2018

Exploring Domain-Specific Perfectionism: Do Excelling Student-Athletes Differ in Perfectionism than their Teammates?

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Exploring Domain-Specific Perfectionism: Do Excelling Student-Athletes Differ in Perfectionism than their Teammates?

A Masters Thesis presented to the Faculty of the
Graduate Program in Exercise and Sport Sciences
Ithaca College

In partial fulfillment of the requirements for the degree
Master of Science

By

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August 2018

Ithaca College
School of Health Sciences and Human Performance
Ithaca, New York

CERTIFICATE OF APPROVAL

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MASTER OF SCIENCE THESIS

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This is to certify that the Thesis of
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submitted in partial fulfillment of the requirements for the degree of Master of Science in the School of Health Sciences and Human Performance at Ithaca College has been approved.

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ACKNOWLEDGEMENTS

I would like to thank my thesis advisors Drs. Harenberg and Vosloo for their constant support, guidance, and mentorship throughout the duration of my thesis project. Finally, I would like to thank my family, Eric, Tanya, Calli, and Cole for their continued support, love, and compassion throughout the past two years. I would not have been able to complete this project if it were not for ALL of you!

DEDICATION

I would like to dedicate this project to all of those individuals who feel they cannot complete a thesis. I would have never thought I would be able to complete a project such as this. For all of those pursuing a Master's degree, you can do it! Keep an open mind and enjoy your Master's degree journey.

Finally, I would like to dedicate this thesis to my parents, Eric and Tanya. I cannot describe how grateful I am for your support and willingness to let me chase my dreams. I love you.

ABSTRACT

Perfectionism can be defined as striving for perfection and setting excessively high standards along with tendencies of hypercritical evaluation of behaviors (Frost, Marten, Lahart, & Rosenblate, 1990). Recent research suggested that perfectionism might differ between domains (e.g., academics, athletics). For example, Dunn, Dunn, and McDonald (2012) showed that student-athletes perceived higher perfectionistic tendencies in athletics compared to academics. However, it is unknown whether there were differences between excelling athletes (e.g., All-Americans) and their teammates. As such, the purpose of the present study was two-fold: a) to examine the differences between excelling athletes (i.e., qualifying for Academic All-American) and their teammates, and b) to explore predictors of perfectionism in academics and athletics. In total, 199 NCAA athletes (female n = 106, M_{age} = 19.49, SD_{age} = 1.19; male n = 91, M_{age} = 19.35, SD_{age} = 1.17) completed domain-specific (i.e., academics and athletics) measures of perfectionism, intolerance of uncertainty, perceptions of competence and importance, satisfaction, and stress. Fifty-eight participants met the criteria for Academic All-american (i.e., GPA > 3.3, starting status) and were considered as 'excelling'. To compare excelling student athletes to their teammates, three mixed-model ANOVAs were conducted. Athletes in both groups generally showed significantly higher perceptions of perfectionism in athletics compared to academics on all dimensions. For the second purpose of the study, six multiple regressions predicting perfectionism in both domains were conducted. Prospective intolerance of uncertainty was the strongest predictor in all six regressions.

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CHAPTER ONE

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INTRODUCTION

In different contexts of everyday life (e.g., work, academics, athletics) performance is consistently monitored and evaluated. In many cases, the process of evaluation focuses on the congruence between a set performance standard and performed behavior. In addition to measurable evaluation criteria, individuals may set performance expectations, which may derive from internal (e.g., self-set) or external (e.g., parents, significant others) sources. The expectations over and above a certain standard may foster performance excellence. However, in some cases, highly set performance goals may also inhibit performance. For example, when I started on the high school varsity hockey team as a freshman, my coaches and teammates expected me to produce points immediately. Additionally, my parents expected my best effort every time I touched the ice. Consequently, the complexity of demands and striving to execute perfect performance, such as scoring points, led to my perception of failure (by not scoring points) time and time again. I felt I was unable to live up to the expectation to consistently score points. This degree of perfectionism had a debilitating effect on my confidence, enjoyment, and desire to participate in hockey.

For student athletes, excellence in athletics and academics is desired. Alongside this expectation comes the consistent strive to perform to perfection. The appraisal of the performed behavior may also vary by oneself or others depending on the congruence between set performance standard and actual performance. Negative self-appraisals are common perfectionistic behaviors that are associated with heightened perceived stress

in relation to making a mistake (Frost & Henderson 1991; Frost, Marten, Lahart, & Rosenblate, 1990). For example, it has been suggested that increases in perfectionism in athletics is a function of heightened perceived ability to execute a task (Breeding & Anshel, 2015). Dynamic, complex, and often multifaceted environments, such as university athletics, warrant further investigation into the presence and effects of perfectionism on performance.

Perfectionism is commonly defined as striving for perfection and setting overly high standards along with tendencies of hypercritical evaluation of performed behaviors (Frost et al., 1990; Hewitt & Flett, 1991). Three distinctions are depicted in the definition: a) striving for perfection, b) setting high standards, and c) critical evaluation of one's behavior (Frost et al., 1990; Hewitt & Flett, 1991). Striving for perfection has been associated with adaptive, facilitative, and beneficial consequences (Gotwals, Dunn, Stoeber, & Stoll, 2012; Stoeber & Otto, 2006). The facilitative nature is mediated by the perceived relevance of the performance outcome (Speirs Neumeister, 2004). However, critical evaluations (maladaptive) have unanimously been associated with debilitating effects on performance and wellbeing (Gotwals et al., 2012; Stoeber & Otto, 2006). While there is an abundance of research on perfectionism, it remains unclear exactly which factors (e.g., personality, situation, environment) may facilitate the constructive or destructive nature of perfectionism.

Stoeber and Otto (2006) suggested that perfectionism comprises of two main dimensions: perfectionistic strivings and perfectionistic concerns. The authors included these two dimensions as the guiding framework in the tripartite model. Perfectionistic strivings have been associated with adaptive or healthy consequences of perfectionism

(Stoeber & Otto, 2006). Sub dimensions of perfectionistic strivings are personal standards and self-oriented perfectionism (Stoeber & Otto, 2006). Contrary to perfectionistic strivings, perfectionistic concerns have been associated with maladaptive outcomes. These concerns are comprised of the following dimensions: concern over mistakes, doubts about actions, and socially prescribed perfectionism. The tripartite model simplifies the interpretation of adaptive and maladaptive consequences of perfectionism through the two most widely used measures (i.e., Frost Multidimensional Perfectionism Scale, Hewitt Multidimensional Perfectionism Scale).

Academics

Previous literature has acknowledged college students to be at an increased risk of perfectionism (Christman, 2012). Pathological consequences, such as depression, anxiety, stress, negative emotions, and neuroticism have repeatedly been associated with perfectionistic concerns among college students (Bieling, Israeli, Smith, & Antony, 2003; Bieling, Israeli, & Antony, 2004; Christman, 2012; Cox, Enns, & Clara, 2002). Although perfectionistic concerns appear to be debilitating to one's well-being and potentially academic performance, adaptive consequences may also be present. Perfectionistic strivings have been associated with higher grade point average (GPA), satisfaction with GPA, subjective well-being, competence, and greater emotional sensitivity (Flett, Hewitt, & De Rosa, 1996; Stoeber & Otto, 2006; Stoeber & Childs, 2010). However, researchers have investigated intragroup differences in perfectionism between "gifted" students and their non-gifted cohort (Roberts & Lovett, 1994). Specifically, those socially ascribed as gifted in academics have shown higher intensities of perfectionism than their cohort of

non-gifted students (Roberts & Lovett, 1994) and a norming sample of college students (Speirs Neumeister, 2004).

The term ‘gifted’ encompasses individuals having extremely high intellectual ability, prior achievement, and a high degree of advanced capabilities (Stephens & Karnes, 2000). Within developmental contexts, socially labeling an individual as exceptional, superior, or gifted in athletics and academics may lead to the expectation of extraordinary performed behavior (Speirs Neumeister, 2004). For example, gifted college students reported debilitative aspects of perfectionism resulting from authoritarian parenting styles (Speirs Neumeister, 2004). Students’ inability to recognize effort independent of outcome resulted in a stringent focus on unrealistic expectations in academics (Speirs Neumeister, 2004). Perfectionistic strivings in gifted students were noted to arise from early academic success and mastering the curriculum without feeling challenged at an early age (Speirs Neumeister, 2004). The act of attaining perceived perfection early on appeared to normalize the expectation for perfect performance (Speirs Neumeister, 2004). Previous research has acknowledged the potential antecedents of perfectionism in gifted students within academics. Less is known about the antecedents of perfectionism in athletics.

Athletics

Perfectionistic strivings have previously been associated with higher self-esteem and mastery approach goals in athletics (Koivula, Hassmén, & Fallby, 2002; Stoeber, Stoll, Pescheck, & Otto, 2008). Consequently, perfectionistic concerns have been associated with lower levels of perceived competence and self-esteem (Flett & Hewitt, 2005; Gotwals, Dunn, & Wayment, 2003). Most research suggested that perfectionism

relies on cognitive appraisals of performance (Flett & Hewitt, 2005; Koivula, Hassmén, & Fallby, 2002; Stoeber, Stoll, Pescheck, & Otto, 2008), but recent research within academics suggests perfectionism to be a potential function of academic efficacy (Damian et al., 2017). Further examination of a variety of antecedents to perfectionism is warranted in both academics (Damian et al., 2017) and athletics. To date, a majority of research has considered perfectionism to be static across contexts, but this assumption has received criticism in the last decade.

Domain Specific Perfectionism

Perfectionism may be dependent upon the context and differ across domains, such as academics and athletics (Dunn, Gotwals, & Dunn, 2005; Dunn, Dunn, & McDonald, 2012; McArdle, 2010). Dunn and colleagues (2005) found that male and female high school students reported significantly higher mean scores of perfectionism in athletics than in academics. Furthermore, McArdle (2010) explored domain specific measures of perfectionism in academically "gifted" adolescent student-athletes. Results indicated significantly higher scores on school perfectionism, contingent self-worth, perceptions of competence, and task value of school rather than sport (McArdle, 2010). Self-reported perfectionism levels in student-athletes appear to be influenced by the domain and not generalizable across multiple situational contexts (Dunn et al., 2005), and potentially dependent on the social recognition of ability (McArdle, 2010).

To date, only one study has explored perfectionism in intercollegiate student-athletes while also examining the relationship of possible predictors using domain specific measures (Dunn, Dunn, & McDonald, 2012). The results suggested that student athletes' perception of competence and importance was associated with adaptive

perfectionism in sport (Dunn et al., 2012). On average, student athletes also reported higher levels of perfectionism in athletics that in academics (Dunn et al., 2012). The findings indicate that athletes may be more apt to develop higher perfectionism intensities in an athletic rather than academic setting (Dunn et al., 2005; Dunn et al., 2012) unless socially ascribed as gifted in academics (McArdle, 2010). Yet, further research is required to understand the intricacies of perfectionism across academics and athletics for those who are socially ascribed as gifted or excelling in academics.

As such, the purpose of the current study is to examine whether student-athletes recognized for academic excellence differ in their perfectionistic intensities compared to their cohort of teammates. A secondary purpose is to explore the prediction of perfectionism by various personality antecedents (intolerance of uncertainty, satisfaction with performance, perceived stress, and perceived competence and importance) from a domain specific perspective (i.e., academics and athletics).

Statement of Purpose

The purpose of this study is two-fold:

1. To compare perfectionism intensities between excelling student-athletes and their teammates in athletics and academics.
2. To explore the strongest predictors of perfectionism in the domains of athletics and academics in intercollegiate student-athletes.

Research Question

1. Do excelling and non-excelling student-athletes differ in perfectionistic intensities (i.e., SOP, SPP, and OOP) in athletics and academics?

2. What are the strongest domain specific predictors of perfectionistic intensities in academics and athletics?

Hypotheses

1. Excelling student-athletes will report higher perfectionism (SOP, OOP, SPP) than their non-excelling teammates in athletics and academics.

2. Perceived satisfaction, competence, and importance will be positive predictors of perfectionism. Perceived stress and intolerance of uncertainty will be negative predictors of perfectionism.

Scope of the Problem

In intercollegiate athletics, performance excellence is expected. Performance excellence is many times associated with winning (e.g., outcome) rather than the development of skills (e.g., process). Athletes seem to place a heightened degree of perfectionism in athletics compared to academics. To date, it is unclear if this is true for all intercollegiate athletes. Specifically, investigation into perfectionism intensities between excelling student-athletes and their teammates is warranted. Furthermore, information regarding which factors influence perfectionism in academics and athletics is limited. Therefore, a deeper exploration into potential predictors of domain-specific perfectionism is warranted.

Assumptions of the Study

For the purpose of this study, the following assumptions will be made at the start of the investigation:

1. Interscholastic student-athletes will honestly and appropriately respond to a survey.

2. The responses of the sample of interscholastic student-athletes accurately represent the experiences of student-athletes and their lived experiences.

Definition of Terms

The following terms are operationally defined for the purpose of this study:

1. Excelling: Individuals who are a starter on their respective team and have earned a GPA of 3.3 or higher will be applied for sophomores, juniors, and seniors. Freshmen must have maintained a GPA of one standard deviation higher than 3.3 than the mean of the entire freshmen sample, and also be a starter on their respective collegiate team.
2. Perfectionism: Perfectionism can be defined as striving for perfection and setting overly high standards along with tendencies of hypercritical evaluation of behaviors (Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991).
3. Stable: The intensity of a quality is prevalent across all contexts of one's life and does not fluctuate.
4. Situational: The intensity of a quality is fluctuating across contexts of one's life.

Delimitations of the Study

The delimitations of the study are as follows:

1. Excelling student-athletes will be chosen to represent gifted student-athletes in the domain of academics and athletics. However, the socially ascribed label (i.e., excelling) suggests two key components of gifted, high performance achievement and a high degree of advanced potential. The recognition on such a social platform that differentiates them from their cohort may represent different forms of perfectionism than their respective cohorts.

Limitations of the Study

The limitations of the study are as follows:

1. Only interscholastic student-athletes were chosen for this study resulting in a narrow scope of the population diminishing the generalizability of the study.
2. Cross-sectional nature of the methodological design reduces the interpretability of the results.

CHAPTER TWO

PROPOSAL

REVIEW OF LITERATURE

Evaluative settings, such as academics and athletics, provide various opportunities to be recognized, scrutinized, and rewarded. The complex nature of evaluative settings within athletics and academics invites varying degrees of performance standards. For example, walk-on student-athletes may expect to work hard while their parents expect them to be a starter on their team. Yet their coach may not expect great performance. The different performance expectations may create confusion as to which bar is high enough. Yet, meeting or failing to meet the expectation may result in recognition (e.g., showing up – coach), scrutiny (e.g., not starting – parents), and reward (effort – individual). The focus which performance expectation is most relevant is important to consider in evaluative domains.

The focus of performance expectations from the previous example could differentiate the degree of striving for perfect performance. For example, if the focus is on effort, the individual may increase their degree of striving for perfection due to the rewarding appraisal. However, if they attune to the coach's expectations, it may result in a decrease in striving to achieve membership on the team and therefore a decrease in performance. Consequently, not meeting parental expectations of being a starter could lead to a drastic outcome such as perception of burnout or depression. Some may even discontinue their sport participation. The relationship between performance standards and striving for perfection is complex in athletics alone. Although striving for perfection and performance standards are pertinent to consider within evaluative domains, so is the

direction of focus on evaluating performed behavior in reference to the performance standard set.

The degree of critical evaluation (by oneself or others), based on the perfection of the performed task is a function of the set performance standard. For example, if a student-athlete became a starter on a collegiate team, parents may express enhanced satisfaction or even provide rewards (e.g., affection, material) for excellent performance by their child. As a result, the child may associate love, approval, or even success with perfection because of the rewarding behavior from significant others. Consequently, anything less than being a starter may be perceived as failure resulting in a decreased sense of confidence, love, or approval from others. Perfectionism is complex, encompassing a variety of intrapersonal and interpersonal dynamics that ascribe the intensity of expressed perfectionism (Hewitt & Flett, 1991). Though evaluative settings promote varying degrees of perfection, the operationalization of what perfectionism entails has evolved.

Definition of Perfectionism

Perfectionism can be defined as striving for perfection and setting overly high standards along with tendencies of hypercritical evaluation of behaviors (Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991). The definition can be broken into three distinct components: a) striving for perfection, b) setting of high standards, and c) critical evaluation of one's behavior. Striving for perfection entails the desire to become a competent individual excelling in a specified task. The intensity to strive for perfection is a function of the performance standard deemed as important. Excessively high standards refer to setting challenging and sometimes unrealistic performance expectations. Finally,

critical evaluation of one's behavior refers to the evaluative process from one's self or others towards performance. For example, an individual may set different subjective (e.g., appraisal of technical execution of task) or objective (e.g., score or time) evaluative norms for performed behavior. The three components of perfectionism are subjectively perceived (Frost et al., 1990; Hewitt & Flett, 1991). Psychological predispositions (Frost et al., 1990) and the environment may influence perfectionism tendencies (Hewitt & Flett, 1991).

In the early literature on perfectionism, the three most widely used conceptual frameworks were Frost et al.'s (1990) model of perfectionism, Hewitt and Flett's (1991) model of perfectionism, and Stoeber and Otto's (2006) tripartite model. Frost and colleagues (1990) established a dimensional conceptualization through previous decades of literature with two purposes: a) to operationalize perfectionism and b) understand the antecedents to perfectionism. Hewitt and Flett (1991) recognized the limitations of Frost and colleagues (1990) model and aimed to develop a more holistic model including the effects of the environment on the development of perfectionism (e.g., coaches, parents, teachers, peers). Finally, Stoeber and Otto (2006) created a model investigating the potential adaptive and maladaptive consequences of perfectionism through establishing a sound interpretation of various perfectionism measurements. The individual differences among these conceptual models are explored below.

Frost et al.'s Model of Perfectionism

When Frost and colleagues (1990) first conceptualized perfectionism, it was generally considered a negative trait. This may have been a function of the populations in which perfectionism had previously been explored (e.g., individuals with psychological

disorders; Frost et al., 1990). It remained questionable, however, if all aspects of perfectionism were maladaptive or negative. Specifically, Frost et al. (1990) set out to recognize and summarize the limitations of the literature to develop a conceptualization based on the understanding that perfectionism is a global and stable personality characteristic consistent in all domains of life.

A major issue of perfectionism research was the inability to differentiate perfectionistic people from those who are merely competent and strive to get better (Frost et al., 1990). At the time, literature lacked an operational definition of perfectionism. The only proposed central component of perfectionism was setting excessively high standards of expected performance (Burns, 1980; Frost et al., 1990; Hamachek, 1978; Hollander, 1965). In addition, researchers argued that the setting of personal standards might not be pathological (Frost et al., 1990) depending on one's ability to appraise the performance outcome in an adaptive or maladaptive way.

Hamachek (1978) suggested *normal* perfectionists have the ability to regulate expectations from situation to situation requiring a more, or less, intense focus on the perfection of the task. For example, if a world-class tennis player competes in a charity match against a recreational player, the athlete may pay less attention to perfection and more attention to enjoyment of the situation. Contrary to this notion, *neurotic* perfectionists allow little room for variation in appraising a situation if their outcome does not match their expected high standard (Hamachek, 1978). An elite golfer who suffers a back injury continues to play in several tournaments, but still expects perfect performance, which is not attainable due to the injury. Frost and colleagues (1990) argued that not only was the dimension of personal standards present in perfectionism,

but also a critical evaluation of one's behavior relative to the personal standard set. In addition, critical evaluation may be a crucial element to appropriately operationalize perfectionism.

Critical evaluation of behavior incorporates concerns regarding mistakes in performance (Frost et al., 1990). Within athletics, an athlete may become intently focused on a mistake made during performance rather than acknowledging the overall success when an extraordinary performance is achieved. This drastic level of critical evaluation may lead to an overall negative (i.e., maladaptive) appraisal despite the potential positive outcome of the entire performance. Hamachek (1978) suggested normal perfectionists interpret mistakes as less important than neurotic perfectionists. Specifically, normal perfectionists may be able to identify satisfactory performance despite mistakes made (Hamachek, 1978). Neurotic perfectionists may approach achievement situations with more concern over failure, while normal perfectionists may view these situations as opportunities to meet their need for achievement (Hamachek, 1978). Consequently, the intensity of focus, along with the importance placed on mistakes, within the critical evaluation of behavior may differentiate adaptive and maladaptive tendencies of perfectionism (Frost et al., 1990; Hamachek, 1978).

Having doubts about one's performance quality is a second form of evaluation present in perfectionism (Burns, 1980; Frost et al., 1990; Hamachek, 1978). Dissimilar to the focus on mistakes, doubts about performance quality entails an individual's perception that a task is not completed to their satisfaction (Frost et al., 1990). Essentially, perfectionists may doubt the quality of their performance and feel uncertain

after completion of a task (Frost et al., 1990). However, central to this belief is the antecedent, appraising as unfulfilled, resulting in unsatisfactory performance evaluation.

From early perfectionism research, perfection was often associated with social approval from influential figures (e.g., parents, peers, coaches, teachers) within performance environments or significant others (Burns, 1980; Hamachek, 1978; Hollander, 1965). For example, parents may provide affection and approval to their children for exceptionally performed behavior (Frost et al., 1990). Consequently, mistakes may present a perceived risk of losing approval, love, or support (Frost et al., 1990). Parental behavior may also influence how the child evaluates performance through the anticipation of a consequence from an influential figure (Frost et al., 1990; Speirs Neumeister, 2004). As such, parental influence seems to play an important role in the development of perfectionism.

In addition, preciseness and orderliness were prominent characteristics in previous perfectionism research (Frost et al., 1990). Although these characteristics do not equate to evaluating behavior, they play a pivotal role in daily tasks (Frost et al., 1990). For example, athletes may prepare a breakfast meal at night before the next morning. However, if the meal is not prepared to their standard, they may become disgruntled or "fussy". Hollander (1965) described the phenomenon as possessing a sense of "order". In conclusion, Frost and colleagues (1990) conceptualization of perfectionism consisted of a multitude of disruptions along the six dimensions (i.e., personal standards, doubts about actions, concern over mistakes, parental criticism/expectations, and organization) affecting the intensity of perfectionism. This conceptualization originated one of the first

multidimensional conceptualizations of perfectionism incorporating all the factors previously discussed.

Following the conceptualizations of perfectionism, several measurement instruments have been developed that view is as a stable personality trait (Cox, Enns, & Clara, 2002; Frost et al., 1990). Frost et al. (1990) proposed the Multidimensional Perfectionism Scale (FMPS) consisting of six dimensions encompassing perfectionism (i.e., personal standards (PS), concern over mistakes (COM), parental expectations (PE), parental criticism (PC), doubts about actions (DAA), and organization (O)). Measuring as a trait anticipates perfectionism being present and fluent across multiple contexts or situations. Each dimension assesses a facet of Frost and colleagues (1990) conceptualization of perfectionism (see description above). *Personal standards* consist of setting high standards and self-perceived importance placed on these expectations (Frost et al., 1990). *Concern over mistakes* is conceptualized as negative reactions to perceived mistakes that equates to perceived failure and a belief that others are negatively evaluating performed behavior (Frost et al., 1990). Perceiving ones' parents as having extremely high goals accompanied by critical examination of performance constitutes *parental expectations* and *parental criticism* (Frost et al., 1990). *Doubts about actions* comprises the tendency to not feel satisfied with performance (Frost et al., 1990). Finally, *organization* involves one's perceived importance of order and organization (Frost et al., 1990). The sum score of all dimensions creates a conceptualized total perfectionism score (Frost et al., 1990). The scale showed strong internal reliability for the total perfectionism score ($\alpha = .90$) (Frost et al., 1990). The internal reliability for all six dimensions reported was also adequate ($\alpha > .77$; Frost et al., 1990). However, organization is excluded from

the total perfectionism score due to its lack of correlation to the other subscales (Frost et al., 1990).

Hewitt and Flett's Model of Perfectionism

Soon after Frost and colleagues (1990) developed their initial model, Hewitt and Flett (1991) proposed another Multidimensional Model of Perfectionism. The authors argue that the primary focus when investigating perfectionism should be on the interpersonal influence, which was ignored in Frost et al.'s (1990) model. Specifically, the source of reference norm (e.g., self, others) and interpersonal dynamics play an important role in the intensity of perfectionism. These are reflected in Hewitt and Flett's (1991) model. For example, an intercollegiate student-athlete may have an expectation of playing ten minutes per game, but their parents expect two goals per game. The direction of focus on one of these two goals will cause vastly different reference points, potentially affecting this individual in other relevant areas (e.g., confidence, motivation, self-efficacy). Expectations towards performance standards (self or others) may drastically affect the intensity of perfectionism of an athlete. Hewitt and Flett (1991) matured the multidimensional perfectionism conceptualization to consider environmental affect in the development of perfectionism. Their conceptualization encompasses three distinct perfectionism intensities: a) self-oriented perfectionism, b) others-oriented perfectionism, and c) socially prescribed perfectionism.

Similar to Frost et al.'s (1990) model, the first dimension of the HMPS is self-oriented perfectionism. Essentially, the authors articulated that self-oriented perfectionists set extremely high standards for themselves. This is accompanied by critical evaluations of performed behavior (Hewitt & Flett, 1991). In addition to high personal standards and

critical evaluation, this facet incorporates a motivational aspect reflecting striving for perfection and avoiding failure (Hewitt & Flett, 1991). This motivational component is thought to be the most significant characteristic of self-oriented perfectionists (Hewitt & Flett, 1991). In summary, self-oriented perfectionists' direction of focus and attention is towards their own expectations, more so than at the influential figures in their environment. These expectations reflect realistic, or attainable, personal standards (Hewitt & Flett, 1991).

The second dimension is others-oriented perfectionism. The direction of perfectionistic expectations within this dimension is no longer just oneself, but at other individuals in a given environment or context (e.g., a team). Specifically, an individual may require high or even unrealistic expectations of significant others (i.e., loving partners, friends, teammates), which then heightens that individual's personal expectations and standards (Hewitt & Flett, 1991). For example, a hockey player who consistently scores every game may expect nothing less than a goal a game from their teammates. However, these teammates may not be competent enough to fulfill such goals. This expectation of others may not be realistic or attainable, which could lead to more critical evaluations if the expectations are not met. Much research has focused on this dimension of perfectionism (Stoeber & Otto, 2006; Gotwals et al., 2012), highlighting its maladaptive nature.

The final form is socially prescribed perfectionism, which considers who contributes to the perfectionistic expectation for an individual. Essentially, it is defined as "the perceived need to attain standards and expectations prescribed by significant others" (Hewitt & Flett, 1990, p. 457). An example constitutes a child only feeling worthy or

accepted when standards or expectations made by parents, or coaches are met. This degree of acceptance is socially ascribed and not self-developed. Similar to others-oriented perfectionism, however, these significant others now hold unrealistic standards and expectations for the individual accompanied by excessively critical evaluation of performed behavior (Hewitt & Flett, 1991). Along with the unrealistically high standards, expectations, and evaluations comes an external pressure from significant others to exhibit perfect behavior (Hewitt & Flett, 1991). For example, a parent may require their young golf athlete to consecutively hit one hundred successful fairway drives a day before being able to eat dinner. In such a drastic scenario, the athlete may experience feelings of unworthiness, or unacceptance, along with fear of failure if the expectation cannot be met.

Hewitt and Flett (1991) created a survey to assess the conceptualization of three distinct perfectionistic profiles: self-oriented perfectionism (e.g., setting of excessively high standards and critically self-evaluating one's behavior), others-oriented perfectionism (e.g., high expectations of perfection one places on others), and socially prescribed perfectionism (e.g., perceiving others to expect one's behavior to be perfect) (Hewitt & Flett, 1991). Each of these profiles are dimensions in their scale. In contrast to the global score of the FMPS, the HMPS is scored as an average on each of the three profiles (e.g., Bieling, Israeli, Smith, & Antony, 2003). The scale has been widely used in research with high school and collegiate students. Internal reliability amongst all three dimensions was adequate: self-oriented perfectionism ($\alpha > .86$), others-oriented perfectionism ($\alpha > .82$), and socially prescribed perfectionism ($\alpha > .87$; Hewitt & Flett, 1991).

Tripartite Model of Perfectionism

Stoeber and Otto (2006) proposed a theoretical framework, the tripartite model, with two specific intentions: a) to create a framework that allows interpretation intra- and interpersonal dimensions of perfectionism, and b) to re-examine research regarding perfectionism to assess if there is truly an "adaptive" in addition to "maladaptive" form of perfectionism. The researchers suggest there are two higher-order dimensions profoundly related to perfectionism: perfectionistic strivings (PS) and perfectionistic concerns (PC). The authors argue that varying self-reported scores on subscales representing these dimensions may create three different profiles of perfectionists; a) adaptive or healthy, b) maladaptive or unhealthy, and c) non-perfectionists (see Figure 1; Stoeber & Otto, 2006).

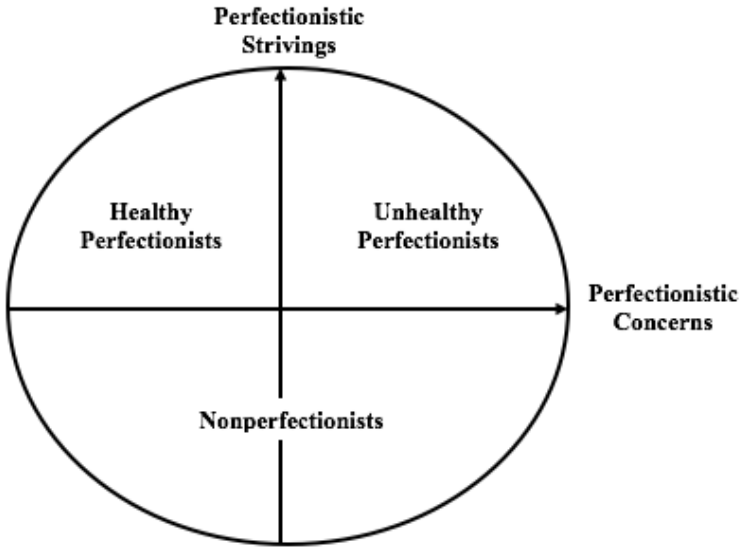

Figure 1.

The tripartite model proposed by Stoeber and Otto (2006)

After reviewing the existing literature, Stoeber and Otto (2006) suggest that two variations of perfectionism appear to be present: a generally positive and a generally negative form of perfectionism. The authors note that these two forms have been renamed

throughout the past several decades: normal and neurotic (Hamachek, 1978), adaptive and maladaptive (Rice, Ashby, & Slaney, 1998), active and passive (Adkins & Parker, 1996), and positive strivings and maladaptive evaluation concerns (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993). Because no clear definition of each form has emerged, the evidence on the presence of each form has been mixed. Therefore, Stoeber and Otto (2006) highlighted the presence of two higher-order factors of perfectionism through factor analysis: perfectionistic strivings and concerns (Damian, Stoeber, Negru-Subtirica, & Baban, 2017) creating the tripartite framework.

Perfectionistic strivings are thought to promote varying degrees of positive, or beneficial, characteristics of perfectionism. They arise from combining different measurement facets (see Figure 2 for review) but are widely associated with positive consequences. For example, Frost and colleagues (1993) found two substantial factors when combining dimensions of the HMPS and FMPS. One was deemed positive strivings (perfectionistic strivings) and the other was deemed maladaptive evaluation concerns (perfectionistic concerns). Perfectionistic strivings were correlated with aspects of well-being and positive affect, while maladaptive evaluation concerns were only significantly associated with negative affect and depression (Frost et al., 1993). Empirically, Frost and colleagues (1993) findings lend further support for the multidimensionality of perfectionism constituting adaptive and maladaptive consequences.

Frost and colleagues (1993) utilized the two most widely used multidimensional perfectionism scales (i.e., FMPS and HMPS) to provide empirical support for the presence of two forms of perfectionism. However, Stoeber and Otto (2006) report that most researchers have opted to utilize an interpersonal conceptualization (HMPS) rather

than an intrapersonal approach (FMPS). Stoeber and Otto (2006) report the facets of the FMPS and HMPS that represent the overarching dimensions of the tripartite model (i.e., perfectionistic strivings and concerns). These facets are illustrated in Figure 2. The combination of the different dimension and profile scores measure the two overarching dimensions of perfectionism (e.g., perfectionistic strivings, perfectionistic concerns; Stoeber & Otto, 2006). In the tripartite model, three profiles are present: a) healthy (adaptive) perfectionists (e.g., high perfectionistic strivings, and low perfectionistic concerns), b) unhealthy (maladaptive) perfectionists (e.g., high perfectionistic strivings, and high perfectionistic concerns), and c) non-perfectionists (e.g., low perfectionistic strivings; Stoeber & Otto, 2006).

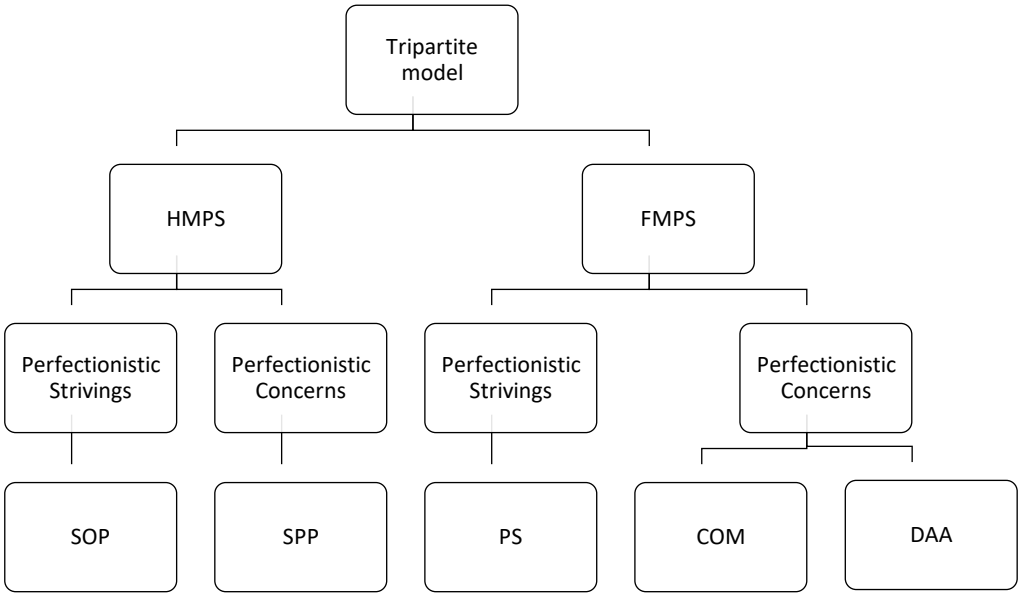

Figure 2.

Facets of the HMPS and FMPS representing the tripartite model

Note: Hewitt and Flett's Multidimensional Scale (HMPS) (SOP: self-oriented perfectionism, SPP: socially prescribed perfectionism), Frost and colleagues Multidimensional Perfectionism Scale (FMPS) (PS: personal standards, COM: concern over mistakes, DAA: doubts about actions).

To provide empirical support for their model, Stoeber and Otto (2006) reviewed 35 different studies assessing perfectionism using either the FMPS or HMPS. Fifteen of the 35 studies used the FMPS, while the remaining twenty used HMPS. The researchers divided results of the studies into four categories: a) positive evidence where perfectionistic strivings were related to positive characteristics only; b) mixed evidence where perfectionistic strivings was related to both positive and negative characteristics; c) negative evidence where perfectionistic strivings were related to negative characteristics only; and d) null finding where perfectionistic strivings were unrelated to any positive or negative characteristics (Stoeber & Otto, 2006). The results of the fifteen studies using the FMPS suggested unanimously that perfectionistic strivings are related to positive outcomes (Stober & Otto, 2006). The 20 studies utilizing the HMPS found similar patterns; twelve studies provided positive evidence, with healthy perfectionists reporting higher levels of positive characteristics than unhealthy and non-perfectionists (Stoeber & Otto, 2006). Four studies were categorized as mixed evidence, and four studies were categorized as null findings due to no significant differences between healthy and unhealthy perfectionists (Stoeber & Otto, 2006). The authors note that the results provided initial support for the tripartite model, yet more investigation into the antecedents and consequences of perfectionism was warranted.

The dimension of perfectionistic strivings was related to higher positive affect, satisfaction with life, and active coping styles (Stoeber & Otto, 2006). Healthy perfectionists, represented by high perfectionistic strivings and low perfectionistic concerns reported higher levels of self-esteem, higher grade point average (GPA), and greater GPA satisfaction, along with lower levels of procrastination, interpersonal

problems, and depression (Stoeber & Otto, 2006). The authors argued that perfectionism was not solely a maladaptive, negative, or a dysfunctional characteristic, but a multidimensional phenomenon with many facets that were positive and negative (Stoeber & Otto, 2006). Although Stoeber and Otto (2006) assessed a wide array of studies, few had looked at the differentiation of adaptive and maladaptive intensities of perfectionism in academics and none had been assessed in athletics.

Perfectionism in Academics

Most research connects perfectionism with maladaptive outcomes in academics (e.g., depression, anxiety, stress, negative emotions, and neuroticism; Bieling, Isreali, & Antony, 2004; Bieling, Israeli, Smith, & Antony, 2003; Christman, 2012; Cox, Enns, & Clara, 2002). It has also been suggested that college students may be at an increased risk of maladaptive perfectionism (Christman, 2012). Specifically, negative characteristics of depression, anxiety, self-esteem, and low self-worth have been associated with maladaptive perfectionism in academics (Bieling et al., 2004; Flett, Hewitt, & De Rosa, 1996; Rice & Ashby, 2007; Stoeber & Childs, 2010). Maladaptive perfectionism was a significant predictor of depression, anxiety, and stress in college students (Bieling et al., 2004). In addition, maladaptive perfectionism was associated with the personality trait of avoidance, which is characterized by feelings of depression and anxiety (Ulu & Tezer, 2010). Although maladaptive perfectionism may be detrimental to one's well-being and possibly even predict clinical diagnoses, it may also negatively affect individual performance within academics.

Maladaptive perfectionism has previously been associated with a lack of preparation on exams, and not setting higher standards for future exams (Bieling et al.,

2003). It may go along with unrealistically high-performance standards, self-criticism, and fear of failure in college students (Cox et al., 2002). In addition, maladaptive perfectionism intensities have been associated with performance anxiety, social anxiety, and study insufficiencies (Christman, 2012). In summary, maladaptive forms of perfectionism may be detrimental to one's well-being, and possibly performance in academics.

While there is vast evidence for maladaptive perfectionism in academics, there is also evidence indicating the presence of adaptive perfectionism. Adaptive perfectionism has been associated with subjective well-being, competence, and greater emotional sensitivity (Flett et al., 1996; Stoeber, & Childs, 2010). In comparison, perfectionism has been associated with better performance on exams compared to maladaptive and non-perfectionist intensities (Bieling et al., 2003). Furthermore, adaptive perfectionism had been associated with greater emotional sensitivity and social expressiveness (Flett et al., 1996). Christman (2012) reported adaptive perfectionist tend to see positive results of their effort independent of actual outcome. Adaptive perfectionism was associated with a task orientation of focusing on the process rather than the outcome (Ulu & Tezer, 2012). Adaptive intensities of perfectionism have not only been associated with facilitative outcomes, but also attainable degrees of performance standards (i.e., process, effort; Christman, 2012; Ulu & Tezer, 2012).

Findings lend further support for those encompassing adaptive intensities of perfectionism to focus on the process independent of the outcome. For example, adaptive perfectionists focus on what they can control and do not evaluate the outcome in terms of drastic self-criticism in academics contrary to maladaptive forms of perfectionism. The

notion aligns with Stoeber and Otto's (2006) belief that adaptive perfectionists have higher levels of perfectionistic strivings but lower levels of perfectionistic concerns. Essentially, adaptive perfectionists focus on maximizing their capabilities without drastic self-criticism of performance. The minimization of perfectionistic concerns was highlighted by adaptive perfectionism sharing a relationship with hope for success rather than fear of failure in college students (Stoeber & Rambow, 2007). Furthermore, students with adaptive forms of perfectionism tend to carry higher academic achievement in grades and grade point averages (Rice, & Asbhy, 2007; Stoeber & Rambow, 2007). The evidence from the existing perfectionism research in academics suggested that: a) adaptive and maladaptive intensities of perfectionism are present, and b) both forms are related to positive (adaptive) and negative (maladaptive) consequences. The previously discussed results lend further support for Stoeber and Otto's (2006) conceptualization of perfectionism encompassing both facilitative and debilitative consequences perfectionism within academics.

Excelling Students

An important consideration when examining perfectionism is the population in which it occurs. For example, those socially appraised as "gifted" or "talented" may embody different perfectionistic intensities compared to their cohort (Roberts & Lovett, 1994). The term gifted had been used with varying definitions (Stephens & Karnes, 2000). For the purpose of the present study, gifted was defined as an individual possessing superior intellectual ability that had demonstrated high performance achievement with the potential of advancement (Stephens & Karnes, 2000). The first

study exploring the development of perfectionism in "gifted" college students appeared to have been conducted by Speirs Neumeister in 2004.

The author conducted a mixed methods study and recruited first year students in an honors program. Participants were included in the qualitative portion if they scored one and a half standard deviations higher on the dimension of socially prescribed perfectionism and approximately two standard deviations higher on self-oriented perfectionism than the norming sample of college students provided by Hewitt and Flett (1991). Semi-structured interviews were conducted and transcribed verbatim (Speirs Neumeister, 2004). Findings suggested different attributions to the development of students' perfectionism intensities of self-oriented (adaptive) and socially prescribed perfectionism (maladaptive; Speirs Neumeister, 2004).

Socially prescribed perfectionism was attributed to three themes: parental perfectionism and parenting style, equating self-worth with achievement, and high perceived expectations from others (Speirs Neumeister, 2004). The influence of parental perfectionism and authoritarian parenting style was associated with stringent expectations for a child, leading to a fear of disappointing others. The fear of disappointing others negatively impacted students' self-worth. These connections were found across several domains, such as school performance and social situations (Speirs Neumeister, 2004). Participants equated their self-worth to achievement in an attempt to strive for perfection to avoid disappointing others. The perceived expectations were experienced in multiple contexts, such as academics and social situations (Speirs Neumeister, 2004). However, the expectations achieved seemed to be acknowledged by others in an unempathetic manner.

Numerous students explained how their perception of overly high expectations from others resulted in a lack of appreciation for excellent achievements because it was expected and not acknowledged (Speirs Neumeister, 2004). These extremely high expectations were not only prevalent in academics but also athletics. One participant explained that his father held extremely high expectations for his workout regime because he was labeled as a "gifted" high school athlete and if those expectations were not met he was verbally scrutinized (Speirs Neumeister, 2004). The results lend further support for the notion that parents play a pivotal role in the onset of perfectionism, as proposed by Frost and colleagues (1990), but feelings of self-worth based on perceived performance expectations of others (e.g., parents) appear to contribute to the development of socially prescribed perfectionism as well.

A second theme of equating one's self-worth with achieving perfection expected by others was prevalent throughout the development of socially prescribed perfectionism (Speirs Neumeister, 2004). Essentially, self-worth was solely equated to the achievement of perfection that was expected by significant others (e.g., parents, teachers, peers) and not the process or effort engaged in by the individual (Christman, 2012; Ulu & Tezer, 2012). Further, these results were found in the entire sample of the study (Speirs Neumeister, 2004). The feeling of superiority to others in the academic setting and achieving perfection through outcomes of "perfect performance" in academics created higher perceived self-worth (Speirs Neumeister, 2004). Ultimately, anything less than a perfect outcome may be deemed as failure and result in feelings of lower self-worth. However, it is essential to note that the appraisal is a result of significant others' expectations of performance that one equates with their own self-worth.

The final theme found among participants acknowledged to influence socially prescribed perfectionism was a fear of disappointing others (Speirs Neumeister, 2004). This fear manifested in a variety of detrimental ways, such as feeling devalued by peers, parents, and teachers, as well as depression, anorexia, and extreme weight loss (Speirs Neumeister, 2004). Results highlight the potential pathological consequences of socially constructed maladaptive intensities of perfectionism previously noted within academic literature on perfectionism (Bieling et al., 2004; Christman, 2012; Rice & Ashby, 2007). In conclusion, results highlight the importance of the environment, and influential others, to develop socially prescribed perfectionism intensities within gifted students.

Interestingly, Speirs Neumeister (2004) found many self-oriented perfectionists had trouble labeling what influenced their perfectionistic tendencies, but numerous environmental factors appeared to play a pivotal role. A lack of challenge early in one's academic career was a prevalent theme. The participants described the attainment of perfection early on through mastering the curriculum without being challenged or experiencing failure significantly contributed to their perfectionism tendencies. Similar to the development of socially prescribed perfectionism, self-oriented perfectionists were influenced by their parents' perfectionism. Authoritarian parenting orientation of self-oriented perfectionists was similar to socially prescribed perfectionists, but accompanied by highly supportive behaviors. Parents were setting high, but realistic, performance expectations for their children, accompanied by highly supportive behaviors when their children experienced a perceived failure.

Parents were worried about their children's high internal expectations of performance and strived to soothe their perceived failures when high expectations were

not consistently met (Speirs Neumeister, 2004). Specifically, parents tended to focus on effort rather than outcome when their children tended to do the opposite. Self-oriented perfectionists acknowledged their use of high personal standards, but not manifested through external expectations (Speirs Neumeister, 2004). Participants suggested high personal standards were self-developed, rather than socially prescribed by others in their evaluative environment (e.g., parents and teachers). In addition, worry about meeting the expectations of others was not intensified, but worry about reaching their own intrinsic expectations of performance were clearly illuminated in self-oriented perfectionists (Speirs Neumeister, 2004).

The influences of both self-oriented and socially prescribed perfectionism among "gifted" students were similar but constituted key differences in the potential influence of self-oriented or socially prescribed perfectionism. Specifically, the drive of behavior in self-oriented perfectionists appears to be more intrinsic, or self-induced. Socially prescribed perfectionists were more externally driven to meet the expectations of others. Researchers have suggested exploring all contexts of "gifted" students' lives, not just academically, to obtain a more comprehensive understanding of perfectionism intensities within this unique intra-group population (Miller & Neumeister, 2017). Exploring "gifted" students in other domains, such as those who compete in intercollegiate athletics, may lead to a more comprehensive understanding of perfectionism.

Perfectionism in Athletics

To date, researchers have adopted Stoeber and Otto's (2006) tripartite model and applied the two higher order dimensions (e.g., perfectionistic strivings, perfectionistic concerns) to the athletic domain. These two overarching dimensions of perfectionism

provide a deeper understanding of perfectionism in athletics (Stoeber, 2011). However, similar to other contexts, perfectionism has been assessed utilizing multiple measurements, and combinations of facets, with the intention to understand perfectionism within athletics. Consequently, Gotwals and colleagues (2012) conducted a literature review of 31 studies on perfectionism in athletics with two purposes to investigate: a) the applicability of the tripartite model in athletics, and b) if adaptive characteristics and consequences, in addition to maladaptive, are truly present within athletics.

Similar to Stoeber and Otto (2006), Gotwals et al. (2012) adopted four categorizations: supportive evidence (e.g., all significant correlations were positive with adaptive characteristics or negative with maladaptive characteristics), contrary evidence (e.g., all significant correlations were positive with maladaptive characteristics or negative with adaptive characteristics), mixed evidence (e.g., results indicate positive and negative correlations with adaptive and maladaptive characteristics), and non-significant findings (e.g., all correlations were non-significant). Results indicated that seven of the 31 studies were identified as supportive evidence, four as contrary evidence, 17 as mixed evidence, and three as non-significant (Gotwals et al., 2012). Following initial analyses, the authors also assessed whether overlap between perfectionistic strivings and perfectionistic concerns was accounted for in the reports of the study-level analyses (Gotwals et al., 2012).

After controlling for overlap by running partial correlations instead of bivariate correlations, supportive evidence increased to 20 out of 31 studies, while two studies yielded contrary evidence, and eight showed mixed evidence (Gotwals et al., 2012). The researchers concluded perfectionistic strivings are strong predictors of adaptive,

sometimes neutral, or rarely maladaptive consequences in the athletic domain (Gotwals et al., 2012). In addition, results provide further support for the notion of adaptive and maladaptive perfectionism intensities to be present in the domain of athletics as well as academics when utilizing the tripartite model's two higher order dimensions of perfectionism (Gotwals et al., 2012; Stoeber & Otto, 2006).

Like academics, athletics has a variety of intrapersonal and interpersonal influences affecting performance. For example, maladaptive perfectionism has been associated with greater perceived stress, lower perceived competence, fear of failure, and low self-esteem (Anshel & Eom, 2003; Breeding & Anshel, 2015; Stoeber & Becker, 2008). Athletes who base self-esteem on perceived competence reported higher levels of maladaptive perfectionism (Koivula, Hassmén, & Fallby, 2002). Lower levels of perceived competence have also been shown to influence maladaptive profiles of perfectionism (Breeding & Anshel, 2015). Consequently, a maladaptive perfectionistic athlete may need more time to sufficiently develop and master skills because of unrealistic performance expectations. Maladaptive perfectionism has also been related to higher levels of cognitive anxiety and lower levels of self-esteem in athletes (Koivula, Hassmén, & Fallby, 2002). Additionally, research has associated maladaptive perfectionism with ego orientation, which may have debilitating effects if accompanied by low levels of perceived competence (Flett & Hewitt, 2005). In particular, athletes who over-strive to compensate for perceived deficits in ability may feel dissatisfied and prone to negative effects of perfectionism (Flett & Hewitt, 2005). Generally, athletes with maladaptive perfectionism intensities showed lower self-esteem (Gotwals, Dunn, & Wayment, 2003).

Frost and Henderson (1991) found athletes who reported high scores in concern over mistakes to be low in self-confidence in competitive situations. In addition, fear of failure had repeatedly been expressed in maladaptive perfectionism profiles when assessing perfectionism in athletics (Frost & Henderson, 1991; Gucciardi, Mahoney, Jalleh, Donovan, & Parkes, 2012). Maladaptive perfectionists tended to set higher levels of mastery avoidance and performance avoidance goals than adaptive perfectionists (Gucciardi et al., 2012). Maladaptive characteristics of perfectionism negatively impacted performance as well as psychological well-being within the athletic domain. Although maladaptive intensities of perfectionism appeared to effect relevant constructs surrounding wellbeing, performance, and goal orientation, adaptive intensities appeared to facilitate optimal functioning in athletics.

Adaptive intensities of perfectionism in athletics were associated with better performance orientations (e.g., mastery-oriented goals, positive affect of success), well-being, and higher self-esteem (Gucciardi et al., 2012; Sagar & Stoeber, 2009; Stoeber, Stoll, Pescheck, & Otto, 2008). Adaptive perfectionism predicted higher levels of positive affect after success than maladaptive intensities (Sagar & Stoeber, 2009). Furthermore, adaptive perfectionism had been associated with facilitative achievement goal orientations (e.g., mastery-approach and performance-approach; Gucciardi et al., 2012; Stoeber et al., 2008). Higher self-esteem had also been related to adaptive perfectionistic profiles (Koivula et al., 2002). Athletes who reported higher levels of adaptive perfectionism were perceived stronger success orientation, rather than failure orientation (Frost & Henderson, 1991). The facilitative focus on specific achievement goals aligned with adaptive perfectionist reporting significantly lower levels of burnout

across three dimensions (e.g., reduced accomplishment, physical exhaustion, and sport devaluation) than maladaptive perfectionists with effect sizes of .75 to 1.62 across the three dimensions (Gotwals, 2011). Evidence for adaptive, in addition to maladaptive, perfectionism intensities had repeatedly been expressed in the athletic and academic domain.

There is a growing debate whether the personality characteristic of perfectionism is a stable or situational construct that may vary depending on the context (Breeding & Anshel, 2015). Accordingly, measuring perfectionism should be context-specific (Dunn, Gotwals, & Causgrove Dunn, 2005). That is, perfectionism should be measured with reference to one performance domain (e.g., academics, athletics) rather than as a global trait. Additionally, it has been argued that perfectionism may only be present in one or two contexts of one's life (Slaney & Ashby, 1996). Research in the last decade on perfectionism had shifted to a domain specific measurement, suggesting perfectionism was a state specific personality characteristic tending to fluctuate across different contexts. Research has provided evidence that perfectionism might be dependent upon the context, and differentiate across domains, such as academics and athletics (Dunn et al., 2005; Dunn, Dunn, & McDonald, 2012; McArdle, 2010).

The first study to explore the potential domain-specific nature of perfectionism in athletics and academics was conducted by Dunn, Gotwals, and Dunn (2005). The authors used two domain-specific adapted measures of the HMPS labeled as Sport-MPS, and School-MPS (Dunn, Gotwals, & Dunn, 2005). In addition, the authors utilized the original HMPS to compare the results of the situational measures to the originally stable measure. Results indicated that intercollegiate male and female student-athletes reported

significantly higher mean scores on the Sport-MPS than the Hewitt-MPS and School-MPS (Dunn et al., 2005). Results indicated that perfectionism might be situation specific and vary across different contexts of student-athletes' lives. As such, a domain specific way to measure perfectionism might be more appropriate. Self-reported perfectionism levels in student-athletes appeared to be influenced by the domain and not generalizable across multiple situational contexts (Dunn et al., 2005).

McArdle (2010) explored domain specific contingencies of self-worth, perceptions of competence, and task value using domain specific measures of perfectionism in "gifted" adolescent student athletes. Participants were labeled as "gifted" in the domain of academics, which was hypothesized to promote higher levels of perfectionism in academics than in athletics (McArdle, 2010). Results indicated that contingent self-worth based on school performance was positively associated with perfectionism in the school domain (McArdle, 2010). Results also indicated participants reported significantly higher scores on school perfectionism, contingent self-worth, perceptions of competence, and task value of school rather than sport (McArdle, 2010). The findings provided further support that those who are deemed 'gifted' experience heightened perfectionism in one domain only. As such, perfectionism may be more appropriately assessed by the specified domain, rather than generalized as a stable personality trait (Dunn et al., 2005; McArdle, 2010). Yet, further exploration into the domain specific nature of perfectionism in those labeled as "gifted" is needed in both academics and athletics from a domain specific lens.

To date, one study has explored perfectionism in intercollegiate student-athletes while also examining the relationship of possible predictors using domain specific

measures (Dunn, Dunn, & McDonald, 2012). The results indicated that athletes who had higher levels of perceived competence in sport, and placed more importance on sport than school, reported higher levels of self-oriented (adaptive) perfectionism in sport (Dunn et al., 2012). Consequently, perceived competence was negatively related to socially prescribed (maladaptive) perfectionism (Dunn et al., 2012). On average, student athletes reported higher levels of perfectionism across all three subscales of perfectionism (SOP, OOP, SPP) in sport rather than school (Dunn et al., 2012). The findings indicated that athletes might be more apt to develop higher perfectionism intensities in an athletic rather than academic setting.

To date, there is a lack of a deeper exploration into perfectionism in academics and athletics by using domain-specific measures (Dunn et al., 2005; Dunn et al., 2012; McArdle, 2010). Initial evidence suggests perfectionism intensities may fluctuate between contexts yet replication and extension of the findings is needed. The various facets of academically gifted students' lives warrant further exploration to better understand the presence of perfectionism (Miller & Neumeister, 2017), in individuals such as those who participate in athletics. Furthermore, Dunn and colleagues (2012) suggest assessing predictors of perfectionism through a domain specific perspective to better illustrate the variation and strength of various perfectionism antecedents dependent upon the specified domain being assessed.

Research has yet to examine perfectionism differences using domain-specific measures within the intercollegiate student-athlete population, particularly in those labeled as excelling. Consequently, the purpose of the current study is to examine whether student-athletes recognized for excellence differ in their perfectionistic

tendencies compared to their cohort of teammates. A secondary purpose is to explore the influence of various perfectionism antecedents (intolerance of uncertainty, satisfaction with performance, perceived stress, and perceived competence and importance) from a domain specific perspective (i.e., academics and athletics) as suggested by Dunn and colleagues (2012).

CHAPTER THREE

PROPOSAL

METHODS

Participants

Participants will include approximately 300 collegiate athletes. Participants will be recruited from all three divisions of the National Collegiate Athletic Association (NCAA; e.g., Division I, II, and III). Interscholastic athletes in the Northeastern region of the United States will be contacted. Participants will be involved in either fall (e.g., soccer, softball, baseball, golf, tennis, football) or winter (e.g., wrestling, basketball, hockey, volleyball) sports.

Definition of Excelling

The College Sports Information Directors of America (CoSIDA) (2014) defined the nomination criteria of an Academic All-American as maintaining a 3.30 GPA as well as being a starter or an important reserve. In the current study, excelling student athletes will be defined through self-reported information as 1) encompassing a GPA that is equal to or above a 3.3 cumulative GPA and 2) a starter for their respective team.

Procedures

Ethical approval will be sought through the Ithaca College Institutional Review Board (IRB). Once the researcher has received IRB approval he will contact coaches via email with a brief description of the study (see Appendix A). The researcher will schedule a time and location most convenient for them to administer the questionnaires in person for coaches interested. Alternatively, an online platform (e.g., Qualtrics) will be used to administer the questionnaires if a convenient time can't be found. Qualtrics is an

online data collection platform. The online version of the questionnaires will be sent directly to athletes emails using Qualtrics. Both the online and in-person questionnaires have an implied consent form built into the questionnaire, according to IRB guidelines (Appendix B). Coaches will not be present within the designated area to complete questionnaires so their presence does not affect the athlete's responses. Coaches will be asked to leave the designated area when questionnaires are distributed. The researcher will be within the designated area when the questionnaires are completed to answer any questions that may arise. After obtaining implied consent, participants will be instructed to complete the questionnaires to the best of their abilities. Participants will be notified they may skip or stop the questionnaires at any time free of consequences if the participant does not feel comfortable answering them. Prior to administering the questionnaires participants will be notified to complete the items individually and not discuss their answers with teammates. No compensation will be given to participants in the research study.

Measures

Perfectionism

Perfectionism will be assessed using the Hewitt and Flett Multidimensional Perfectionism Scale (HMPS; Hewitt & Flett, 1991). The scale consists of 45 items, measuring three subscales: *Self-Oriented Perfectionism* (SOP.Sport/SOP.School; e.g., "In athletics/academics I seldom feel the need to be perfect"), *Socially-Prescribed Perfectionism* (SPP.Sport/SPP.School; e.g., "In athletics/academics the better I do the better I am expected to do"), and *Others-Oriented Perfectionism* (OOP.Sport/OOP.School; e.g., "In athletics/academics I do not have very high standards

for those around me"). For the proposed study, perfectionism will be assessed through a domain-specific (e.g., athletic and academic) measure. Each item will be introduced with the specific context (e.g., In athletics/academics I never aim for perfection in my work). The same domain specific measurement technique has previously been applied (Dunn, Dunn, & McDonald, 2012). All three subscales are equally distributed amongst the 45 items. Each item is measured on a 7-point Likert type scale (1 = strongly disagree; 7 = strongly agree). Higher subscale scores represent higher levels of perfectionism (Dunn, Dunn, & McDonald, 2012). Scores amongst each subscale may range from 15 to 105 (Hewitt & Flett, 1991). Acceptable internal consistency has repeatedly been shown across all subscales using domain specific measures ($\alpha > .70$; Dunn, Gotwals, & Dunn, 2005; Dunn, Dunn, & McDonald, 2012).

Perceived Competence and Importance

Domain specific measures of perceived competence and importance of success will be assessed using The Perceptions of School and Sport Questionnaire (PSSQ) constructed by Dunn, Dunn, and McDonald (2012). The scale consists of 12 items: six assessing perceived competence (PC-Athletics, *I have more ability as an athlete than I do as a student in school* and PC-Academics, *I feel more confident in my "study skills" than I do in my sport skills)*, and six assessing perceived importance (PI-Sport, *It is more important for me to win games with my team than to receive high grades*, and PI-School, *Becoming a better student is more important to me than becoming a better athlete*). Participants responded to each item on a 7-point-Likert type scale (1 = strongly agree, 4 = neither agree nor disagree, 7 = strongly agree). Seven of the twelve items are worded so that scores > 4.0 represent higher PC/PI in athletics and five of the twelve items are

worded that scores > 4.0 represented higher PC/PI in academics (Dunn et al., 2012). The latter five items are reverse scored after computing sub-scores for the subscale (e.g., PC/PI in academics). Researchers reported acceptable internal consistency across the two subscales of the PSSQ (PC/PI in athletics, PC/PI in academics) of (α > .78 - .79; Dunn et al., 2012).

Perceived Stress

The Perceived Stress Scale (PSS-10; Cohen & Janicki-Deverts, 2012) will be used to assess the degree to which individuals perceive instances as stressful. The scale consists of 10 items. Items will all be introduced with "*In the past month….*" and paired with statements "*how often have you felt that you were on top of things in athletics/academics; how often have you felt nervous or stressed in athletics/academics*). Participants self-report data on a five-point Likert type scale (0 = *never,* 4 = *very often*). Four of the ten items are positively worded and reverse-scored prior to computing the sum of all ten items. The range of scores possible range from 0 - 50, with scores above 20 suggesting high stress (Cohen & Janicki-Deverts, 2012). The higher the sum of the ten items represents a greater perceived psychological stress (Cohen & Janicki-Deverts, 2012). Internal reliability was good in prior research, Harris Poll sample (α > .78) and strong in the eNation samples (α > .91; Cohen & Janicki-Deverts, 2012).

Satisfaction with Performance

Participants perceived satisfaction with performance in athletics and academics will be assessed using The Athlete Satisfaction Questionnaire (ASQ; Riemer & Chelladurai, 1998). The questionnaire consists of 15 subscales. For the purpose of this study, only one of these subscales will be used (Individual performance). This subscale

was originally made for the athletic domain and reflects satisfaction with task performance. Two versions of this subscale will be used: The original version (for athletics) and an adapted version (for academics). Each of the subscales will be comprised of three items to assess an individual's perceived satisfaction with task performance in athletics and academics (Riemer & Chelladurai, 1998). Items will be introduced with *"I am satisfied with…"* and paired with statements *"the improvement in my skill level in athletics/academics; the improvement in my performance over the previous season/school year).* Each item is self-reported using a seven-point Likert type scale (1 = not at all satisfied, 4 = moderately satisfied, to 7 = extremely satisfied). The dimension consisting of three items total score range is from 3-21 (Riemer & Chelladurai, 1998). The subscale of Individual Performance has shown strong internal consistency (α > .85; Riemer & Chelladurai, 1998).

Intolerance of Uncertainty

Participants' intolerance of uncertainty will be assessed using The Intolerance of Uncertainty Scale (IUS-12; Carleton, Norton, & Asmundson, 2007). The questionnaire consists of 12 items assessing anxious and avoidance aspects of intolerance of uncertainty. Two versions of the scale will be used to assess the domain specific nature of intolerance of uncertainty in academics and athletics. The scale uses a five-point Likert type scale (1 = Not at all a characteristic of me, 5 = Entirely a characteristic of me). To assess domain specific nature of intolerance of uncertainty, the term "athletics" will be changed to the term "academics" (e.g., *I always want to know what the future has in store for me for athletics/academics; I can't stand being taken by surprise in athletics/academics*). Intolerance of uncertainty is measured on a total sum ranging from

12 to 60 with scores above 25 suggesting higher intolerance of uncertainty (Carleton et al., 2007). Internal consistency was shown to be satisfactory ($\alpha > .90$; Carleton et al., 2007).

Data Analysis

All descriptive and inferential statistics will be conducted in SPSS Version 22 (IBM, Armonk). Dimensions scores will be assessed through means in both academics and athletics for all variables (i.e., SOP, OOP, SPP, perceived stress, perceived competence and importance, perceived satisfaction, and intolerance of uncertainty) for both academics and athletics. Cronbach's alpha will be used to assess the internal consistency of each subscale. All participants will be grouped into excelling or non-excelling groupings based on meeting the following criteria: a) a cumulative GPA > 3.3, and b) being a starter on their respective team. Before inferential statistics will be conducted, data will be checked for normality. Normal distribution will be assessed through frequency distributions of means, standard deviations, skewness, and kurtosis patterns. Similar to Dunn and colleagues' (2012) approach, three mixed-model ANOVAs will be conducted. Each ANOVA will assess one sub-dimension of the HMPS (i.e., SOP, OOP, SPP). The independent factor will compare excelling versus non-excelling participants. The repeated factor is the two contexts (i.e., academics and athletics). Finally, six multiple regressions will be conducted to investigate the ability of intolerance of uncertainty, perceived competence and importance, perceived satisfaction, and perceived stress to predict the three domain-specific dependent variables of perfectionism (e.g., SOP, OOP, SPP) in academics and athletics. All regression analyses will be assessed for multicollinearity.

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CHAPTER FOUR

RESEARCH MANUSCRIPT

Introduction

The understanding of perfectionism has changed substantially over the past several decades. For instance, it was mainly viewed as a negative personality trait leading to inhibition of performance (Frost, Marten, Lahart, & Rosenblate, 1990). Researchers quickly added to this notion, providing evidence for adaptive, beneficial, and maladaptive, debilitative, intensities of perfectionism (for review, see Stoeber & Otto, 2006; Gotwals, Stoeber, Dunn, & Stoll, 2012). Although various definitions exist, perfectionism entailed the act of striving to execute perfect performance and a degree of overly critical evaluation of behavior (Frost et al., 1990; Hewitt & Flett, 1991). Perfectionism may permeate individuals to varying degrees within achievement domains, such as academics and athletics. For example, previous literature has acknowledged students to be at an increased risk for perfectionism (Christman, 2012). However, intercollegiate varsity athletes are engaged in multiple achievement contexts (i.e., academics and athletics), which are simultaneously demanding a degree of performance (Gotwals, 2011). As such, student-athletes might experience different perfectionism intensities in several contexts of their lives.

Within academics, adaptive perfectionism had been associated with higher GPA, positive affect, life satisfaction, and motivation (Bieling, Israeli, Smith, & Antony, 2003; Rice & Ashby, 2007; Stoeber & Rambow, 2007), while maladaptive perfectionism had

been associated with lower esteem, depression, anxiety, stress, and loneliness (Bieling, Israeli, & Antony, 2004; Christman, 2012; Flett, Hewitt, & De Rosa, 1996). In athletics, more adaptive perfectionism might be present, which is associated with higher self-esteem, confidence, and approach-oriented motivation (Gucciardi, Mahoney, Jalleh, Donovan, & Parkes, 2012; Koivula, Hassmén, & Fallby, 2002). Maladaptive perfectionism has been associated with emotional exhaustion, higher anxiety, lower self-esteem, and avoidance goal orientations (Gotwals, Dunn, & Wayment, 2003; Gotwals, 2011; Gucciardi et al., 2012; Koivula et al., 2002). It should be noted here that most research on perfectionism in academics and athletics focused on motivational and performance outcomes. Less attention has been given to the predictors of perfectionism.

Recently, Breeding and Anshel (2015) examined the potential of perceived competence to predict perfectionism in athletes. Results indicated that perceptions of competence appeared to influence the intensity of perfectionism in athletics. In other words, athletes who perceived themselves to hold higher skill levels increased their intensity of perfectionism. Furthermore, researchers have called for additional empirical investigation into other factors that may predict perfectionism in academics (Damian, Stoeber, Negru-Subtirica, & Băban, 2017). Dunn and colleagues (2012) suggest examining domain specific predictors of perfectionism (i.e., academics and athletics) when examining perfectionism and other variables. Further empirical investigation, from a domain specific perspective, is required and a purpose of the current study. However, the domain specific perspective of perfectionism antecedents (Dunn et al., 2012) formed from the theory that individuals' perfectionism may fluctuate across achievement contexts (Dunn et al., 2005).

For example, Mitchelson and Burns (1998) found that working mothers reported higher intensities of perfectionism at the workplace than at home. The authors also provided foundational evidence for the situational nature of perfectionism. Although mothers appear to differentiate in perfectionism intensity across contexts, researchers have theorized that the domains of academics and athletics may produce varying degrees of perfectionism intensity (Dunn, Gotwals, & Dunn, 2005).

Domain Specific Perfectionism

Perfectionism may be a function of the context and differentiate across domains, such as academics and athletics (Dunn et al., 2005; Dunn et al., 2012; McArdle, 2010). Dunn and colleagues (2005) were the first to explore the situational verse stable presence of perfectionism using three measures of perfectionism: HMPS (stable), and two domain specific measures of the HMPS (i.e., academics and athletics). Results indicated that males and females reported significantly higher mean scores on the Sport-MPS than the Hewitt-MPS and School-MPS (Dunn et al., 2005). Findings were thought to indicate that situational, or contextual, factors significantly influenced perceptions of perfectionism in achievement contexts (Dunn et al., 2005). In an attempt to replicate and extend previous findings, Dunn and colleagues (2012) found student-athletes reported significantly higher perfectionism in athletics than in academics across all perfectionism subscales (i.e., SOP, OOP, SPP). Results supported the notion for domain specific measurements of perfectionism when exploring achievement domains (i.e., academics and athletics; Dunn et al., 2005; Dunn et al., 2012).

McArdle (2010) explored domain specific measures of perfectionism in “gifted” adolescent student-athletes with respect to academics and athletics. Results indicated

participants reported significantly higher scores on school perfectionism, contingent self-worth, perceptions of competence, and task value of school rather than sport (McArdle, 2010). Heightened perfectionism has been suggested to be a function of a heightened perceived ability to appropriately execute a task (Breeding & Anshel, 2015). For example, athletes who reported higher perceptions of competence and importance in athletics than in academics reported higher levels of adaptive perfectionism in athletics as well (Dunn et al., 2012). However, McArdle (2010) found student-athletes socially ascribed as gifted in academics to report heightened levels of competence and perfectionism in academics compared to athletics. Self-reported perfectionism levels in student-athletes appear to be influenced by the domain and not generalizable across multiple situational contexts (Dunn et al., 2005), and dependent on intrinsic and extrinsic recognition of ability in a given context (McArdle, 2010; Dunn et al., 2012). Previous findings suggested that intra-group differences (i.e., gifted) may subject individuals to differentiating perfectionism intensities while engaging in simultaneous achievement domains (i.e., academics and athletics; McArdle, 2010).

Excelling Students

The term "gifted" encompasses individuals having extremely high intellectual ability, prior achievements, and a high degree of advanced capabilities (Stephens & Karnes, 2000). Gifted students may differ in perfectionistic profiles from their peers (LoCicero & Ashby, 2000; Roberts & Lovett, 1994). Researchers examined honors programs (Plomiski & Burns, 2017; Speirs Neumeister, 2004) for collegiate students and gifted programs (Roberts & Lovett, 1994) for adolescents as operationalizing criteria to define "gifted". Clearly, discrepancy in operationalizing "gifted" has been a prominent

limitation within this unique population. However, ‘gifted’ has been suggested to be more thoroughly represented by the term ‘high-achieving’ (Speirs Neumeister, 2018). Miller and Neumeister (2017) have suggested examining multiple contexts of “gifted” students’ lives to more holistically understand the presence of perfectionism in this population, particularly for those students competing in athletics. Therefore, the current study aimed to compare the presence of perfectionism in excelling and non-excelling student-athletes from a domain-specific lens (i.e., academics and athletics).

Gaps in the Literature

To date, there is a lack of a deeper exploration into perfectionism in academics and athletics utilizing domain specific measures in collegiate student athletes (Dunn et al., 2005; Dunn et al., 2012; McArdle, 2010). This may be due to the traditional view that perfectionism is a stable personality trait rather than domain-specific. For example, if one were to explore perfectionism’s association to psychopathology measures, it may be more beneficial to assess global, or stable, perfectionism levels due to depression being translucent across contexts (Dunn et al., 2012). However, initial evidence suggests perfectionism intensities may fluctuate between achievement contexts, particularly between academics and athletics. Yet replication and extension of the findings is needed. In addition, factors influencing the onset of perfectionism within academics warrant further investigation (Damian et al., 2017). Dunn and colleagues (2012) suggest assessing predictors of perfectionism through a domain specific perspective to better illustrate the variation and strength of perfectionism antecedents with respect to academics and athletics.

Purpose

Research has yet to examine perfectionism differences using domain specific measures within the intercollegiate student-athlete population labeled as excelling. However, this may be a function of the varying conceptualization of "gifted" (Speirs Neumeister, 2018), such as high school honors students (Roberts & Lovett, 1994) and collegiate honors program students (Speirs Neumeister, 2004). Consequently, the purpose of the current study is to examine whether student-athletes recognized for excellence differ in their perfectionistic tendencies compared to their teammates. A secondary purpose is to explore the influence of various perfectionism antecedents (intolerance of uncertainty, satisfaction with performance, perceived stress, and perceived competence and importance) from a domain specific perspective (i.e., academics and athletics) as suggested by Dunn and colleagues (2012).

Methods

Participants

The present study included male (n = 91, 45.7%), female (n = 106, 53.3%), transgender (n = 1, .5%), and other (n = 1, .5%) gender participants with an age range from 18 to 23 (M_{age}=19.49, SD_{age}=1.19). Participants competed in intercollegiate levels of Division I (n = 20, 10.1%), II (n = 13, 6.5%), and III (n = 166, 83.4%) athletics. Participants participated in field hockey (n = 16, 8%), crew (n = 31, 15.6%), lacrosse (n = 42, 21.1%), diving (n = 10, 5%), swimming (n = 16, 8%), soccer (n = 43, 21.6%), softball (n = 35, 17.6%), and football (n = 6, 3%). Time with teams ranged from 0 to 4 years (M_{years}=1.86, SD_{years}= 1.14). Excelling student-athletes (n = 58, 29.1%), who fit the inclusion criteria, allowed for intragroup comparisons of domain specific perfectionism.

Definition of Excelling

The College Sports Information Directors of America (CoSIDA, 2014) defined nomination criteria of an Academic All-American as maintaining a 3.3 grade point average (GPA) as well as being a starter or an important reserve to even be nominated. Accordingly, excelling student athletes will be defined through self-reported information as 1) encompassing a cumulative GPA above a 3.3 and 2) being a starter for their respective team in the current study. This criterion was applied for sophomores through seniors. At the time of the study, student-athletes in their first year (i.e., freshmen) did not have a GPA record yet. As such, the criteria for excelling freshmen consisted of embodying a cumulative high school GPA one standard deviation higher than all freshmen in the sample equal to or above 3.3 and being a starter on their respective team.

Procedures

After receiving Institutional Review Board (IRB) approval, the researcher contacted coaches directly via email with an email description of the study (see Appendix A) to schedule a time and location most convenient to administer the questionnaires in person. Alternatively, an online platform (e.g., Qualtrics) was also used to administer the questionnaires. Qualtrics is an online data collection platform. The online version of the questionnaires was sent to coaches and then forwarded to their athletes. Both versions of the questionnaires contained an implied consent (see Appendix B), and then participants were instructed to complete the questionnaires to the best of their abilities. The author remained present to answer any questions. Prior to administering the questionnaires, participants were notified to complete the items individually and not discuss their

answers with teammates. No compensation was given to participants in the research study.

Measures

Perfectionism. Perfectionism was assessed using the Hewitt and Flett Multidimensional Perfectionism Scale (HMPS; Hewitt & Flett, 1991) from a domain specific perspective (Dunn, Dunn, & McDonald, 2012) in academics and athletics. The scale consists of 45 items, measuring three subscales: Self-Oriented Perfectionism (SOP.Sport/SOP.School; e.g., *"I seldom feel the need to be perfect…. in athletics/academics"),* Others-Oriented Perfectionism (OOP.Sport/OOP.School; e.g., *"I do not have very high standards for those around me…. in athletics/academics"*), Socially Prescribed Perfectionism (SPP.Sport/SPP.School; e.g*., "The better I do the better I am expected to do…. in athletics/academics"*). For the proposed study, perfectionism was assessed through a domain-specific (e.g., athletics and academics) flag. Each item is measured on a 7-point Likert type scale (1 = strongly disagree; 7 = strongly agree). Higher subscale scores represent higher levels of perfectionism (Dunn, Dunn, & McDonald, 2012). Scores among each subscale may range from 15 to 105 (Hewitt & Flett, 1991). Acceptable internal consistency has repeatedly been shown across all subscales using domain specific measures ($\alpha > .70$; Dunn, Gotwals, & Dunn, 2005; Dunn et al., 2012). Internal consistency was adequate in the current study for academics ($\alpha = .74 - .89$) and athletics ($\alpha = .75-.86$) across all three subscales (i.e., SOP, OOP, SPP).

Perceived Competence and Importance. Domain specific measures of perceived competence and importance of success were assessed using The Perceptions of

School and Sport Questionnaire (PSSQ) constructed by Dunn, Dunn, and McDonald (2012). The scale consists of 12 items: six assessing perceived competence (PC-Sport, "*I have more ability as an athlete than I do as a student in school"* and PC-School, "*I feel more confident in my "study skills" than I do in my sport skills")*, and six assessing perceived importance (PI-Sport, "*It is more important for me to win games with my team than to receive high grades*," and PI-School, "*Becoming a better student is more important to me than becoming a better athlete"*). Participants responded to each item on a 7-point-Likert type scale with a number (1 = strongly agree, 4 = neither agree nor disagree, 7 = strongly agree). Seven of the twelve items are worded so that scores > 4.0 represented higher PC/PI in athletics and five of the twelve items are worded that scores > 4.0 represented higher PC/PI in academics (Dunn et al., 2012). The latter five items are reverse scored after computing sub-scores for the subscale (e.g., PC/PI in academics). Researchers reported acceptable internal consistency across the two subscales of the PSSQ (PC/PI in athletics, PC/PI in academics) of (α > .78 - .79) (Dunn et al., 2012). The current study indicated acceptable internal consistency in both academics (α = .75) and athletics (α = .77).

Perceived Stress. The Perceived Stress Scale (PSS-10; Cohen & Janicki-Deverts, 2012) was used to assess the degree to which individuals perceive instances as stressful. The scale consists of 10 items. Items were introduced with "*In the past month…."* and paired with statements "*how often have you felt that you were on top of things in athletics/academics; how often have you felt nervous or stressed in athletics/academics"*). Participants self-reported data on a five-point Likert type scale with number points (0 = never, 4 = very often). Four of the ten items are positively

worded and reverse-scored prior to computing the sum of all ten items. The scores may range from 0 - 50, with scores above 20 suggesting high stress (Cohen & Janicki-Deverts, 2012). Internal reliability was good in prior research, Harris Poll sample ($\alpha > .78$) and strong in the eNation samples ($\alpha > .91$) (Cohen & Janicki-Deverts, 2012). The current study indicated acceptable internal consistency for both academics ($\alpha = .86$) and athletics ($\alpha = .86$).

Satisfaction with Performance. Participants' perceived satisfaction with performance in athletics and academics was assessed using The Athlete Satisfaction Questionnaire (ASQ; Riemer & Chelladurai, 1998). For the purpose of this study, only one of these subscales was used (Individual Performance) and adapted for the domain of academics. Two versions of the ASQ subscale: Individual performance were used consisting of 3 items to assess an individual's perceived satisfaction with task performance in the domains of athletics and academics (Riemer & Chelladurai, 1998). Items will be introduced with *"I am satisfied with…"* and paired with statements *"the improvement in my skill level in athletics/academics; the improvement in my performance over the previous season/ school year").* Each item is self-reported using a seven-point Likert type scale consisting of number points (1 = not at all satisfied to 4 = moderately satisfied to 7 = extremely satisfied). The dimension consisting of three items total score range is from 3 - 21 (Riemer & Chelladurai, 1998). Researchers reported a mean of 4.7 with a standard deviation of 1.2 suggesting high satisfaction to be a total score of above 15. The subscale of Individual Performance has shown strong internal consistency ($\alpha >$ .85; Riemer & Chelladurai, 1998). The current study indicated acceptable internal consistency in academics ($\alpha = .92$) and athletics ($\alpha = .88$).

Intolerance of Uncertainty. Participants' intolerance of uncertainty was assessed using The Intolerance of Uncertainty Scale (IUS-12; Carleton, Norton, & Asmundson, 2007). The questionnaire consists of 12 items assessing prospective intolerance of uncertainty (i.e., fear and anxiety directed towards the future: 7 items) and inhibitory intolerance of uncertainty (i.e., uncertainty inhibiting action: 5 items; Carleton et al., 2007). Two versions of the scale were used to assess the domain specific nature of intolerance of uncertainty in athletics and academics. The scale uses a five-point Likert type scale with number points (1 = not at all a characteristic of me to 5 = entirely a characteristic of me). To assess domain specific nature of intolerance of uncertainty "athletics" will be interchanged with "academics" (e.g., "*I always want to know what the future has in store for me for athletics/academics; I can't stand being taken by surprise in athletics/academics"*). Internal consistency was shown to be extremely high ($\alpha > .90$; Carleton et al., 2007). The current study indicated acceptable internal consistency in academics ($\alpha \geq .75$) and athletics ($\alpha \geq .75$) for both prospective and inhibitory subscales.

Data Analysis

All dimension scores, descriptive statistics and classification of excelling student-athletes were analyzed using SPSS Version 24. Dimension scores were assessed through means (i.e., SOP, OOP, SPP, perceived competence and importance) and sums (i.e., perceived stress, perceived satisfaction, intolerance of uncertainty – prospective anxiety, inhibitory anxiety) in both academics and athletics. Cronbach's alpha was assessed to check for appropriate internal consistency for each subscale. All participants were grouped into excelling or non-excelling. Descriptive statistics were assessed for normal distribution in all variables (i.e., SOP, OOP, SPP, perceived stress, perceived satisfaction,

perceived competence and importance, and intolerance of uncertainty) for both academics and athletics and subgroup (i.e., excelling and non-excelling). Normal distribution was assessed through frequency distributions of means, standard deviations, skewness, and kurtosis patterns. Similar to Dunn and colleagues' (2012) approach, three 2 (excelling versus non-excelling) x 2 (academics versus athletics) mixed-model ANOVAs were conducted. The between groups excelling factor consisted of excelling versus non-excelling participants and the context repeated factor included academics versus athletics. Each ANOVA assessed one sub-dimension of the HMPS (i.e., SOP, OOP, SPP). Finally, six separate multiple regressions were conducted to investigate the ability of intolerance of uncertainty, perceived competence and importance, satisfaction with performance, and perceived stress to predict the three domain-specific dependent variables of perfectionism (e.g., SOP, OOP, SPP) in academics and athletics. An alpha level of ($p < .05$) was set for all analyses. All regression analyses were assessed for multicollinearity.

Results

All variables indicated acceptable normal distribution patterns (i.e., skewness = -.625 - .298, kurtosis = -.565 - .647) to conduct parametric statistics. Cronbach's α was calculated for all variables (i.e., SOP, OOP, SPP, IUP, IUI, PSSQ, PS, ASQ) in academics and athletics. All variables showed appropriate levels of internal consistency (i.e., $\alpha \geq .71$, see Tables 1 and 2). Variables were introduced into the regression models via entry method and all predicting variables represented appropriate levels of variance inflation factors (VIF < 3; Field, 2013). For all regression analyses, missing data was first

deleted list wise (n = 11, 5.5%). The remaining 188 complete cases were used for the regression analyses.

Table 1

Means, Standard Deviations, and Pearson Correlations Coefficients between all Athletic-Specific Variables

Dimension	1	2	3	4	5	6	7	8
1. SOP-AT	_							
2. OOP-AT	.54**	_						
3. SPP-AT	.45**	.37**	_					
4. PCPI-AT	.17*	.16*	.06	_				
5. PS-AT	.04	.07	.28**	-.05	_			
6. IUP-AT	.33**	.20**	.33**	.01	.31**	_		
7. IUI-AT	.03	-.09	.28**	-.15*	.5**	.58**	_	
8. SAT-AT	.02	.03	-.26**	.06	-.33**	-.04	-.20**	_
M	5.41	4.52	4.13	3.88	32.11	21.72	12.30	4.80
SD	.89	.77	.77	1.08	7.39	5.16	4.44	1.34
Cronbach Alpha Coefficients (α)	.86	.75	.77	.77	.86	.75	.77	.88

Notes: N=199, * < .05, ** < .001, Self-Oriented Perfectionism (SOP), Others Oriented Perfectionism (OOP), Socially Prescribed Perfectionism (SPP), Perceived Competence and Importance (PCPI), Perceived Stress (PS), Intolerance of Uncertainty – Prospective (IUP), Intolerance of Uncertainty – Inhibitory (IUI), Athletics (AT)

Differences Between Excelling and Non-Excelling Student-Athletes Perfectionism

To answer the first research question, three separate 2 (excelling) x 2 (context) mixed-model ANOVAs were conducted with the contexts (i.e., academics versus athletics) being the repeated factor, due to the contexts being dependent, while excelling

versus non-excelling status being the between-subject factor. All significant interactions were scrutinized by implementing t-tests to assess where the significant effect was observed as well as effect sizes. All means and standard deviations can be found in Table 3.

Table 2

Means, Standard Deviations, and Pearson Correlations Coefficients between all Academic-Specific Variables

Dimension	1	2	3	4	5	6	7	8
1. SOP-AC	_							
2. OOP-AC	.58**	_						
3. SPP-AC	.46**	.45**	_					
4. PCPI-AC	-.31**	-.06	-.13	_				
5. PS-AC	.02	.01	.28**	.18*	_			
6. IUP-AC	.41**	.22**	.35**	-.27**	.20**	_		
7. IUI-AC	.07	-.03	.26**	-.30**	.40**	.62**	_	
8. SAT-AC	.21**	.10	-.15*	-.34**	-.31**	.11	-.15*	_
M	5.15	4.27	3.98	3.94	32.17	23.36	12.59	4.91
SD	1.02	.74	.78	1.08	7.58	5.09	4.28	1.51
Cronbach Alpha Coefficients (α)	.89	.74	.78	.75	.86	.76	.75	.92

Notes: N=199, * < .05, ** < .001, Self-Oriented Perfectionism (SOP), Others Oriented Perfectionism (OOP), Socially Prescribed Perfectionism (SPP), Perceived Competence and Importance (PCPI), Perceived Stress (PS), Intolerance of Uncertainty – Prospective (IUP), Intolerance of Uncertainty – Inhibitory (IUI), Academics (AC)

Table 3

Chi Square and Independent t-Tests on all variables for Excelling and Non-Excelling Student-Athletes

Variable	Excelling (n=58)	Non-Excelling (n=141)	*p*
Gender Identity	Male: 22 Female: 36	Male: 69 Female: 70	.212
Age	20 (1.08)	19.28 (1.18)	**.001**
Division	I: 6 II: 1 III: 51	I: 14 II: 12 III: 115	.212
GPA	3.70 (.27)	3.40 (.42)	**.001**
SOP_AC	5.45 (.90)	5.03 (1.04)	**.007**
SOP_AT	5.54 (.89)	5.36 (.89)	.214
OOP_AT	4.53 (.85)	4.52 (.75)	.94
OOP_AC	4.3 (.68)	4.27 (.77)	.78
SPP_AT	4.13 (.80)	4.13 (.76)	.99
SPP_AC	3.99 (.70)	3.97 (.81)	.86
IUP_AT	23.13 (5.17)	21.13 (5.06)	**.01**
IUP_AC	24.45 (5.20)	22.90 (4.98)	**.05**
IUI-AC	12.34 (4.40)	12.69 (4.23)	.60
IUI_AT	12.53 (4.81)	12.21 (4.29)	.64
PCPI_AC	3.82 (1.07)	3.99 (1.08)	.30
PCPI_AT	3.66 (.92)	3.98 (1.13)	.06
PS_AT	32.67 (7.48)	31.88 (7.37)	.50
PS_AC	31.88 (7.07)	32.30 (7.80)	.73
SAT_AT	4.98 (1.22)	4.73 (1.38)	.25
SAT_AC	5.40 (1.15)	4.70 (1.59)	**.003**

Notes: N=199, Self-Oriented Perfectionism (SOP), Others Oriented Perfectionism (OOP), Socially Prescribed Perfectionism (SPP), Perceived Competence and Importance (PCPI), Perceived Stress (PS), Intolerance of Uncertainty – Prospective (IUP), Intolerance of Uncertainty – Inhibitory (IUI), Academics (AC).

Self-Oriented Perfectionism

Results for the self-oriented perfectionism variable indicated a significant main effect for group differences ($F_{(1,197)} = 4.15$ $p < .05$, $\eta_p^2 = .02$) between excelling and non-excelling students (see table 3). Specifically, excelling student-athletes generally reported significantly higher intensities of perfectionism than non-excelling students, independent of context (i.e., academics and athletics). A significant main effect was found between contexts ($F_{(1,197)} = 11.79$, $p = .001$, $\eta_p^2 = .06$) indicating student-athletes generally perceived higher intensities of perfectionism in athletics compared to academics. A significant interaction effect ($F_{(1,197)} = 4.95$, $p < .05$, $\eta_p^2 = .025$) was found for self-oriented perfectionism. Follow up t-test indicated a significant difference between excelling and non-excelling student-athletes for self-oriented perfectionism in academics. Excelling student-athletes reported significantly higher self-oriented perfectionism in academics than non-excelling students ($t_{(197)} = 2.71$, $p = .007$, Cohen's $d = 0.44$). Essentially, excelling student-athletes maintained relevantly stable perceptions of perfectionism across contexts whereas non-excelling student athletes perceived significantly lower levels of perfectionism in academics than athletics (see Figure 1).

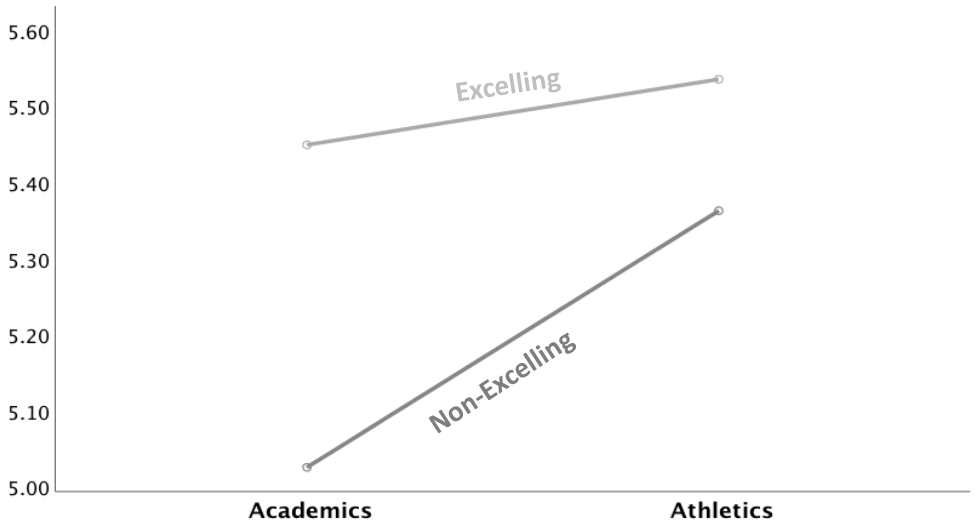

Figure 1.

Self-oriented perfectionism differences between excelling and non-excelling students in athletics and academics

Others-Oriented Perfectionism

Results indicated non-significant differences between excelling and non-excelling student athletes ($F_{(1,197)} = 0.07$, $p = .80$) for others-oriented perfectionism. Results indicate that excelling and non-excelling student-athletes generally reported similar perceptions of others-oriented perfectionism across athletics and academics. Results indicated a significant main effect for context ($F_{(1,197)} = 31.91$, $p < .000$, $\eta_p^2 = .14$). Student-athletes generally perceived significantly higher intensities of others-oriented perfectionism in athletics compared to academics. Results indicated a non-significant interaction effect ($F_{(1,197)} = 0.04$, $p = .85$) indicating excelling and non-excelling students perceived relatively similar intensities of others-oriented perfectionism in both academics and athletics (see Figure 2).

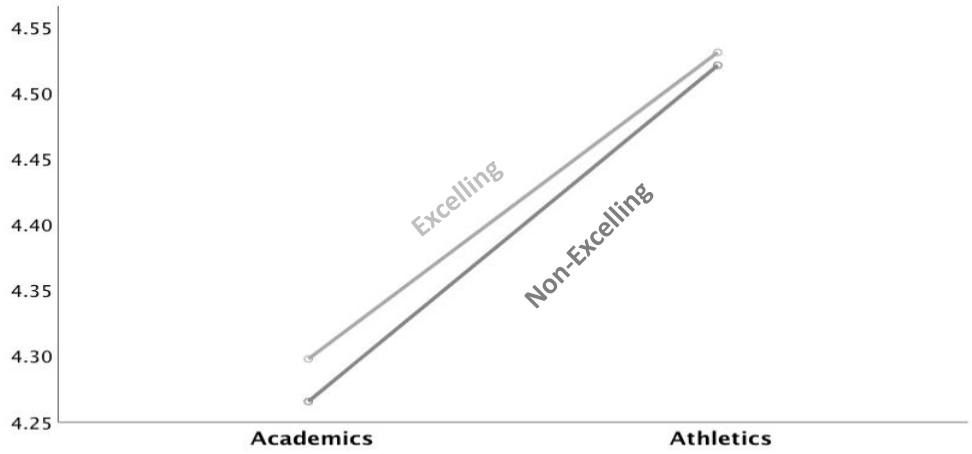

Figure 2.

Others-oriented perfectionism differences between excelling and non-excelling students in athletics and academics

Socially Prescribed Perfectionism

Results indicated non-significant results for differences between excelling and non-excelling student athletes ($F_{(1,197)} = .08$, $p = .78$). Results indicate that excelling and non-excelling student-athletes generally reported similar perceptions of perfectionism across athletics and academics. Results indicated a significant main effect for context ($F_{(1,197)} = 13.09$, $p < .000$, $\eta_p^2 = .06$). All athletes generally perceived significantly higher intensities of perfectionism in athletics compared to academics. Results indicated a non-significant interaction effect ($F_{(1,197)} = 0.04$, $p = .85$) suggesting excelling and non-excelling students perceived relatively similar intensities of perfectionism in both academics and athletics (see Figure 3).

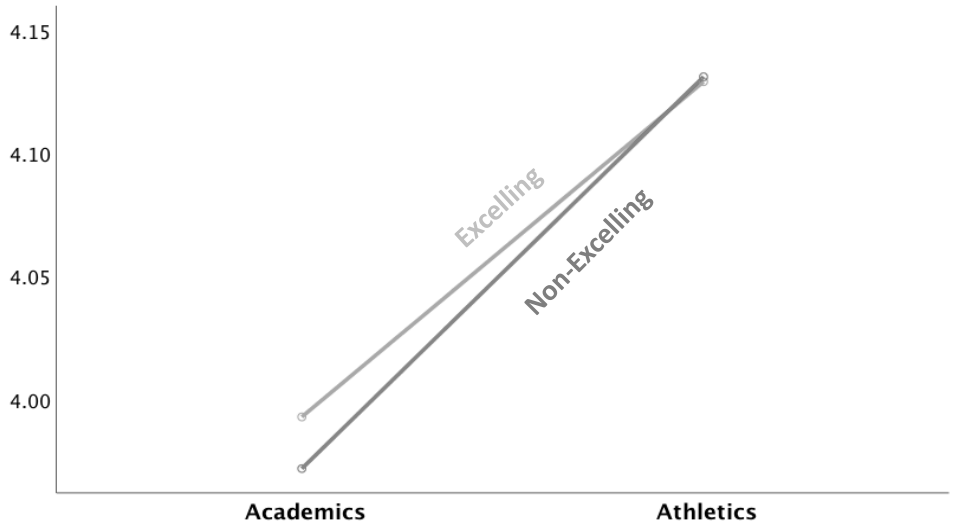

Figure 3

Socially prescribed perfectionism differences between excelling and non-excelling students in athletics and academics

Predicting Perfectionism

To examine the second purpose of the present study, six multiple regressions were run to predict the development of SOP, OOP, and SPP intensities of perfectionism in both academics (see Table 4) and athletics (see Table 5).

Academics - *Self-Oriented Perfectionism*. The multiple regression equation predicting Self-Oriented Perfectionism was significant ($F_{(5,182)} = 13.61$, $p < .000$). The model predicted 27.2% of the variance. The strongest predictor was prospective intolerance of uncertainty ($\beta = .52$, $p < .000$). Inhibitory intolerance of uncertainty ($\beta = -.32$, $p < .000$) and perceived competence and importance ($\beta = -.21$, $p = .003$) were significant negative predictors. Perceived satisfaction and stress in academics were not significant predictors in this model.

Table 4

Results of the Multiple Regressions Predicting Perfectionism in Academics

Predicted Variable	Variable	β	R^2
Self-Oriented Perfectionism	Perceived Competence/Importance	-.21**	.27**
	Perceived Stress	.10	
	IUS- Prospective Anxiety	.52**	
	IUS- Inhibitory Anxiety	-.32**	
	Perceived Satisfaction	.06	
Others-Oriented Perfectionism	Perceived Competence/Importance	.01	.08**
	Perceived Stress	.04	
	IUS- Prospective Anxiety	.36**	
	IUS- Inhibitory Anxiety	-.29*	
	Perceived Satisfaction	.03	
Socially Prescribed Perfectionism	Perceived Competence/Importance	-.17*	.21**
	Perceived Stress	.21**	
	IUS- Prospective Anxiety	.34**	
	IUS- Inhibitory Anxiety	-.08	
	Perceived Satisfaction	-.19**	

Notes: N = 188, * p < .05, ** p < .01,

Table 5

Results of the Multiple Regressions Predicting Perfectionism in Athletics

Predicted Variable	Variable	β	R^2
Self-Oriented Perfectionism	Perceived Competence/Importance	.12	.18**
	Perceived Stress	-.001	
	IUS- Prospective	.48**	
	IUS- Inhibitory	-.24**	
	Perceived Satisfaction	-.02	
Others-Oriented Perfectionism	Perceived Competence/Importance	.11	.14**
	Perceived Stress	.11	
	IUS- Prospective	.37**	
	IUS- Inhibitory	-.36*	
	Perceived Satisfaction	.002	
Socially Prescribed Perfectionism	Perceived Competence/Importance	.22**	.24**
	Perceived Stress	.09	
	IUS- Prospective	.26**	
	IUS- Inhibitory	.08	
	Perceived Satisfaction	-.22**	

Notes: N = 188, * p < .05, ** p < .01

Academics - *Others-Oriented Perfectionism*. The multiple regression equation predicting Others-Oriented Perfectionism was significant ($F_{(5,182)}$ = 3.46, p = .005). The model predicted 8.7% of the variance. The strongest predictor was prospective intolerance of uncertainty (β = .36, p < .000). Inhibitory intolerance of uncertainty was significant, but a negative predictor in the current equation (β = -.29, p = .004). Perceived

satisfaction, stress, and perceptions of competence and importance in athletics were not significant predictors in this model.

Academics - *Socially Prescribed Perfectionism*. The multiple regression equation predicting Socially Prescribed Perfectionism was significant ($F_{(5,182)} = 9.73$, $p < .000$). The model predicted 21.1% of the variance. The strongest predictor was prospective intolerance of uncertainty ($\beta = .34$, $p < .000$) and perceived stress ($\beta = .21$, $p = .005$). Perceptions of satisfaction with performance ($\beta = -.19$, $p = .011$) and perceptions of competence and importance ($\beta = -.17$, $p = .022$) were significant, but negative predictors in the current model. Inhibitory intolerance of uncertainty was not a significant predictor in this model.

Athletics - *Self-Oriented Perfectionism*. The multiple regression equation predicting Self-Oriented Perfectionism was significant ($F_{(5,182)} = 8.06$, $p < .000$). The model predicted 18.1% of the variance. The strongest predictor was prospective intolerance of uncertainty ($\beta = .48$, $p < .000$). Inhibitory intolerance of uncertainty was a significant ($\beta = -.24$, $p = .01$) negative predictor in the current model. Perceived satisfaction, stress, and perceptions of competence and importance in athletics were not significant predictors in this model.

Athletics - *Others-Oriented Perfectionism*. The multiple regression equation predicting Others-Oriented Perfectionism was significant ($F_{(5,182)} = 5.71$, $p < .000$). The model predicted 13.6% of the variance. The strongest predictor was prospective intolerance of uncertainty ($\beta = .37$, $p < .000$). Inhibitory intolerance of uncertainty was a negative predictor ($\beta = -.36$, $p < .000$) in the current model. Perceived satisfaction, stress,

and perceptions of competence and importance in athletics were not significant predictors in this model.

Athletics - *Socially Prescribed Perfectionism*. The multiple regression equation predicting Socially Prescribed Perfectionism was significant ($F_{(5,182)} = 11.61$, $p < .000$). The model predicted 24.2% of the variance. The strongest predictor was intolerance of uncertainty - prospective ($\beta = .26$, $p = .001$) and perceived competence and importance in sport ($\beta = .22$, $p = .001$). Perceived satisfaction with performance was a negative predictor ($\beta = -.22$, $p = .002$) in the current model. Perceptions of stress and inhibitory intolerance of uncertainty were not significant predictors in this model.

Discussion

The first purpose of the current study was to examine differences in perfectionism intensities (SOP, OOP, SPP) between excelling and non-excelling student-athletes in academics and athletics. In general, results indicated several differences between excelling students and their teammates in SOP perfectionism. However, patterns of perfectionism did not differ between excelling and non-excelling students in academics or athletics in the remaining perfectionism dimensions (i.e., OOP, SPP). The following discussion explores the results in depth for each of the three dependent variables - perfectionism subscales (i.e., SOP, OOP, SPP).

Self–Oriented Perfectionism

A main effect was observed between excelling student-athletes and their non-excelling teammates for self-oriented perfectionism. In other words, excelling students, irrespective of context, generally reported higher self-oriented perfectionism than their teammates. Furthermore, a main effect for context was found for self-oriented

perfectionism, irrespective of excelling or non-excelling, indicating student-athletes generally reported higher self-oriented perfectionism in athletics compared to academics. An interaction effect was also found for self-oriented perfectionism with regard to excelling and non-excelling students across contexts. Specifically, excelling student-athletes maintained a heightened self-oriented perfectionism across contexts, whereas non-excelling student-athletes reported much lower self-oriented perfectionism in academics compared to athletics. The interaction effect suggest self-oriented perfectionism is drastically different across the contexts of academics and athletics for non-excelling students. Interestingly, self-oriented perfectionism has commonly been associated with beneficial consequences in academics (Stoeber & Otto, 2006) and athletics (Gotwals et al., 2012).

The current findings replicated and extended the findings of Dunn and colleagues (2012), who found Canadian student-athletes to report significantly higher perfectionism in athletics compared to academics. Student-athletes may report higher perfectionism in specific achievement domains than others (Dunn et al., 2005). The current findings extend the previous findings (Dunn et al., 2005; Dunn et al., 2012) by including American student-athletes and examining differences between excelling student-athletes and their teammates. Excelling student-athletes reported higher intensities of athletic perfectionism (OOP, SPP) than academic perfectionism. However, the current findings suggest subtle perfectionism differences (i.e., SOP) for excelling student-athletes than their teammates with respects to perfectionism in athletics and academics. Excelling students seem to hold higher perfectionism across domains whereas non-excelling students perceived much higher perfectionism in athletics than academics.

The results support the previous notion that those identified as gifted will report higher intensities of perfectionism in relevant achievement domains (Adderholt-Elliot, 1987). For example, previous literature has acknowledged similar findings of excelling students reporting higher levels of self-oriented perfectionism in academics compared to their non-excelling peers (Mofield & Parker Peters, 2018; Roberts & Lovett, 1994). Further studies did not shown a difference between excelling and non-excelling students self-oriented perfectionism in academics (Parker & Mills, 1996). Therefore, consensus regarding differences between excelling and non-excelling students self-oriented perfectionism has not been reached (Speirs Neumesiter, 2018). The current findings add to the current literature by including excelling collegiate student-athletes, whereas the previous studies have looked at middle to high school aged populations, who do not also compete in athletics.

However, the current findings may have implicit consequences for excelling students' engagement in achievement domains, specifically academics. For example, Closson and Boutilier (2017) explored honors status as a moderating variable between perfectionism and academic engagement. Results indicated that honors status was a significant moderator where the positive relationship between SOP and academic engagement was smaller for honors than non-honors students (Closson & Boutilier, 2017). In other words, self-oriented perfectionists who were honors students were not as academically engaged as their non-gifted peers. Through a longitudinal study, researchers found middle and high school students' adaptive perfectionism to significantly predict academic engagement (Damian et al., 2017). There may exist an association between non-honors status, adaptive perfectionism, and academic engagement. The minimization

in the relationship between honors status, adaptive perfectionism, and academic engagement is thought to be a function of early success in academics and the perception of a lack of challenge (Closson & Boutilier, 2017). Researchers must consider the validity of adaptive perfectionism and its consequences within this unique intragroup population through empirical investigation. The current findings may provide the first insight into the differences between excelling and non-excelling student-athletes with respect to self-oriented perfectionism in athletics and academics. Yet, motivational orientation and degree of self-efficacy may be factors contributing to the differences observed in the current study.

Ryan and Deci (2000) suggested optimal human performance, social development, and well-being is obtained through striving to fulfill three specific needs: a) autonomy, b) relatedness, and c) competence. The intensity and direction of motivation, which is the consequence of need fulfillment or lack thereof, was thought to be highly valued because it produces behavior (Ryan & Deci, 2000). At the core, differences in motivation stem from a wavering value and behavioral regulation that may be internalized and then integrated (Ryan & Deci, 2000, p. 71). Research suggested that being perfectionistic is intrinsically, rather than extrinsically, motivated in most contexts (Stoeber & Stoeber, 2009). Previously, self-oriented perfectionism has unanimously been associated with intrinsic motivation, whereas socially prescribed perfectionism had been associated with extrinsic motivation in academics (Fletcher & Neumeister, 2012).

Internalization captures the degree of value, or regulation emphasized, where integration involves fusing the value, or regulation, with themselves (Ryan & Deci, 2000). Excelling students may internalize (capture the degree of value) and integrate

(fusing a value with themselves) into academics and athletics, whereas the non-excelling population may internalize both domains, but only integrate that value for athletics. These two processes are thought to be invaluable in guiding behavior throughout the lifespan (Ryan & Deci, 2000). For example, those who succeed and recognize their success as enjoyable (intrinsic) in both academics and athletics may be more inclined to pursue that specific behavior, such as those excelling in the current sample. However, further empirical investigation is warranted to assess the theoretical link between motivation and self-oriented perfectionism among excelling student-athletes.

Bandura (1997) suggested past successful experiences are the most impactful predictor of self-efficacy. Research has articulated that prior success was a strong influence of self-oriented perfectionism in collegiate honors students (Speirs Neumeister, 2004). Specifically, students high in self-oriented perfectionism have reported higher GPA and grades than students with high socially prescribed or maladaptive perfectionism (Rice & Ashby, 2007; Stoeber & Rambow, 2007) and higher exam scores (Bieling et al., 2003). Self-efficacy, specifically successful prior achievement coupled with self-oriented perfectionism appeared to influence markedly academic performance. Furthermore, athletes who reported higher self-efficacy and confidence performed better than those with lower levels (Hatzigeorgiadis et al., 2009). Athletes high in self-oriented perfectionism have reported increased levels of confidence compared to those high in socially prescribed or maladaptive perfectionism (Koivula et al., 2002). Excelling student-athletes may embody higher efficacy in both academics and athletics, due to past successful experience, compared to their non-excelling teammates. The theoretical considerations proposed between self-efficacy, self-oriented perfectionism, and

performance in athletics and academics among excelling student -athletes warrant further empirical inquiry.

Other Perfectionism Dimensions

Results of the current study indicated no interaction effect, or main effect in relation to differences in others-oriented or socially prescribed perfectionism between excelling and non-excelling student-athletes. However, a significant main effect indicated differences across contexts (i.e., academics and athletics) irrespective of excelling or non-excelling status. Specifically, student-athletes reported higher perfectionism (OOP, SPP) in athletics than in academics. Results support the use of domain specific measures of perfectionism when considering achievement domains (i.e., academics and athletics; Dunn et al., 2005; Dunn et al., 2012; McArdle, 2010). Perfectionism intensities may significantly differ across contexts for student-athletes. Specifically, student-athletes appear to internalize higher perfectionism with respect to athletics compared to academics. However, intragroup differences (i.e., excelling and non-excelling) seem to be a vital factor to consider when exploring perfectionism in the two achievement domains. The results suggest that perfectionism may not be a global personality characteristic, but actually fluctuate across contexts for both excelling and non-excelling student athletes. However, further empirical inquiry is necessary to solidify the observation that student-athletes generally report different perfectionism intensities across achievement contexts (i.e., athletics, academics) regardless of excelling or non-excelling status.

Initial investigation into perfectionism differences between athletics and academics within collegiate student athletes revealed significantly higher perfectionism across all subscales (SOP, OOP, SPP) than academics or general perfectionism measures

(Dunn et al., 2005). Student-athletes embodied higher perfectionism regardless of form (i.e., adaptive or maladaptive; SOP, OOP, SPP) in athletics than in academics (Dunn et al., 2012). The current study provided further evidence to suggest that student-athletes may report higher perfectionism in athletics compared to academics. However, the investigation into intragroup differences (i.e., excelling verse non-excelling) perfectionism levels with respects to academics and athletics has only recently been explored.

McArdle (2010) found gifted adolescent student-athletes reported significantly higher intensities of perfectionism in academics compared to athletics. The current study contradicts McArdle's (2010) findings. The findings may be diluted due to the perfectionism measure used in her study (i.e., FMPS), which is a total perfectionism score that does not consider adaptive or maladaptive qualities of perfectionism (Dunn et al., 2012). In addition, results indicate age (i.e., adolescent versus collegiate), or academic level, differences may exist when considering perfectionism intensities of excelling verse non-excelling student-athletes in academics and athletics. Therefore, assessing perfectionism from a longitudinal, but domain specific, perspective across academics and athletics for excelling and non-excelling collegiate student-athletes is warranted. This methodological design may help facilitate further inquiry into the potential instability of perfectionism among excelling and non-excelling student-athletes.

Higher intensities of others-oriented perfectionism in athletics compared to academics suggest a socially constructed pressure to achieve excellence directed toward others exists. In other words, it may be more pertinent for athletes to hold others to higher expectations and standards to achieve excellence in athletics compared to academics.

Their independent success may be a function of their teammate's performance in the athletic environment, especially for team sports, which represented a majority of the current sample. For example, student-athletes who perceived athletics as more important than school may predispose individuals for higher intensities of others-oriented perfectionism (Dunn et al., 2012). Therefore, further empirical inquiry as to what influences importance, or personal significance, in the domains of athletics and academics is warranted in relation to its association with others-oriented perfectionism.

In general, student-athletes reported higher socially prescribed perfectionism in athletics compared to academics. In other words, student-athletes generally felt more pressure, and a heightened expectation of performance, from others in athletics compared to academics. Potential explanations might include the interdependency of performance to achieve success in team sports. For example, performance outcomes within team sports might be a direct function of individual and collective achievement of performance expectations. From a peer perspective, holding others accountable for heightened expectations, in a domain of importance, might facilitate a higher perception of socially prescribed perfectionism. A second explanation of the current findings might arise from the periphery of the collegiate athletic environment. Parents play a pivotal role in the development of socially prescribed perfectionism in athletics. Previous literature has acknowledged authoritarian parenting styles as pivotal precursors to the development of socially prescribed perfectionism in gifted students (Speirs Neumeister, 2004). Parental influence was associated with perfectionism in athletics. For example, Cremades and colleagues (2013) investigated parental involvement differences in perfectionism of collegiate freshmen athletes. Results indicated athletes with highly involved fathers

reported higher standards for others in athletics (Cremades et al., 2013). Interestingly, mother involvement was not influential in relation to perfectionism. Further exploration into relevant others, and their profiles, that may influence socially prescribed perfectionism in athletics is warranted (i.e., coaching style, parenting style, leadership style).

Predicting Domain Specific Perfectionism

The second purpose of the current study was to investigate predictive characteristics of perfectionism in all three domain specific perfectionism dimensions (SOP, OOP, SPP) using domain specific predictors as suggested by Dunn and colleagues (2012). Results of the current study extended previous findings, but also provided perspective on the development of perfectionism in the achievement domains of athletics and academics. The following paragraphs discuss the current findings in relation to other empirical findings along with potential explanations for SOP, OOP, and SPP in academics and athletics.

Self-Oriented Perfectionism

Academics. Prospective intolerance of uncertainty was the strongest predictor of self-oriented perfectionism. Prospective intolerance of uncertainty resembles "fear and anxiety about the future" (Carleton et al., 2007, p. 112). Self-oriented perfectionism entails the act of setting extremely high expectations coupled with critical evaluation of performed behavior (Flett & Hewitt, 1991). Therefore, the findings may be explained through the overlap of core components of self-oriented perfectionism and prospective intolerance of uncertainty, which entails a critical evaluation of behavior. However, an important distinction is that intolerance of uncertainty is future-oriented and potentially

dependent upon past evaluations; which is where the potential influence of prospective intolerance of uncertainty may enhance self-oriented perfectionism in academics. In other words, self-oriented perfectionists are future directed in their standards set, but rely on past performances to dictate future expectations, which may create a heightened fear of the unknown.

For example, previous literature demonstrated a positive association between self-oriented perfectionism and a higher GPA (Rice & Ashby, 2007; Stoeber & Rambow, 2007). Rice and colleagues (2012) found perfectionism in undergraduate students to be consistent, or stable, throughout a semester. Prospective intolerance of uncertainty may facilitate self-oriented perfectionism in academics due to the drive to elevate performance, but evaluation of performance became more stringent as expectations grew. The current findings suggest prospective intolerance of uncertainty drastically impacts self-oriented perfectionism in academics. Therefore, further empirical investigation is warranted with respect to prospective intolerance of uncertainty and self-oriented perfectionism and how it may affect academic performance.

Furthermore, perceptions of confidence and importance in academics was a negative predictor of self-oriented perfectionism. Increases in perceived competence and importance in a given domain have been suggested to influence increases in self-oriented perfectionism (Flett et al., 2002). Empirical results have previously indicated a strong association between perceived competence and importance and an increase in self-oriented perfectionism in athletics (Dunn et al., 2012). However, in a study of academically talented youth who competed in athletics, no relationship between perceptions of competence and importance and perfectionism was found (McArdle,

2010). This was thought to be a function of the unidimensional construct of perfectionism utilized (i.e., FMPS) that relies on a composite score (Dunn et al., 2012). Results further corroborate the need to explore the relationship between perceived competence and importance in athletics and academics and its relationship to domain specific self-oriented perfectionism. Specifically, the cross-sectional nature of the current and previous studies may be a limiting factor in interpreting the results between the constructs. Longitudinal designs assessing the domain specific influence over time would benefit the integrity of the contradicting results in recent perfectionism literature.

Athletics. Prospective intolerance of uncertainty was the strongest predictor of self-oriented perfectionism in athletics. The current findings suggest subtle differences may exist between perfectionism orientations within athletics that may be explained by prospective intolerance of uncertainty. For example, previous literature has acknowledged maladaptive perfectionism to be associated with fear of failure, rather than adaptive (self-oriented; Gucciardi et al., 2012; Sagar & Stoeber, 2009). However, if fear of failure, worry, and anxiety based on the future are at the core of intolerance of uncertainty, self-oriented perfectionist may have fear, as albeit less intense compared to their maladaptive perfectionistic peers. Investigation into the manifestation of fear in athletes may provide a deeper and more fruitful explanation of the predictive nature of prospective intolerance of uncertainty and self-oriented perfectionism.

Inhibitory intolerance of uncertainty was a significant, but negative, predictor in the current model of self-oriented perfectionism in athletics. In other words, athletes who reported higher levels of inhibitory intolerance of uncertainty reported lower levels of self-oriented perfectionism. Inhibitory intolerance of uncertainty can be described as

inhibiting action due to fear (Carleton et al., 2007). Previous findings support the association between fear and perfectionism. For example, Frost and Henderson (1991) conducted the first empirical investigation on perfectionism in athletics and found maladaptive perfectionism to be significantly associated with failure orientations and lower confidence. In addition, Gotwals (2011) found maladaptive perfectionism to be associated with higher dimensions of burnout compared to adaptive perfectionism. However, Carleton (2016) suggested fear of the unknown to meet the necessary criteria of fundamental fears. Current results, in addition to previous empirical findings, suggest inhibitory intolerance of uncertainty may be a pertinent factor to consider with regard to maladjustment tendencies in athletics. For example, previous findings have suggested extreme perfectionists embody ego orientations, which may have debilitating effects if they express doubts about their abilities to execute a task (Flett & Hewitt, 2005).

Others-Oriented Perfectionism

The results of regression models predicting others-oriented perfectionism explained small percentages of the variance in athletics (i.e., 14%) and academics (i.e., 8%). Current research has scarcely considered antecedents or consequences of others-oriented perfectionism due to the ambiguity of its association to adaptive and maladaptive outcomes in academics (Stoeber & Otto, 2006) and athletics (Gotwals et al., 2012). Therefore, this exploration has shed light on its potential relevance, specifically within athletics, where team sports are interdependent on peer performance, which may result in heightened expectations for others in the athletic environment.

The strongest predictor of others-oriented perfectionism in athletics was prospective intolerance of uncertainty. Yet again, the worry about future performance

seemed to influence significantly others-oriented perfectionism or holding others to extremely high standards. The fear of the unknown, or others performance, may actually be interdependent on interpersonal perceptions of competence of relevant others in the athletic environment who have a direct effect on performance. Potential avenues of further exploration are encouraged to consider what motivates this potential relationship. For example, perceived interpersonal characteristics (i.e., age, skill level, confidence, self-efficacy, competence) of others might drive the heightened prospective intolerance of uncertainty resulting in higher expectations for others in the competitive environment. Further empirical investigation might provide clarity as to how prospective intolerance of uncertainty infuses others-oriented perfectionism in the athletic context.

Socially Prescribed Perfectionism

Prospective intolerance of uncertainty was also a significant positive predictor of socially prescribed perfectionism in academics and athletics. Participants in the current study may have perceived expectations others hold (e.g., teachers, parents) as unrealistic, or unattainable, resulting in a heightened fear, or anxiety about reaching those expectations. For example, Flett and colleagues (1996) found socially prescribed perfectionism to be positively associated with fear of negative evaluation and reduced self-esteem in academics. In addition, performance anxiety, study insufficiencies, and fear of failure were positively related to maladaptive perfectionism (Christman, 2012). It has been suggested that those reporting higher maladaptive forms of perfectionism (i.e., socially prescribed perfectionism) pursue excellence in unhealthy ways, which might result in seeing themselves as a failure (Christman, 2012). The relationship between socially prescribed perfectionism and prospective intolerance of uncertainty in academics

would benefit from a longitudinal research assessing how fear of success or failure might moderate the influence of prospective intolerance of uncertainty on socially prescribed perfectionism in academics.

The association between prospective intolerance of uncertainty and socially prescribed perfectionism in athletics might be explained through its previously noted association to fear of failure. Fear of failure has previously been associated with maladaptive forms of perfectionism (Gucciardi et al., 2012; Sagar & Stober, 2009). For example, Sellars and colleagues (2016) found maladaptive perfectionists to be overly critical and never satisfied with their performance in athletics. Prospective intolerance of uncertainty might act as a protective factor to not feel dissatisfied by the extremely high standards set for them that are potentially unattainable. Further empirical investigation might provide a deeper understanding of the multifaceted personality characteristic within the achievement domain of athletics, and how fear of the unknown may moderate the dynamic relationship between prospective intolerance of uncertainty and socially prescribed perfectionism in athletics.

Academics. Perceived stress was a significant predictor of socially prescribed perfectionism in academics. Essentially, those who reported higher levels of perceived stress in academics reported higher levels of socially prescribed perfectionism in academics. For example, striving to execute perfection comes with a reference to others' expectations of performance behavior in socially prescribed perfectionism. Therefore, the link between stress and socially prescribed perfectionism might be explained through overly high expectations, or standards, they perceive as unattainable resulting in a heightened stress. Previous literature acknowledged maladaptive perfectionism to be

associated with heightened stress (Bieling et al., 2004), fear of negative evaluation (Flett et al., 1996), and study inefficiencies (Christman, 2012) in academics. Therefore, further exploration into the contextual performance demands placed on student-athletes may help explain the current findings. Specifically, qualitative investigation into relevant others expectations that become the reference point of performance behavior for intercollegiate student-athletes academic experience may extend previous findings highlighting the association between stress and socially prescribed perfectionism in academics.

Furthermore, perceptions of competence, importance, and satisfaction with performance were inversely related to socially prescribed perfectionism in academics. More specifically, the higher perceptions of satisfaction, competence, and importance placed on academics, the less socially prescribed perfectionism in academics. Results support previous findings, whereas heightened perceptions of competence and importance are related to self-oriented perfectionism (Dunn et al., 2012) and not socially prescribed perfectionism. Therefore, it appeared that others' expectations and tuning into those expectations might deteriorate an individual from experiencing satisfaction, competence, and a sense of importance in academics. Further empirical investigation into the domain specific relationship among these variables is warranted.

Athletics. Higher perceptions of competence and importance predicted socially prescribed perfectionism in athletics. The present findings suggest student-athletes who reported higher perceptions of competence and importance towards athletics reported higher levels of socially prescribed perfectionism in athletics. Therefore, the implications of relevant others' expectations of performance may not only affect an individuals' perfectionistic orientation (i.e., SPP), but also their perceptions to execute a task in

athletics. Moreover, perceptions of competence and importance in athletics might actually be a function of achieving relevant other's expectations of performance, specifically if these expectations come from teammates. If one's teammates expected heightened performance from a specific individual and they consistently met the heightened expectations, it might act as a precursor to heightened perceived competence and importance within athletics. However, the present results contradict previous findings suggesting perceived competence is not a central role in perfectionism (McArdle, 2010), and higher perceptions of competence and importance is related to self-oriented perfectionism (Dunn et al., 2012) rather than socially prescribed perfectionism. Certainly, further empirical investigation into the current findings is warranted.

Perceptions of satisfaction were a significant, but negative, predictor of socially prescribed perfectionism in athletics. Athletes who reported lower perceptions of satisfaction reported higher socially prescribed perfectionism in athletics. Results indicate the potential negative consequences of not being able to meet the heightened expectations of others. Specifically, the cycle of not meeting expectations, or standards, of others may permeate lower intensities of satisfaction in athletics resulting in an increased adherence to socially prescribed perfectionism. For example, perfectionists were at a great risk if coupled with maladaptive coping tendencies in athletics (Flett & Hewitt, 2005). Furthermore, Sagar and Stoeber (2009) found maladaptive perfectionism to significantly predict negative appraisal after failure in athletics. Therefore, coping with failure and its association to socially prescribed perfectionism might indicate a potential association between a lack of satisfaction and increased socially prescribed perfectionism in athletics and other domains.

Limitations

Although the current study followed the design of previous research, several limitations must be acknowledged. The current study was cross-sectional in nature. Excelling and non-excelling students might report different perfectionism intensities over the course of the semester or athletic season. Furthermore, the data was collected over a span of 2 months during the academic year. The time at which the student-athletes completed the survey may be an additional limitation. The study relied on accurate responses of individuals. Survey fatigue or disinterest in the study might have affected the responses. Lastly, both excelling and non-excelling maintained a heightened GPA of above a 3.3 cumulative GPA. This is possible because starting status was also a requirement for being considered as excelling. Yet, the high GPA may be a further limitation of the current study due to both groups being similar in academic performance.

In addition, a majority of the current sample represented NCAA Division III athletes. Therefore, generalizability across divisions is cautioned. Previous studies have found subtle differences in athletic verse academic identities across divisions, which may have influenced the current findings. For example, Sturm, Feltz, and Gilson (2011) compared athletic and academic identities across division one and three athletes and found females to report significantly higher academic identities than males in both division one and three populations. In addition, this comparison was nearly significant (i.e., $p = .057$) for females reporting significantly lower athletic identities than their male counterparts in both divisions.

Despite the limitations of the current study, the findings extend our knowledge of perfectionism in student-athletes. Specifically, the results supported the domain-specific

measurement of perfectionism in the achievement domains (Dunn et al., 2005; Dunn et al., 2012; McArdle, 2010). Furthermore, results supported the centrality of athletics in the presence of collegiate student-athletes' lives through student-athletes' reporting significantly higher perfectionism in athletics compared to academics, which has previously been alluded to (Dunn et al., 2005; Dunn et al., 2012). In addition, the current study extended previous literature by investigating domain specific perfectionism in student-athletes who engaged and excelled in multiple contexts (i.e., academics and athletics) compared to their non-excelling cohort of teammates. Results supported the notion that excelling students differ in self-oriented perfectionism than their cohort and in this study, their teammates, whereas excelling students self-oriented perfectionism was significantly higher for academics. Therefore, replication of the current findings is warranted. In addition, exploring precursors of self-oriented perfectionism in both academics and athletics for excelling and non-excelling students through longitudinal designs is a pertinent next step.

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APPENDIX A

EMAIL DESCRIPTION OF THE STUDY

Subject: Research Recruitment Support
Hello Coach

You are receiving this email requesting your athlete's participation in a research study on perfectionism. The purpose of the research study is to understand the expression of perfectionism in academia and in athletics. In the following study, your athletes will be asked basic demographic information along with perceptions of their perfectionism and other psychological constructs. The time commitment to complete the questionnaires shouldn't exceed 20 minutes and will only be asked to complete the questionnaires once. If you are willing to support me in my research endeavor I will do everything I can to accommodate your team's busy schedule to find a time before or after practice, or a time most convenient for you and your team. If meeting in person isn't feasible, I can also send you a link to the questionnaire that you can distribute to your team. If you would like, I can provide you with information on findings from my entire sample at the completion of this research project.

I appreciate your time and consideration regarding my thesis project. I appreciate any support you are willing to lend.

If you have any questions, please feel free to contact me at:

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APPENDIX B

IMPLIED CONSENT

Exploring Domain-Specific Perfectionism in Intercollegiate Student-Athletes: Do Academically Excelling Athletes Differ in Perfectionistic Tendencies?

1. Purpose of the Study

The purpose of the current study is to explore perfectionism in intercollegiate student-athletes. To date, domain-specific assessment of perfectionism (i.e., in athletics and academics) is sparse. As such, the purpose of the current study is to assess perfectionism in academics and athletics within intercollegiate student-athletes and to explore potential influences and consequences of various perfectionism expressions.

2. Benefits of the Study

There is no direct benefit of this study to you. However, scientific benefits of the study include a better understanding of the multidimensionality of perfectionism in the intercollegiate student-athletes. Particularly, antecedents and consequences of perfectionism will be explored. The knowledge will contribute to our understanding of perfectionism within academics and athletics.

3. What You Will Be Asked to Do

You will be asked to complete a series of questionnaires to the best of your abilities once you consented to your participation. You may skip, or withdraw from the study at any time during the duration of the allotted period for questionnaires to be completed. After completion and submission of your questionnaires, you cannot withdraw from the study anymore because data will be collected anonymously. After submission, no one will be able to link your identity with the submitted questionnaires anymore. Completing the questionnaires should take no more than 20 minutes to complete. Questionnaires will be allocated in person by the researcher or completed via Qualtrics.

4. Risks

Minimal to no risks are associated with this study. In the unlikely event that you may experience discomfort completing the questionnaires, you may discontinue participation.

5. If You Would Like More Information about the Study

You will be notified to ask the researcher any questions regarding the study prior to, or during the allotted time for the questionnaires to be completed. The researcher will answer any question to the best of his abilities. If questions arise after completion of the study you will be notified to contact the researcher, or the researcher's advisors via email with any questions.

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6. Withdrawal from the Study

You may skip any questions if you feel uncomfortable answering them. You may also withdraw from the study at any time without any consequences. After the submission of the questionnaires, withdrawal will be impossible because no one (including the researchers) will be able to link your data to your identity anymore.

7. How the Data will be Maintained in Confidence

No identifiable information will be collected. Data will be collected anonymously and kept confidential. In addition, data will be stored in a locked file cabinet in the faculty advisor's office for three years. Online data collection will be kept confidential through a password protected file via Qualtrics in the graduate research laboratory at Ithaca College. Data will be kept for three years upon completion of data collection. After three years, data will be destroyed.

I have read the above and I understand its contents. I agree and provide IMPLIED CONSENT to participate in the study. I AGREE THAT I AM 18 YEARS OF AGE OR OLDER. PLEASE DO NOT WRITE YOUR NAME ANYWHERE ON THIS SURVEY.

You may tear off this page for your records or return the survey with the page still connected. Thank you for your participation.

APPENDIX C

DEMOGRAPHICS QUESTIONNAIRE

1. Division of Intercollegiate Athletics: 1 2 3
2. Current Academic Year: ☐ Freshmen ☐ Sophomore ☐ Junior ☐ Senior
3. Current Cumulative GPA (Sophomore-Senior Complete, If Freshmen see Item #4): ____. ____ ____
4. If a Freshmen, what was your High School Cumulative GPA: ____. ____ ____ (Skip if not an Intercollegiate Freshmen)
5. Gender Identity: ☐ Male ☐ Female ☐ Transgender ☐ Prefer not to say ☐ Other:_____
6. Current Intercollegiate Sport: _____
7. Current Intercollegiate Institution: _____
8. What intercollegiate conference is your institution competing in? _____
9. Are you currently on an Athletic Scholarship (receiving compensation for athletic ability)? ☐ None ☐ Partial ☐ Full
10. Are you currently on an Academic Scholarship (receiving compensation for academic ability)? ☐ None ☐ Partial ☐ Full
11. Age: _____
12. Are you currently a "starter" on your intercollegiate athletic team? ☐ Yes ☐ No
13. How many years have you been a "starter" prior to this season? _____

14. How many years have you been with your current intercollegiate team?

    _____

15. Have you previously been named a CoSIDA Academic All-American in your intercollegiate athletic career? ☐ Yes ☐ No

    If yes, what academic year? ☐ Freshmen ☐ Sophomore ☐ Junior ☐ Senior

APPENDIX D

HEWITT AND FLETT'S MULTIDIMENSIONAL PERFECTIONISM SCALE

Instructions: Listed below are a number of statements concerning personal characteristics and traits. Please read each item and decide whether you disagree or agree to each statement in the context of academics and athletics & to what extent (e.g., 1-7).

Strongly Disagree			**Neither Agree nor Disagree**			**Strongly Agree**
1	**2**	**3**	**4**	**5**	**6**	**7**

	Academics							**Athletics**						
	Strongly Disagree						**Strongly Agree**	**Strongly Disagree**						**Strongly Agree**
1. When I am working on something, I cannot relax until it is perfect in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
2. I am not likely to criticize someone for giving up too easily in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
3. It is not important that people I am close to are successful in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
4. I seldom criticize my friends for accepting second best in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
5. I find it difficult to meet others expectations of me in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
6. One of my goals is to be perfect in everything I do in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
7. Everything that others do must be of top-notch quality in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
8. I never aim for perfection on my work in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7

	Academics							**Athletics**						
	Strongly Disagree						**Strongly Agree**	**Strongly Disagree**						**Strongly Agree**
9. Those around me readily accept that I can make mistakes too in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
10. It doesn't matter when someone close to me does not do their absolute best in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
11. The better I do, the better I am expected to do in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
12. I seldom feel the need to be perfect in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
13. Anything that I do that is less than excellent will be seen as poor work by those around me in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
14. I strive to be as perfect as I can be in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
15. It is very important that I am perfect in everything I attempt in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
16. I have high expectations for the people who are important to me in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
17. I strive to be the best at everything I do in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
18. The people around me expect me to succeed at everything I do in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
19. I do not have very high standards for those around me in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
20. I demand nothing less than perfection of myself in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
21. Others will like me even I don't excel at everything in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
22. I can't be bothered with people who won't strive to better themselves in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7

	Academics							**Athletics**						
	Strongly Disagree						**Strongly Agree**	**Strongly Disagree**						**Strongly Agree**
23. It makes me uneasy to see an error in my work in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
24. I do not expect a lot from my friends in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
25. Success means that I must work even harder to please others in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
26. If I ask someone to do something, I expect it to be done flawlessly in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
27. I cannot stand to see people close to me make mistakes in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
28. I am perfectionistic in setting my goals in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
29. The people who matter to me should never let me down in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
30. Others think I am okay, even when I do not succeed in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
31. I feel that people are too demanding of me in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
32. I must work to my full potential at all times in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
33. Although they may not say it, other people get very upset with me when I slip up in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
34. I do not have to be the best at whatever I am doing in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
35. My family expects me to be perfect in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7
36. I do not have very high goals for myself in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
37. My parents rarely expected me to excel in all aspects of my life in…	1	2	3	4	5	6	7	1	2	3	4	5	6	7

	Academics							**Athletics**						
	Strongly Disagree						**Strongly Agree**	**Strongly Disagree**						**Strongly Agree**
38. I respect people who are average in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
39. People expect nothing less than perfection from me in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
40. I set very high standards for myself in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
41. People expect more from me than I am capable of giving in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
42. I must always be successful in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
43. It does not matter to me when a close friend does not try their hardest in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
44. People around me think I am still competent even if I make a mistake in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7
45. I seldom expect others to excel at whatever they do in...	1	2	3	4	5	6	7	1	2	3	4	5	6	7

APPENDIX E

THE PERCEPTIONS OF SCHOOL AND SPORT QUESTIONNAIRE

Instructions: The following items are directed towards your innate beliefs surrounding academics and athletics of your own thoughts, feelings, and behaviors. Please answer each item in accordance to the domain (e.g., academics or athletics) it is referring to in relation to the degree you disagree or agree.

Strongly Disagree			**Neither Agree nor Disagree**			**Strongly Agree**
1	**2**	**3**	**4**	**5**	**6**	**7**

	Strongly Disagree						**Strongly Agree**
1. I have more ability as an athlete than I do as a student in school.	1	2	3	4	5	6	7
2. Becoming a better student is more important to me than becoming a better athlete.	1	2	3	4	5	6	7
3. Doing well in my sport is more rewarding for me than doing well in the classroom.	1	2	3	4	5	6	7
4. I am able to improve my university grades more easily than I am able to improve my sport skills.	1	2	3	4	5	6	7
5. Being recognized as a “great student” in the classroom is more important to me than being recognized as a “great athlete.”	1	2	3	4	5	6	7
6. I have more confidence in myself as an athlete than I do as a student.	1	2	3	4	5	6	7
7. It is more important for me to win games with my team than to receive high grades in my classes.	1	2	3	4	5	6	7
8. I feel more competent in my “study skills” than I do in my sport skills.	1	2	3	4	5	6	7
9. Being successful in sport gives me a greater sense of satisfaction than being successful in the classroom.	1	2	3	4	5	6	7
10. Doing well in sport competition is easier for me than doing well in the classroom.	1	2	3	4	5	6	7

	Strongly Disagree						**Strongly Agree**
11. I get more excited when I do things well in the classroom than when I do things well in my sport.	1	2	3	4	5	6	7
12. I generally feel more prepared to succeed in academic exams than I do in sport competition.	1	2	3	4	5	6	7

APPENDIX F

THE PERCEIVED STRESS SCALE

Instructions: Listed below are questions that ask about your feelings and thoughts during the past month pertaining to both academics and athletics. The best approach is to answer fairly quickly. For each statement, please tell me if you had had these thoughts or feelings in academics and athletics: never, almost never, sometimes, fairly often, or very often.

	Academics					**Athletics**				
	Never				**Very Often**	**Never**				**Very Often**
1. In the past month, how often have you been upset because of something that happened unexpectedly in..	0	1	2	3	4	0	1	2	3	4
2. In the past month, how often have you felt unable to control the important things in your life in..	0	1	2	3	4	0	1	2	3	4
3. In the past month, how often have you felt nervous or stressed in..	0	1	2	3	4	0	1	2	3	4
4. In the past month, how often have you felt confident about your ability to handle personal problems in..	0	1	2	3	4	0	1	2	3	4
5. In the past month, how often have you felt that things were going your way in..	0	1	2	3	4	0	1	2	3	4
6. In the past month, how often have you found that you could not cope with all the things you had to do in..	0	1	2	3	4	0	1	2	3	4
7. In the past month, how often have you been able to control irritations in your life in..	0	1	2	3	4	0	1	2	3	4
8. In the past month, how often have you felt you were on top of things in..	0	1	2	3	4	0	1	2	3	4
9. In the past month, how often have you been angry because of things that happened that were outside of your control in..	0	1	2	3	4	0	1	2	3	4
10. In the past month, how often have you felt that difficulties were piling up so high that you could not overcome them in..	0	1	2	3	4	0	1	2	3	4

APPENDIX G

THE INTOLERANCE OF UNCERTAINTY SCALE

Instructions: Games, meets, competitions, exams, and assignments are more or less always uncertain to outcome. One can never know how the task will go. Please indicate the statements that best apply to you when thinking about tasks associated with academics and athletics independently.

Not at all a characteristic of me				Entirely a characteristic of me
1	**2**	**3**	**4**	**5**

	Academics					**Athletics**				
	Not at all a characteristic of me				**Entirely a characteristic of me**	**Not at all a Characteristic of me**				**Entirely a characteristic of me**
1. I always want to know what the future has in store for me in..	1	2	3	4	5	1	2	3	4	5
2. Unforeseen events associated with … upset me greatly.	1	2	3	4	5	1	2	3	4	5
3. I can't stand being taken by surprise in ...	1	2	3	4	5	1	2	3	4	5
4. The smallest doubt can stop me from acting in	1	2	3	4	5	1	2	3	4	5
5. A small unforeseen event in … can spoil everything, even with the best planning.	1	2	3	4	5	1	2	3	4	5
6. When I am uncertain I can't function very well in ...	1	2	3	4	5	1	2	3	4	5
7. One should always look ahead so as to avoid surprises in ..	1	2	3	4	5	1	2	3	4	5
8. When it's time to act, uncertainty will paralyze me in …	1	2	3	4	5	1	2	3	4	5

	Academics					**Athletics**				
	Not at all a characteristic of me				**Entirely a characteristic of me**	**Not at all a characteristic of me**				**Entirely a characteristic of me**
9. I should be able to organize everything in advance for…	1	2	3	4	5	1	2	3	4	5
10. I must get away from all uncertainty in…	1	2	3	4	5	1	2	3	4	5
11. It frustrates me not having all the information I need about…	1	2	3	4	5	1	2	3	4	5
12. Uncertainty in … keeps me from living a full life.	1	2	3	4	5	1	2	3	4	5

APPENDIX H

THE ATHLETE SATISFACTION QUESTIONNAIRE

Instructions: An individual may be satisfied to varying degrees with different types of experiences in athletics and academics. In the following items you are asked to report how satisfied with the content of each item you are in respects to athletics and academics from not at all satisfied to extremely satisfied. Your honest and spontaneous response to each and every item is vital to the success of the study.

Not at all satisfied			Moderately satisfied			Extremely satisfied
1	**2**	**3**	**4**	**5**	**6**	**7**

	Academics							**Athletics**						
	Not at all satisfied						**Extremely satisfied**	**Not at all satisfied**						**Extremely satisfied**
1. I am satisfied with the degree to which I have reached my performance goals during this year in..	1	2	3	4	5	6	7	1	2	3	4	5	6	7
2. I am satisfied with the improvement in my performance over the previous year in..	1	2	3	4	5	6	7	1	2	3	4	5	6	7
3. I am satisfied with the improvement of my skill level in..	1	2	3	4	5	6	7	1	2	3	4	5	6	7