36. I feel overly tired from my sport participation.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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37. I am not achieving much in my sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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38. I don't care about my sport performance as much as I used to.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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39. I am not performing up to my ability in my sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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40. I feel wiped out from my sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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41. I'm not into my sport like I used to be.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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42. I feel physically worn out from my sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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43. I feel less concerned about being successful in my sport than I used to.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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44. I am exhausted by the mental and physical demands of my sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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45. It seems that no matter what I do, I don't perform as well as I should.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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46. I feel successful at my sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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47. I have negative feelings toward my sport.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
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Thank you!

You have reached the end of the survey. Your answers will now be submitted. Thank you for your participation.