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More Than Just an Athlete: A Model For Character Strengths To Enhance Well-Being During Retirement From Sport

Abstract

Sport, for as long as it has existed, has held a purpose of developing character in competitors. Positive psychology establishes that each of us has unique character strengths core to who we are that support our well-being. Athletes often develop their sense of self during adolescence and formative college years while competing at elite levels. This results in a strong "athlete identity" and a self-concept centered around sport participation, performance, and team membership. Each year, approximately 150,000 National Collegiate Athletic Association (NCAA) student-athletes graduate, very few going on to play at professional levels. Athletic retirement is a pivotal transition where redefining one's identity beyond the role of athlete is necessary to flourish. What if identity was redefined leveraging one's best traits? Could character strengths developed through years of athletics support effective coping through this major life transition and lead to flourishing in new life domains? This paper reviews the research on character strengths and discusses how, when cultivated through mindfulness, goal setting, and growth mindset they can help retiring student-athletes achieve greater well-being. A model for character strengths use is presented with implementation recommendations aimed at helping student-athletes attain greater well-being at the culmination of their athletic career.

Keywords

character strengths, mindfulness, goal setting, growth mindset, athletic identity, collegiate athletes

Disciplines

Psychology | Sports Studies

More Than Just an Athlete: A Model For Character Strengths To Enhance Well-Being During Retirement From Sport

Eliza J. McDevitt

University of Pennsylvania

A Capstone Project Submitted

In Partial Fulfillment of the Requirements for the Degree of

Master of Applied Positive Psychology

Advisor: Laura Taylor

August 1, 2020

More Than Just an Athlete: A Model For Character Strengths To Enhance Well-Being During Retirement From Sport

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Capstone Project

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Introduction

The majority of National Collegiate Athletic Association (NCAA) student-athletes retire from sport at the end of their collegiate career (NCAA Research, 2020). Those who are lucky enough to avoid injury or cuts culminate years of investment in sport with four seasons at the elite collegiate level. When they earn their degree, they face a major moment of transition as they enter life post-college and retire from sport. This paper introduces the concept of well-being and its associated field of study, positive psychology. Then, it presents an overview of the student-athlete experience including the development of an athlete identity, participation at the NCAA level, and subsequent retirement from sport. A review of research and literature is then presented on four concepts from positive psychology - character strengths, mindfulness, goal setting, and growth mindset. These concepts are explored in the context of NCAA student-athlete retirement and how they might support well-being.

This paper argues that character strengths use in the NCAA student-athlete population would enhance well-being and requires supporting cognitive skills of mindfulness, goal setting, and a growth mindset. Character strengths, a foundational component of positive psychology, describe positive human traits that can be developed and used across life domains to support well-being (Peterson & Seligman, 2004). Mindfulness, a form of heightened awareness, is essential to recognize one's strengths (Niemiec, 2013) and attend to the retirement transition in a way that supports self-development. Goal setting, a starting point for positive change, establishes motivation and provides clear direction for effort (Locke, 1996). And growth mindset, a way of thinking about one's abilities as malleable, supports a desire for continuous improvement leading to success in school, sport, and life (Dweck, 2008). Together, mindfulness, goal setting, and growth mindset can support intentional use of character strengths, spurring positive change and increased well-being in the midst of a challenging life transition. Positive psychology holds the

potential to improve the student-athlete retirement transition, support lifelong well-being, and enhance graduates' positive impact on the world through bringing forth their best selves in pursuits beyond athletics.

The Pursuit of Flourishing

What is Well-being?

Well-being can be thought of as a continuum. Represented on a number line, zero to positive ten represents states of flourishing with positive ten being optimal human functioning, or thriving. Zero to negative ten represents languishing. An individual falling chronically below zero may have a diagnosable clinical affliction. The field of psychology uses the *Diagnostic & Statistical Manual* (DSM) to diagnose and treat hundreds of mental illnesses of all kinds (Peterson & Seligman, 2004). Well-being is not the absence of ill-being and freedom from mental illness does not automatically mean happiness and high functioning. Individuals with mental illness can be happy and high-functioning through effective coping that leads to a high quality of life (Bolier et al., 2013)

Various models of well-being exist and have been studied across populations and domains. Well-researched models include Maslow's (1968) hierarchy of needs, subjective well-being theory (Diener, Oishi, & Tay, 2018), Ryff and Keyes' (1995) theory of functioning well, Deci and Ryan's (2012) self-determination theory, Prilleltensky's (2016) theory of mattering, and Seligman's (2011) PERMA model. PERMA is a widely used and extensively researched well-being model. It includes five dimensions: positive emotions (P), engagement (E), positive relationships (R), meaning (M), and accomplishment (A). Each dimension contributes to well-being, is pursued for its own sake, is exclusive of the other dimensions, and is measurable (Seligman, 2011). PERMA is an advancement of Seligman's authentic happiness theory (2004)

which is based on the outmoded idea that everything we do is an attempt to maximize feeling good. Three dimensions of PERMA (positive emotions, engagement and relationships) directly support happiness, with engagement underpinned by our virtues and strengths (Seligman, 2011). Meaning and accomplishment were added as dimensions necessary to living the good life, even though they might not always *feel* good. While balance across dimensions of well-being is important, disproportionate strength in a single dimension can boost overall well-being (Prilleltensky, 2016). In short, well-being is a complex, multi-dimensional construct that entails feeling good and living well, and it is a worthy pursuit for those who seek to thrive.

What is Positive Psychology?

Positive psychology is the study of well-being. The field is developing a comprehensive understanding of well-being through models like PERMA and identifying specific ways to cultivate positive conditions and experiences. The aim of positive psychology is to increase human flourishing, ultimately advancing individuals and collectives towards thriving (Seligman & Csikszentmihalyi, 2000). Said another way, it aims to move people in the direction of positive ten on the number line.

The idea of meliorism, or the belief that our efforts have the power to better the world, is central to positive psychology. Well-being can be supported generally in two ways – through constructive meliorism, or generating more of what we prefer, and by mitigative meliorism, or removal of what we do not prefer (Pawelski, 2005). While removing suffering can shift an individual rightward on the number line toward flourishing, suffering can still exist, and an increase in what we prefer could also move us rightward on the number line. Progression towards positive ten can be accomplished through *positive interventions*, or intentional activities aimed at increasing subjective well-being (Sin & Lyubomirsky, 2009). Using the growing body of scientific research, positive psychology practitioners design positive interventions

contextualized to specific target populations to enhance well-being. This capstone explores the potential for applying positive interventions, predominantly focused on character strengths, with the NCAA student-athlete population with a goal of promoting greater flourishing.

Positive psychology began in 1998 when then president of the American Psychological Association (APA), Dr. Martin Seligman, challenged the field of psychology to undertake a paradigm shift from pathology, weakness, and fixing ill-being to a focus on strengths, virtues, and nurturing what is best in humanity in an effort to balance the field (Seligman & Csikszentmihalyi, 2000). Traditionally, psychology focused on pathology and research for diagnosis and treatment of adverse conditions. This focus is understandable given that, for humans, bad often captures our focus more than good. Negativity bias, or the human tendency to focus on negative more than positive, evolved because attending to possible negative outcomes improves one's chance of survival (Baumeister, Bratslavsky, Finkenauer & Vohs, 2001; Rozin & Royzman, 2001). As a result, human cognition, emotion and behavior adapted to more heavily focus on negative events, information, and relationships. Seligman believed a shift from a negative to a positive focus could improve well-being for a broader segment of the population, buffer against mental illness, and even provide pathways to improve psychological states for diagnosed mentally ill individuals. Upholding the importance of research and treatment for those suffering from mental illness, Seligman's proposed positive complement within the field aimed at greater balance through heightened focus on what is good in life (Seligman & Csikszentmihalyi, 2000).

While the paradigm shift in the field of psychology represented a significant re-direction of scientific focus, the research was not starting from scratch. The January 2000 issue of *American Psychologist* represented a formal introduction of positive psychology to the field, kickstarting the paradigm shift by sharing fifteen articles representing areas of study already

underway befitting the scope of positive psychology. Articles on positive experience (e.g., pleasure, optimal experience, subjective well-being, optimism, happiness, self-determination, and positive emotions), development of individual strengths (e.g., creativity, wisdom, and performance), and how positive psychology fits in a social context (e.g., social relationships, cultural norms) opened the aperture of psychology research and application to the positive half of the human experience. Over the past twenty years, research and application within positive psychology has grown immensely, providing a wealth of knowledge about how to enhance flourishing across a variety of populations moving more individuals and groups towards flourishing.

How Does Applied Positive Psychology Support Well-being?

One way the field is actively working towards this is through researching and implementing effective positive interventions. *Positive interventions* are intentional activities aimed at increasing subjective well-being in an individual or population by cultivating positive feelings, behaviors, or cognitions (Sin & Lyubomirsky, 2009). Understanding effectiveness and expanding use of positive interventions across populations complements mental illness prevention and treatment by promoting mental wellness. A meta-analysis of positive interventions revealed they are most effective when participants are intrinsically motivated to improve their happiness levels and when the activities are designed with greater variety and longer duration (Sin & Lyubomirsky, 2009). A second meta-analysis confirmed the impacts of positive interventions, albeit with smaller effect sizes, providing supporting evidence that positive interventions can enhance both subjective and psychological well-being and reduce levels of depressive symptoms (Bolier et al., 2013).

While both meta-analyses of positive interventions point to individualized approaches being most effective, large-scale approaches to improving well-being hold great promise for

moving whole populations towards flourishing. One large-scale systematic approach to applying positive psychology is *Positive Education*. Referred to as *PosEd*, it is defined as "education for both traditional skills and for happiness" (Seligman, Ernst, Gilham, Reivich, & Linkins, 2009) and has been implemented in school curriculums across the world with desirable academic and well-being results. The goal of PosEd is to produce well-being along with traditional educational outcomes (Adler & Seligman, 2019). In addition to measuring academic success, PosEd measures well-being before and after curriculum implementation to understand dimensions of happiness and reduction in ill-being symptoms like depression and anxiety (Adler & Seligman, 2019). PosEd utilizes validated interventions shown to increase well-being and decrease ill-being over time by incorporating them into educational settings and infusing positive psychology concepts across the entire system of stakeholders. Findings from well-controlled studies provides substantial evidence that PosEd interventions can increase resilience, positive emotion, engagement and meaning in students (Seligman et al., 2009).

Positive psychology is a developing field and its application through PosEd is relatively new, so limitations exist in the research and known outcomes of application. PosEd has predominantly been used in primary and secondary education contexts to date, but positive interventions with college students have resulted in well-being improvements. In particular, freshmen experiencing the transition into college see positive effects of interventions (Parks & Szanto, 2013). In an eight week strengths-based intervention with 92 first-year college students, significant improvements in well-being occurred in the treatment group whereas the control group showed no change (Koydemir & Sun-Selişik, 2016). Success of PosEd and positive interventions implemented with college students points to the potential for well-being improvements in an education-based setting like the NCAA through a programmatic approach.

It should be noted that much of the research in the field of positive psychology is based in WEIRD (western, educated, industrialized, rich, and democratic) populations. This presents a limitation given the growing diversity of the NCAA student-athlete population. From 2012 to 2019, self-report data from NCAA institutions showed a 6% increase in non-white student-athletes (National Collegiate Athletic Association [NCAA], 2020a). In 2019, 16% of student-athletes self-reported at Black, 6% as Hispanic/Latino, 4% as two or more races, and 2% as Asian/Native Hawaiian/Pacific Islander. Of the approximately 182,000 Division 1 student-athletes, more than 80,000 of them self-identified as non-white, almost 44% (NCAA, 2020a). The growing number of non-white student-athletes presents a need to understand differences across racial and ethnic experiences, how PosEd might be received, and the differential impacts it could have on varied demographic groups.

A lack of representative research should not stop implementation of well-being programs for student-athlete populations. Instead, it should inspire deeper attention to and measurement of the unique experiences of black, indigenous, and people of color within the student-athlete population to see what aids and what detracts from their experience, retirement transition, and post-college careers and lives. Practitioners should take extra care to build in mechanisms for feedback from non-white audiences and hold a growth mindset with readiness to continuously improve interventions to better address well-being in diverse populations.

Well-being as a pursuit is supported by a growing base of research and interventions from the field of positive psychology. Findings can be thoughtfully applied across populations and contexts including educational settings towards positive outcomes. With the goal of increased flourishing, positive psychology is worthy consideration for inclusion in the NCAA environment to enhance the lives of student-athletes.

NCAA Student-Athlete Well-being

Current State: Preventing Injury and Treating Mental Illness

The NCAA is a membership-based organization of thousands of United States colleges and universities and their constituent stakeholders (athletes, coaches, administrators, college presidents, etc.) grouped into three divisions and multiple conferences (National Collegiate Athletic Association [NCAA], 2020b). The organization coordinates championship competitions and provides regulatory oversight for collegiate sports. Nearly half a million student-athletes participate in NCAA sports each year, with approximately 180,000 in Division I (NCAA, 2020a). NCAA participation represents an elite level of sport. Years of dedicated training and intense competition are required to develop the skill required to compete at the Division I level.

In addition to supporting academic success, the NCAA states student-athlete well-being is a tenant of their mission (National Collegiate Athletic Association [NCAA], 2020c).

Currently, the NCAA takes a preventative approach with physical health and a treatment approach to mental health. For example, the NCAA's Chief Medical Officer convened a taskforce to address mental health issues facing NCAA athletes in 2013. It resulted in agreement and deep concern voiced by coaches, trainers, sports psychologists, psychiatrists, counselors, and athletes on challenges with student-athlete mental health and led to a 2014 publication of Mind, Body and Sport: Understanding and Supporting Student-Athlete Mental Wellness that was disseminated to member institutions. The convening and subsequent handbook focused predominantly on treating ill-being focusing on topics of depression, stress, anxiety, eating disorders, substance abuse, and suicidal tendencies. Additionally, the NCAA's Sport Science Institute recognizes mental health as a top priority and is working to destigmatize seeking out mental health support in the athletics culture on campuses. Supporting mental health issues through treatment and prevention is a noble and necessary pursuit, yet the NCAA's current

efforts overlook the incredible potential for comprehensive student-athlete well-being through promoting mental wellness.

Future Vision: Promoting Holistic Well-being

Systematically promoting well-being alongside current efforts to reduce mental ill health and prevent injury and physical illness, would allow the NCAA to comprehensively fulfill its mission of athlete well-being. Use of positive psychology to boost cognitive skills that support academic and sports performance, would represent a shift towards promoting mental health instead of only treating mental illness. With coaches, trainers, and staff learning cognitive skills in order to facilitate teaching and modelling of them with student-athletes, cultivating well-being is an opportunity to bring benefits to all stakeholders in the system. With this shift, the NCAA could truly support comprehensive well-being and uphold its mission of preparing student-athletes for life-long success.

A growing body of research on athletic careers points to the importance of an athlete's coping resources and strategies to successfully undergo career transitions such as entering NCAA level competition and retirement (Wylleman, Reints, & De Knop, 2013; Wylleman & Rosier, 2016). One specific area where the NCAA could preemptively support well-being is the athletic retirement transition. In order to understand the challenges a student-athlete faces at the end of their career a review of the athlete career is needed.

Athlete Career: Experience Overview

Athlete identity development.

The developmental model of sports participation proposes athletes undergo a three-stage journey through their youth and adolescent years- sampling sports, specializing in one, and then a set of investment years that are highly motivated by performance goals in the chosen sport (Cote, Baker, & Abernethy, 2003; Cote & Fraser-Thomas, 2007). It is likely that the

specialization and investment years lead to the development of an *athlete identity*, or the degree to which an individual identifies with the athlete role (Brewer, Van Raalte, & Linder, 1993). As a self-concept, athlete identity provides a cognitive structure for an individual that supports how they organize and process self-related information (da Silva, Lisboa, Folle, Melo, & Cardoso, 2020).

Developed out of identity theory, athlete identity is a relatively new construct operationalized and measured using the *Athlete Identity Measurement Scale* (AIMS). Evaluation with hundreds of undergraduate athletes suggests the AIMS is a reliable and valid measure of the athlete identity construct (Brewer et al., 1993). The *Public-Private Athletic Identity Scale* (PPAIS) is an alternative scale which incorporates the distinction between the public and private aspects of the athlete role that influence individuals' behaviors (Webb, Nasco, & Webb, 2006). These scales provide a starting point for researching the development and change in athlete identity. They could support understanding how identity shifts and the resulting behavioral implications in student-athletes pre- and post-retirement.

When an athlete identity is formed, often an individual commits to the athlete role without exploration of other ideological or occupational alternatives (Brewer & Petitpas, 2017). This may be in tension with healthy identity development, which occurs in adolescents when they choose among meaningful alternatives in ideologies and occupations (Marcia, 1966). Athletes who do not engage in the exploratory behavior that takes place during identity formation, and instead make a firm commitment to sport as their primary identity source, can be described as in a state of identity foreclosure (Brewer & Petitpas, 2017). Failure to explore alternative life options increases likelihood of deferring to authority figures, lowers autonomy and self-directedness, and creates an external locus of control (Marcia, 1966). Research points to increasingly common sports specialization among youth and highlights risks of commitment to a

single sport at an early age including social isolation, overdependence, burnout, manipulation in athlete relationships with coaches and sponsors, and overuse injuries (Malina, 2010).

Yet, sports can fulfill multiple dimensions of well-being. Athletes may not feel a need to explore alternative identities because basic psychological needs for competence and relatedness are met through sports participation (Petitpas & France, 2010). A meta-analysis of athletic identity research showed that athlete identity can provide a source of meaning and self-esteem (Ronkainen, Kavoura, & Ryba, 2016). Sports participation could fulfill each dimension of well-being following the PERMA model:

- Positive emotions from participation, teammate interactions and winning;
- Engagement in practice and competition honing athletic abilities;
- Relationships developed among teammates and coaches;
- Meaning from representing a team that is greater than oneself;
- Accomplishment through developing one's skill and winning competition.

At the same time, athlete identity can be highly problematic for well-being when sports participation is jeopardized by injury, poor performance, or career termination (Brewer & Petitpas, 2017; Ronkainen et al., 2016). If one or more dimensions of well-being supported through sport are lost in retirement, overall well-being can decline.

NCAA participation.

Athletes face challenges in the transition into NCAA level participation including increased performance expectations, relationship changes with coaches, teammates, and parents, a balancing act of academics and athletics in a dual-career approach, and changing needs for financial support (Wylleman & Rosier, 2016). Greater independence, responsibility, discipline, and self-regulation and improved coping skills are needed in athletes entering higher pressure competition. Simultaneously, student-athletes are adopting the elite athlete lifestyle including

healthy food intake, sleep habits, recuperation, and time management (Wylleman & Rosier, 2016). The concurrent shift from adolescence into adulthood while entering NCAA athletics could impact the way identity is developed and deepen the athlete identity.

A debate exists around whether the NCAA perpetuates an unhealthy focus on sport-related activities as schools generate revenue from sports. Across each of an athlete's four years of eligibility, participation requires an immense time commitment. A 2015 survey of 21,000 athletes reported Division I athletes spend upward of 34 hours per week on sports-related activities despite NCAA restrictions to 20 hours per week (National Collegiate Athletic Association [NCAA], 2016). This heavy focus on sports-related activities could further ingrain the athlete identity, potentially intensifying difficulties faced by student-athletes in the retirement transition.

The NCAA's time restriction is imposed because athletes are also full-time students. The term student-athlete is used to describe these young adults who are both pursuing undergraduate and 5-year graduate degrees simultaneously with a sports career. The NCAA reports graduation rates of student-athletes exceeding that of the general student population, including a record high graduation success rate of 89% in 2019 (NCAA Research, 2019). After graduation, the percentage of NCAA student-athletes who continue on to compete in their sport in professional leagues or at the Olympic level is less than 10% (NCAA Research, 2020). Only a few NCAA sports have well-established professional leagues (baseball, basketball, football, soccer, golf, and ice hockey) and in sports without professional leagues, the odds of continued participation at the Olympic or other elite level are infinitesimal. This means, for many NCAA athletes, their sports career ends with their final collegiate season or championship competition.

MORE THAN JUST AN ATHLETE **Athletic retirement.**

Retirement from sport is a pivotal moment with many well-being impacts for athletes.

Athletic retirement refers to the transition out of a competitive sports career and into a new set of activities and roles with the opportunity for growth (Coakley, 1983). The field of psychology presents numerous models for the retirement transition that generally align with athletic retirement transition but do not incorporate the nuances of the athlete experience. For example, athletic retirement typically occurs at a younger age than career retirement and is often accompanied by entry into the workforce. The cause of athletic retirement can be a voluntary choice (e.g., graduation or a decision to quit) or an involuntary event such as a program or individual being cut or a career-ending injury.

Cause of retirement is one of a few key dimensions that impacts athletic retirement success (Taylor & Ogilvie, 1998). Involuntary causes (e.g., injury and cuts) have been shown to have a negative impact on athletes' feelings of self-respect (Crook & Robertson, 1991), self-control (Werthner & Orlick, 1986), and can lead to feelings of anxiety and depression (Alfermann & Gross, 1997). Research shows athletes who experienced involuntary retirement were more likely to experience greater difficulty in emotional and social adjustment than those who retired voluntarily (Grove, Lavallee, & Gordon, 1997). The cause of retirement influences an athlete's level of perceived control over the retirement process and impacts their available (and necessary) coping resources. Proactive retirement planning and voluntary discontinuation of a sports career have been shown to positively impact transitional challenges of retirement (Alfermann & Stambulova, 2007). These findings indicate that predictability over retirement could lead to a sense of control and choice that supports well-being in retiring athletes (Martin, Fogarty, & Albion, 2014).

Athletic retirement, whether voluntary or involuntary, poses a variety of challenges. Research inclusive of nine studies of diverse NCAA student-athlete populations identified six themes impacting the retirement transition: a) shifts in athlete identity; b) anticipation of and preparation for the transition; c) branching out from existing activities and networks; d) satisfaction with athletic performance; e) loss of camaraderie; f) leveraging social support (Fuller, 2014). Athletes may lose their source of personal competence, mastery, social recognition, and enjoyment (Baillie & Danish, 1992). They may experience changes to their physical bodies and their subjective well-being, find themselves needing to build new social networks, adapt to a new social status, deal with family issues, and take on job responsibilities (Wylleman & Rosier, 2016).

The identity shift spurred by athletic retirement can be deeply impactful, leading to behavior changes and increased negative psychological states, including the potential for depression and suicidal behavior (Wylleman & Rosier, 2016). Research shows athletes with higher salience in their athletic identity are more likely to adapt poorly to career termination especially when lacking support (Gardner & Moore, 2006). Having different personal roles outside "athlete" and support from a social network have been shown to positively impact retirement transitions (Alfermann & Stambulova, 2007). Timing of and preparation for retirement is a major challenge, and deeper awareness of the transition is needed among the members of an athlete's support system (Baillie & Danish, 1992). These findings indicate coaches, college administrators, family, friends, and professional colleagues can all play a critical role supporting an athlete through a successful transition. Another key factor in successful transition noted across a body of research is athletes' awareness and use of transferable skills developed in sport. (Greendorfer & Blinde, 1985; Petitpas, Danish, McKelvain, & Murphy, 1992; Petitpas & Schwartz, 1989). Athletes who recognize skills gained

in sport and leverage them in new domains are likely to have higher self-efficacy (McKnight et al., 2009) which supports successful transition.

Universities are bringing more emphasis to preparing athletes for life after sport and seeing positive outcomes. Big Ten conference member, the University of Wisconsin, provides a program called Career & Leadership that emphasizes self-awareness, exploration, goal-setting, and preparation to ready student-athletes for life after graduation. Recent results show positive career outcomes reported by 95% of graduates (121 of 127) in the 2018-2019 academic year (University of Wisconsin-Madison Department of Intercollegiate Athletics, 2019). A research-backed transition program called *Moving On!*, helps NCAA student-athletes plan for lifetime physical activity post-retirement. The program includes introductory experiences to new and varied types of physical activity, group discussions, and incorporates aspects of identity theory and self-determination theory. Preliminary implementation showed student-athletes viewed the program positively and experienced expanded consciousness of identity and its impact on physical activity (Brooks, Reifsteck, Powell, & Gill, 2019). Retirement from sport is a critical moment encompassing intense change in the lives of young individuals. Shifting away from the role of athlete and leaving a structured college environment presents an opportunity for new roles and routines that can help individuals cultivate thoughts, emotions and behaviors to support lifelong well-being.

Present Opportunity: Character Strengths Use in Athletic Retirement

Intentional development of character strengths in student-athletes is a way to enhance well-being while addressing common challenges within the athlete retirement transition.

Character strengths are positive human traits that are morally valued in their own right and contribute to the fulfillment of oneself and others (Peterson & Seligman, 2004). A core tenant of positive psychology, character strengths are extensively researched and have a strong correlation

to well-being (Shutte & Malouff, 2019; Wagner, 2011). Classified by Peterson and Seligman's (2004) *Character Strengths and Virtues: A Handbook and Classification*, character strengths provide a common language for positive aspects of the human experience, balancing the human tendency to focus on the negative (Baumeister et al., 2001). Character strengths have the ability to provide a concrete language and tangible constructs for student-athletes to reshape a positive self-concept as they shift away from an athlete identity in retirement.

A dimension of U.S. culture already considered as character-building, sport could be enhanced by formalization of character strengths. Sports culture has a long-held belief that sports builds character, healthy habits, and deep social bonds. When it comes to character, sports culture commonly focuses on strengths like discipline, teamwork and leadership. But specific and diverse language for strengths could enhance sports culture because positive character development is not inherent in sport participation (Gerdy, 2000; Hellison, 2003 as cited in Doty, 2006). Professional athletes are often lauded as role models, even when they exhibit questionable character in the sporting arena or their personal lives (Repucci, 1987 as cited in Ballie & Danish, 1992). Character strengths can begin to fill the language gap, aid celebration of diverse character strengths in sport, and raise the bar for role models. Overall, intentional use of character strengths in sport would enhance the positive experience of athletes and the contribution of sports to society by helping more athletes identify, develop and use positive human traits on and off the field.

This can only happen if institutions make character development an explicit goal of sport. For sport to be an effective character-building environment, and for positive characteristics to translate into communities and lifelong well-being, it must be an intentional pursuit. Recent research suggests coaches and administrators must proactively incorporate character-based education into athletics in order for athletes to develop good character in a sports environment

(Camire & Trudel, 2010; Ferris, Ettekal, Agans, & Burkhard, 2016; Lumpkin & Stokowski, 2011). Institutions like the NCAA have influence to establish an approach to character strengths where student-athletes are supported in the exploration and use of their own best human characteristics, leading to well-being benefits for themselves and others.

Three positive psychology concepts - mindfulness, goal setting, and growth mindset - are essential for effective use of character strengths among student-athletes to gain well-being benefits. *Mindfulness*, a form of intentional awareness, also supports overcoming the human tendency towards the negative. It has been shown to amplify positive emotion and positive aspects of our experience and support well-being (Geschwind, Peeters, Drukker, van Os, & Wichers, 2011). Mindfulness is the first step to bring attention to character strengths. Once we become aware of them and their potential, we can intentionally cultivate them and gain the wellbeing benefits (Niemiec, 2013). Additionally, mindfulness has deep roots in mind-body connection (Hölzel et.al, 2011) and is already used in cognitive skills training with elite athletes for performance and well-being benefits (Gardner & Moore, 2006). Mindfulness practices like meditation, visualization, and somaesthetics fit well with the student-athlete focus on performance and physical self. Heightened self-awareness and the identification of positive or negative cognitions, emotions, and behaviors can support student-athletes in cultivating optimal arousal levels for performance (Gardner & Moore, 2007). Mindfulness can change one's perspective (Hölzel, et.al, 2011) and, if directed, has the potential to open student-athletes up to new dimensions of identity, activities, social support, and pursuits that support well-being. At retirement, mindfulness is essential to broadening awareness to life's possibilities beyond athletics.

But awareness is not enough. The active use of character strengths is essential to increase well-being. Goal setting, or the process of articulating a desired future state and planning

strategies to achieve it, supports individuals in establishing motivation and harnessing effort (Locke, 1996). A positive correlation between goal setting and performance is heavily supported in organizational psychology research (Locke & Latham, 1985). While goal setting has undetermined findings in sports settings, evidence of goal setting enhancing performance is strong in other life domains. With an aim of preparing athletes for lifelong well-being, the skill of goal setting is important for success in new pursuits such as career.

When paired with goals, a growth mindset can help student-athletes persist towards a goal despite life's inevitable setbacks, failures, and challenges. Growth mindset is the belief that one's talents and abilities can be grown and developed through effort (Dweck, 2008). This belief is essential to character strengths use because it discourages thinking of character strengths as fixed traits. Instead, it encourages the perspective that our character should be continually developed for greater success in life and well-being benefits. A growth mindset supports application of effort to learn, develop, and grow as opposed to a reliance on talent or ability. A growth mindset can continuously build character and lead to the highest levels of success. Numerous elite athletes including Michael Jordan, Jackie Joyner-Kersee, Tiger Woods, Mia Hamm, and Pete Sampras held a growth mindset that helped them achieve the highest levels of sport (Dweck, 2008). Growth mindset can support retiring student-athletes to believe in themselves, learn from failures as they try new things, and eventually lead to mastery over time. By adopting a growth mindset with character strengths, student-athletes can persist in the effort it takes to improve and capitalize on their strengths for increased performance in any life domain. Growth mindset is the ideal way of thinking to promote positive change and growth.

Character strengths may provide a core sense of self in student-athletes. With mindfulness to identify character strengths, goal setting to harness motivation and effort toward using them, and growth mindset to support persistent effort and continuous improvement,

student-athletes can gain the well-being benefits of character strengths. Taken together, character strengths, mindfulness, goal setting, and growth mindset ground an approach to enhance student-athlete well-being, especially during the major life transition of retirement from sport.

Developing supporting skills and mindsets through character strengths interventions both maximizes potential for character strengths use and associated well-being benefits, as well as provides athletes cognitive skills that will enhance their way of being in life beyond athletics. A review of the literature follows exploring these four areas of positive psychology which are both fitting for the context of higher education and student-athletes, as well as maximally impactful to well-being. Supporting character strengths use in student-athletes through mindfulness, goal setting, and growth mindset has the potential to enhance the retirement transition and support the NCAA's goal of lifelong well-being for student-athletes.

Review of Literature

Character Strengths

What are character strengths?

Empirically developed and validated by scientists worldwide, *character strengths* are positive traits that are morally valued in their own right and contribute to the fulfillment of the self and others (Niemiec, 2018). They are reflected in one's thoughts, feelings, and behaviors (Park, Peterson, & Seligman, 2004). Inspired by the idea that where we focus our attention and energy determines our happiness (Csikszentmihalyi, 1990), two leading positive psychology researchers, Peterson and Seligman (2004), set out to classify human strengths as a way to shine a light on the best aspects of humanity. Their team reviewed artifacts across cultures and disciplines to uncover ubiquitous characteristics, resulting in a classification of twenty-four character strengths categorized under six virtues as shown in Table 1.

Each character strength is extensively detailed in *Character Strengths and Virtues: A Handbook and Classification (CSV)* with scientific rigor aimed at supporting practical application (Peterson & Seligman, 2004). The CSV provides a shared language for what is good in life as a starting point for use in supporting well-being in application. It juxtaposes the APA's fifth edition DSM which focuses on diagnosis and treatment of mental illness (Peterson & Seligman, 2004). The DSM holds no guidance on how to assess positive thoughts, emotions or behaviors, so the CSV symbolizes diversification of attention in the field of psychology to balance negative with positive individual traits.

The CSV served as a foundation for character strengths research and led to the development of a widely-used validated measurement scale, the *VIA Inventory of Strengths* (VIA-IS) or simply VIA (Peterson & Seligman, 2004; Peterson & Park, 2009). Used in several hundred studies and completed by millions of individuals across the world, the VIA assesses character strengths in adults. It is a form of self-report with internal and test-retest reliability that has been improved over the years for greater validity (McGrath, 2019). It has also been modified for use in various languages, with youth under age 18, and in short form for brevity. The VIA does not assess weakness, only strengths. Participants respond to items in the assessment based on their own perception of self. The capacity for all twenty-four character strengths exist in everyone and the VIA helps participants identify which of the twenty-four are core to their identity. While other statistically valid strengths assessments exist in the field of psychology, the extensive research behind the VIA gives confidence in its validity and usefulness across a broad spectrum of populations.

Why are character strengths key to well-being?

Strong evidence correlates character strengths and well-being. Strengths can illuminate a path to grow and cultivate that which is good in life (Maslow, 1971; Deci & Ryan, 2000; Smith,

2006). Research on strengths interventions across multiple studies shows they aid happiness and increase life satisfaction (Schutte & Malouff, 2019). Emotional strengths such as *perspective* have been shown to support sound mental health (Seligman, 1991), and strengths of various types (with the exception of religious/spiritual strengths) positively correlate with resilience (Martínez-Martí & Ruch, 2016). Research shows that strengths use leads to less stress, greater self-esteem, vitality, and positive affect, as well as improved well-being over time (Wood, Linley, Maltby, Kashdan, & Hurling, 2011). There is also evidence of strengths benefiting all dimensions of PERMA (Proyer, Ruch, & Buschor, 2013; Wagner, 2011). The research correlating character strengths and well-being provides strong rationale for using character strengths interventions with a target population of student-athletes.

Character strengths are unique to who we are. They are plural, multi-dimensional, and show up in each of us in unique mixtures and degrees. Research shows individuals have, on average, five strengths within the classification that are core to who they are, or *signature strengths* (Seligman, 2002). With millions of potential permutations of strengths combinations, signature strengths are both a unique identifier and present a highly individualized path to wellbeing. Signature strengths have three common features: a) they feel essential to who you are; b) they feel effortless, or natural to use; c) they serve as a source of energy and thus feel energizing and uplifting to use (Niemiec & McGrath, 2019). The three E's (essential, effortless, and energizing) indicate a signature strength and guide identification of signature strengths core to an individual's sense of self (Niemiec & McGrath, 2019).

But knowledge of one's strengths is not enough to gain well-being benefits - they must be used. Research shows the use of signature strengths can positively impact well-being (Gander, Proyer, Ruch, & Wyss, 2013; Proyer et al., 2013; Wagner, 2011). Strengths identification aids self-awareness but their use helps individuals manage problems more effectively (Niemiec &

McGrath, 2019). Individuals are happier, more productive, and more engaged when using their strengths. Character strengths use also correlates with lower stress, better coping, and fewer physical symptoms of ill health (Niemic & McGrath, 2019). In short, character strengths matter for well-being, because through them, we live our best lives.

How do character strengths aid student-athlete performance and well-being?

Gaining well-being benefits of character strengths starts with positive interventions. Character strengths-based interventions aim to build awareness of strengths and encourage the use of them in daily living to benefit oneself, others, and society (Ruch, Niemiec, McGrath, Gander, & Proyer, 2020). Learning to use character strengths as a student-athlete could result in lifelong well-being benefits. Benefits could arise in athletic and academic performance, and in new life domains post-graduation. For example, using signature strengths can help athletes draw on natural sources of energy to aid their performance while competing in sport. Athletic mental energy, or the sport-specific form of *mental energy*, the ability to think, concentrate, and block distractions holding attention for long hours to achieve a task (Lykken, 2005), was shown to moderate sport-specific stress and burnout as well as general life stress (Chiou et al., 2020). Using signature strengths could generate energy that prevents burnout and supports athletic mental energy that aids performance.

Character strengths support academic performance as well by helping students engage in the classroom at their best. Strengths-based models in education emphasize positive aspects of effort, achievement, and human strengths (Lopez & Louis, 2009). A positive psychology curriculum focused on positive emotion, strengths, and meaning was implemented over the course of a year with ninth graders (Reivich et al., 2003). Findings showed significant improvement in social skills of cooperation and empathy, improved learning and engagement in school, significant increase in learning strengths, and improved academic performance.

Intentional character strengths programming with collegiate athletes is likely to lead to many of the same positive results as seen in younger students. Research shows that efficacy of positive interventions positively correlates with age (Sin & Lyubomirsky, 2009). Therefore, if interventions worked with adolescents, they are likely to work with college-aged students as long as motivation for well-being improvement exists in student-athletes. Improvements in social skills and cooperation could transfer into the athletic domain as well resulting in improved teamwork that aids sports performance.

Beyond academics and athletics, character strengths can aid life domains such as family and career. A study of over 450 Argentinian athletes (half recreational sports participants and half elite athletes ages 11-19) showed that positive family functioning including cohesion, flexibility, communication, and promotion of challenges was related to the development of character strengths regardless of whether the adolescents were recreational or elite athletes (Raimundi, Molina, Schmidt, & Hernández-Mendo, 2019). Supporting the idea that sports are a domain which builds positive aspects of the self, this study shows a link between character strengths development, athletics, and family that supports positive outcomes.

How are character strengths fundamental to well-being during the student-athlete retirement transition?

In the retirement transition, student-athletes face change in identity, social support, physical bodies, and daily routines as they graduate college and enter the workforce. As student-athletes diversify life domains, character strengths can support positive change. First, character strengths are a positive self-concept (Niemiec & McGrath, 2019). As student-athletes enter retirement and shift away from a long-standing athlete identity, character strengths could serve as building blocks for identity reformation. Strengths can support new perspectives of self that focus on positive characteristics and what is most important to the individual. Participation in the

VIA and exploration of one's signature strengths, can help student-athletes develop their core sense of self that goes beyond athletics. Character strengths are not just about doing, they are about being. They are authentic to who you are, so by using them, you are being true to yourself. Using character strengths is one way for retiring student-athletes to both *be* something new and *do* things that support a sense of self and well-being.

Character strengths are transferable and can provide an example for student-athletes of skills developed in sport and academic context that translate into new pursuits post-graduation. Character strengths are both universal and specific as they apply across various life domains and specific strengths can be predominant in certain environments. Research shows strengths vary by context (e.g., work, exercise, family life), periods of adversity, and cultural context (Stuntz, 2018). They remain relatively stable in individuals but are often used more heavily in certain domains than others. If character strengths are illustrated across athletic, academic, social and career silos in a collegiate system, student-athletes could observe the ubiquity of character strengths across domains and be encouraged to use them post-graduation for greater success and well-being. While more research is needed to understand the mechanisms behind effective use of character strengths across domains, the possibility remains that strengths can intentionally be carried across domains and cultivated in new contexts (Smith, 2006).

Character strengths provide a source of energy and coping strategies during times of challenge (Niemiec & McGrath, 2019). For some, strengths may be an untapped reservoir of capacity to draw on in difficult times. Student-athletes facing challenges in the retirement transition can tap into their signature strengths for energy and leverage strengths as a new strategy for overcoming obstacles. Sometimes a new strength can assist with a change in life role or with intentional intervention (Niemiec & McGrath, 2019). The idea of *phasic strengths*, or strengths that elevate and disappear in specific situational contexts (Peterson & Seligman, 2004),

could support athletes in recognizing, labeling and activating new and different positive traits during transition and as they enter new life domains.

Additionally, character strengths have been shown to support resilience (Peterson & Seligman, 2004; Reivich, Seligman, & McBride, 2011). *Resilience*, or the ability to bounce back from adversity through healthy adaptation (Reivich & Shatté, 2002), is critical to coping in major life changes. Post-college, graduates may experience new and unfamiliar territory as they begin professional careers. Strengths provide balance, helping offset life's inevitable adversities and aid individuals in figuring out their own best path through challenges. Resilience, supported by character strengths, could aid graduates navigating new daily routines, different types of social relationships, and professional responsibilities.

Work, a life domain most retired student-athletes enter after graduation, can benefit from character strengths use. Research shows the use of signature strengths can positively impact work performance (Dubreuil, Forest, & Courcy, 2014). Using strengths at work has been shown to lead to better performance, organizational citizenship behavior, lower counterproductive work behavior (Littman-Ovadia, Lavy, & Boiman-Meshita, 2017), and reduced absenteeism among workers with a high workload and high emotional demands (van Woerkom, Bakker, & Nishii, 2016). The importance of fit between a person's job and their strengths is an important predictor of positive outcomes from strengths use (Harzer, Mubashar, & Dubreuil, 2017) which heightens the importance of identifying and developing one's strengths while in college in order to seek employment that is a best fit.

Finally, character strengths can support basic psychological needs and a belief in one's abilities- both are vital to well-being. Distinguished in a sport-related context through validated measures, the concepts of self-efficacy and competence are often used interchangeably in literature (Rodgers, Markland, Selzler, Murray, & Wilson, 2014). *Self-efficacy*, or the belief that

one has the skills necessary to achieve one's desired outcomes (Bandura, 1986), stems from social cognitive theory and is not about the perception of having a skill, but rather is a belief that one can do something with it toward desired ends in given circumstances (Maddux, 2009). Selfefficacy helps determine action and perseverance in the face of challenge (Maddux, 2009). Competence, however, is about the need to master one's environment and feel effective. Competence is one of three basic human needs according to self-determination theory (Deci & Ryan, 2012). The other two basic needs are *autonomy*, the ability to behave according to one's own values and interests, and relatedness, or having meaningful and supportive social connections (Deci & Ryan, 2012). Character strengths can support competence when used to achieve desired ends. Character strengths can support self-efficacy and autonomy by helping an individual determine what the right end should be and a way of achieving it that is authentic. Character strengths also support relatedness. Research shows character strengths are relevant to positive relationships among adolescent peers at school supporting quality friendships (Wagner, 2019) and team roles in work-related settings supporting job statisfaction (Ruch, Gander, Platt, & Hofman, 2018). Using character strengths and observing how they support desired outcomes helps develop self-efficacy and competence as well as autonomy and relatedness.

As positive psychology offers empirically validated interventions based on character strengths to increase well-being and resiliency, clinical psychology too supports the power of strengths as a mechanism for dramatic positive change in life outcomes. Research shows strengths-based approaches in individual psychotherapy amplify therapeutic outcomes (Flückiger & Grosse Holtforth, 2008). In a study of individual therapy patients, ten minutes of priming at the beginning of a session on the patients' individual strengths improved resource activation, attachment and mastery experiences, and therapeutic outcomes. Therapists using strength-based approaches have generated a number of positive effects including broadening client perspectives,

creating hope and motivation, and developing positive meanings through reframing and metaphors (Scheel, Davis, & Henderson, 2012).

What are the limitations of character strengths?

Careful consideration of character strengths interventions within the context and population of application is necessary to understand possible limitations and consequences. The positive impacts of character strengths interventions are widely supported by research across a variety of populations affirming they are likely to benefit student-athletes, but all positive interventions have limitations. Character strengths interventions predominantly focus on measuring well-being impacts. It is important to recognize that other impacts beyond well-being could result from character strengths interventions as well.

The amount of time spent on interventions over a given duration and the mix of content included in interventions influence the results of a PosEd curriculum. Character strengths are often paired with other positive psychology concepts for maximum results in PosEd curriculums. A study with 9th graders paired character strengths with content on meaning and positive emotion (Seligman et al., 2009). The intervention took place over the course of an academic year with dedicated time each week in the classroom. Limitations in time and content covered in positive education curriculums could decrease the scope of positive outcomes in participants.

Different strengths have been shown to have differential impacts on well-being. Signature strengths interventions show more evidence of enhancing well-being and flourishing and lowering depression (Schutte & Malouff, 2019), suggesting that personal identification and feeling a strength is core to oneself is key. That said, *lesser strengths*, or those that appear lower down in an individual's VIA results and do not feel core to an individual's sense of self (Niemiec & McGrath, 2019), could be engaged to gain well-being in new ways. Additionally, it should be noted that certain strengths within the twenty-four classified in the CSV correlate more highly

with well-being than others, and research has shown that working on those strengths whether they are signature or lesser for the individual creates the most positive impact (Ruch et al., 2020).

Happiness strengths (zest, hope, love, gratitude, and curiosity) repeatedly emerge across cultures as most correlated with life satisfaction (Peterson, Ruch, Beerman, Park, & Seligman, 2007).

Specific strengths student-athletes see as valuable in athletics, academics, or retirement transition could fall outside of the strengths correlated highly to well-being and their signature strengths.

Emphasizing that all strengths are beneficial is one way to maximize well-being benefits.

Applying intentional effort to character strengths requires self-regulation. The concept of ego depletion, or the inability to self-regulate after continuously exercising self-regulation (Baumeister, Gailliot, DeWall, & Oaten, 2006) could limit a student-athlete's capacity to use and benefit from strengths. Student-athletes apply disciplined effort in multiple domains including academics, sports, and career preparation. Tapping into signature strengths could enhance the amount of energy available within and across domains and setting goals can provide intrinsic motivation to support self-regulation. Mindfulness also supports self-regulation (Smalley & Winston, 2010), supporting the need for this cognitive skill when using character strengths. It should be recognized that ego-depletion could reduce character strengths use in certain domains while they are being used in others.

Limitations of character strengths arise in the differential benefits of varied strengths as well as the amount of time, effort and energy dedicated to them. Additionally, how character strengths are either infused into an education curriculum or taught with supporting skills can impact intervention outcomes. Despite limitations, character strengths support a positive sense of self; transfer of skills across domains; strategies, energy, and resilience for coping amid change; well-being at work; and feelings of self-efficacy, competence, autonomy, and relatedness. The myriad of well-being benefits provided by character strengths make them the ideal foundation

for positive interventions with retiring student-athletes. And, in order to identify, use, and gain the well-being impacts of character strengths, student-athletes must first become aware of them. This requires mindfulness.

Mindfulness

What is mindfulness?

Mindfulness is to pay attention in a particular way on purpose, in the present moment, non-judgmentally (Kabat-Zinn, 1994 as cited in Niemiec, 2013). It's a form of intentional awareness where one directs attention to the current moment. Life experiences that entail extreme highs or lows, such as a funeral, a wedding, a car accident, or a championship competition, can increase the senses and naturally heighten awareness. Mindfulness brings the same heightened awareness to one's daily living (Niemiec, 2013). Stemming from Buddhist traditions, mindfulness can be secular and mindfulness practices appear across cultures. There are many ways to engage in the structured mental process of directing attention to the present moment non-judgmentally. Mindfulness is about finding a way to be present and deepen one's thoughts and emotions in ways that work for the individual and it does not need to rely on meditation (Brown & Ryan, 2003). It is often taught and practiced either as a way of supporting one's personal goals (e.g., prevent depression or reduce stress) or as a way of life (e.g., mindful living) (Dimidjian & Segal, 2015).

If mindfulness were one end of a spectrum, the other end would be automaticity, or a state of unawareness. Commonly known as auto-pilot, automaticity is the tendency for the mind to wander off (Segal, Williams, & Teasdale, 2002 as cited in Niemiec, 2013). Across much of our lives, we unconsciously perform activities without awareness of parts of our experience. This habitual functioning of our minds is not a bad thing as it allows us to perform daily activities

with little mental energy (Niemiec, 2013). Yet, automaticity can have a detrimental impact on performance when routine behaviors take over, especially if they are deficit-based, focus on weakness, or prioritize the negative. For athletes, increased awareness achieved by mindfulness creates an ability to make conscious improvements during training and enhance performance in competition (Gardner & Moore, 2007). When an athlete performs on auto-pilot an opportunity is lost to consciously direct attention to the improvement of physical skills and cognitive states that aid performance.

Why is mindfulness key to well-being?

Evidence exists that mindfulness meditation has positive effects on well-being (Sedlmeier et al., 2012). Mindfulness has been shown to increase competence, health, longevity, positive affect, creativity, and charisma (Langer, 1989, 1997, 2009 as cited in Dane, 2011). It has also been shown to enhance self-awareness, reduce anxiety, depression and stress, lessen grief during a loss (Khoury et al., 2013; Sagula & Rice, 2004), benefit relationships (Carson, Carson, Gil, & Baucom, 2004) and improve interpersonal functioning (Shapiro, Schwartz, & Santerre, 2002). The physical, psychological, personal relationship, and coping outcomes of mindfulness make it a cognitive skill worth developing to aid the retirement transition and lifelong well-being.

The field of sports psychology promotes psychological skills to enhance sports performance. Psychological skills training (PST) for athletes commonly includes goal-setting, imagery, arousal control, self-talk, and pre-competitive routines that enhance an athlete's ability to visualize optimal performance and enhance self-regulation to improve performance (Gardner & Moore, 2007). Sports psychology interventions originally stemmed from the idea that negative cognitive states lead to negative performance outcomes. Yet research shows both negative and positive cognitive states can support performance and the approach of attempting to control one's mental state is not effective for performance enhancement (Gardner & Moore, 2007).

Mindfulness supports the awareness of one's mental state without attempting to control it and presents the potential to adjust behavioral responses and enhance performance. Mindfulness supports the development of *metacognition*, or how you interpret and respond to your own thoughts and evaluate behavioral responses to them (Wells, 1999). The benefits of improving self-awareness of one's cognitions and emotions extends beyond sport. A study of college students who could identify their emotional states and then navigate them were more inclined towards positive health behaviors (Kashdan, Ferssizidis, Collins, & Muraven, 2010).

Mindful awareness of the physical self supports mastery experiences and overall well-being. Shusterman (2006) argues that mindfulness of the body is important as the connection between mind and body makes us uniquely human. The field of somaesthetics addresses bodily self-awareness, recognizing its close connection to cognitive experience and how it can enhance a sense of mastery. How we think and feel affects our body's ability to function. The reverse is also true- how our body functions affects how we think and feel (Faulkner, Hefferon, & Mutrie, 2015). This reflects the somatopsychic principle which stresses the importance of physical activity to well-being, or the idea of a healthy mind in a healthy body (Faulkner et al., 2015; Harris, 1973). *Physical activity*, or any movement of the body beyond energy expenditure needed for resting level (Caspersen, Powell, & Christenson, 1985 as cited in Faulker et al., 2015), includes exercise that occurs in sport. Student-athletes have regular opportunities for physical activity that can generate positive mental and physical benefits. Further, pairing attention to the body with attention to the mind can heighten the well-being benefits of both (Ratey & Loehr, 2011).

How does mindfulness support character strengths use in student-athletes during retirement?

Mindfulness in and of itself can be powerful for enhancing performance and bolstering well-being. Leading a PosEd program with mindfulness is one way to amplify positive change because awareness of the current state is a prerequisite to adjustments towards a desired future. Mindfulness is necessary for character strengths development because awareness of strengths is the first step to increasing their use in order to gain their well-being benefits. A ten-topic well-being curriculum of non-academic life skills began with mindfulness and resulted in significant well-being and academic outcomes in students (Seligman & Adler, 2019). Niemiec's (2018) research-backed model for optimal character strengths use follows a sequential order *-Aware*, *Explore*, *Apply-* where *Aware* entails bringing attention to character strengths in self and others. These examples evidence an order of operations for character strengths use that begins with mindful awareness.

The idea of optimal use of strengths posits that individuals can learn to express the right combination of strengths, to the right degree, in the right situation (Niemiec, 2019). Optimal use is supported by mindfulness, eliciting feedback from others, and through two specific strengths use techniques: 1) tempering, or using one strength to bring into balance another that is being overused to a point of detriment, and 2) towing, or using one strength (possibly a signature) to boost another that is needed in the moment but underused (Niemiec, 2019). Mindfulness is needed to assess and adjust strengths use in any given situation.

Athletic retirement could entail a loss of physical strength as well as a psychological loss of the athlete identity. Mindfulness is one strategy that could support recognizing and moving through that loss in intentional, non-judgmental ways. Research shows mindfulness supports grief processing (Sagula & Rice, 2004). Patients diagnosed with chronic pain who received an 8-

week mindfulness intervention advanced more quickly through initial stages of grief and exhibited less depression and anxiety (Sagula & Rice, 2004). Mindfulness alone could support and accelerate processing of the loss of athlete identity. Mindfulness towards character strengths specifically could lead to character strengths use as an additional coping strategy for grief processing. Character strengths could also provide positive aspects of the self to focus on amidst the negatives associated with loss. Heightened awareness of strengths that are core to one's identity could help shape a new identity and a positive self-concept to replace athletic identity.

With increased self-awareness, athletes may notice a decrease in physical strength during the retirement process. Research shows gaining physical strength (as athletes do through training) can increase confidence in the ability to do everyday tasks and provide a positive perception of self that can influence self-esteem (Biddle & Mutrie, 2008 as cited in Faulker et al., 2015). Ending routine physical training at retirement could lead to a loss of strength or physical capacity. Mindful attention to this physical change could help athletes realize that a loss of physical strength does not impact many daily tasks that depend on cognitive functions, e.g. common workplace activities like communicating with colleagues. Bringing non-judgmental observation to this loss creates an opportunity to adjust emotional reactions and behaviors. Character strengths may help bridge this transition by providing a stable source of strength. Individuals might choose to visualize and pursue gains in character strengths in new domains (e.g., career) to enhance performance and support well-being in transition.

What are the limitations of mindfulness?

Over the past two decades, growing amounts of mindfulness research evidence the impact of meditation and mindfulness as an intervention, but limitations exist in applying this research. First, variance in what constitutes a standard control group treatment limits the understanding of the impact caused by treatment. Effectively gauging potential outcomes of

meditation or mindfulness interventions is challenging when unknown or uncontrollable factors influence the control and treatment groups (Dimidjian & Segal, 2015). Mindfulness interventions also face challenges in scalability. Research reveals structural, political, cultural, educational, emotional, physical and technological obstacles all exist when implementing mindfulness interventions (Crane & Kuyken, 2013). A shortage of trained facilitators is another common barrier to scaling.

Additionally, mindfulness as a practice does not appeal to everyone. Research shows employees receiving mindfulness-based stress reduction (MBSR) practices in the workplace had strong preferences, based on a number of personal factors, for how the interventions were delivered, making it difficult to deliver mindfulness in a way that pleased all (Lau, Colley, Willett, & Lynd, 2012). Participant personal preferences likely impact motivation and willingness to apply effort, potentially limiting the effectiveness of mindfulness interventions. Committing dedicated time to mindfulness interventions is yet another challenge. The number and length of sessions over time and the types of mindfulness activities included impact the effectiveness of interventions (Carsley, Khoury, & Heath, 2018; Crane & Kuyken, 2013). Continued research and prudent application can advance knowledge and understanding of mindfulness including the impacts of interventions of varied lengths, durations, and formats.

Existing research and application provides confidence that mindfulness can support student-athletes in attuning to physical, cognitive, and emotional changes in positive ways.

Mindfulness toward character strengths can lead to a deepened awareness of positive traits, supporting a positive self-concept essential for well-being in a retirement transition, especially as it entails loss and grief. Character strengths are a dimension of self that, when attended to, can be strengthened and improved similar to attending to physical strengths. In an intentional process

aimed at positive change during athletic retirement, *attention* gained through mindfulness is best followed by *intention* which can be gained through goal setting.

Goal Setting

What is goal setting?

Goal setting is the process of articulating a desired future state and planning strategies to achieve it (Locke, 1996). It is a process that directs our attention and effort. When we articulate a desired outcome as a clear and compelling goal, we can direct attention and effort to towards it. Basic survival requires effort too, but human capabilities allow for conscious choices of goals that go well beyond basic needs. Goals serve as a source of motivation for effort (Locke, 1996) and can span any amount of time. For example, you could have a goal to drink a hundred ounces of water today and you could have a life goal of living to age one hundred. Because goals provide motivation for action, goal setting is the basic cognitive action from which all other action originates (Magyar-Moe & Lopez, 2015).

Important factors in goal setting include difficulty, specificity, and commitment to the goal (Locke & Latham, 1985). Research shows the more difficult a goal is, the greater the achievement, assuming the individual is committed to the goal and possesses the ability and knowledge needed to achieve it. The more specific, or explicit, the goal is, the more precisely performance is regulated. Specificity is gained by quantifying the goal or enumerating it. More specificity reduces variance in performance, assuming the individual can control performance. Research shows that when a person is given a goal to "do their best" without defining their best, they are not as likely to achieve the goal because the goal is too vague. Goals that are both specific and difficult lead to higher performance (Locke & Latham, 1985). Goal commitment is the degree to which a person is genuinely attached to and determined to reach a goal (Locke & Latham, 1985). Goal commitment is especially critical when goals are specific and difficult.

Vague goals can be redefined easily to fit lower performance. Commitment to a goal occurs when an individual believes the goal is important and attainable and that progress can be made towards it.

Mindfulness aids the self-regulation needed to maintain attention on a goal and recognize if behavior supports progress towards it. Self-regulation needed for goal attainment requires conscious assessment of one's behavior to ensure it is aligned with motivations (Brown & Ryan, 2015). As humans, we can only tend so many pieces of information at once because of the brain's finite processing capacity (Csikszentmihalyi, 1990). Therefore, mindfulness can support focused attention on present behaviors, providing self-awareness and the opportunity to adjust behavior to align it to interests, goals, and values (Brown & Ryan, 2003).

The practice of goal setting has the potential to enhance performance and success for student-athletes in sport, academics, career, and other life domains post-graduation. Goal setting is a process of articulating a desired end state to direct attention and effort toward. It is impacted by difficulty, specificity, and commitment to the goal and is supported by mindfulness.

Why is goal setting key to well-being?

Research in organizational and industrial psychology shows goal setting positively correlates with performance (Locke & Latham, 1985). Goals aid performance by directing attention and effort, supporting self-regulation and expenditure of effort, enhancing persistence, and promoting the development of new strategies for performance (Locke & Latham, 1985). If we want to achieve something, we must first pay attention to it (and not other things), exert the necessary effort, and keep going until the desired end state is achieved. Positive interventions aimed at enhancing well-being work best when they start with a desire for change to the status quo that creates motivation for effort (Sin & Lyubomirsky, 2009). Therefore, conscious goal-setting supports positive change.

Goal setting is also important to motivation orientation which impacts well-being.

Motivation, or the reason one performs an action, lies on a spectrum of extrinsic to intrinsic (Brown & Ryan, 2015). Motivation orientation guides behavior and has implications on likelihood of achievement (Ryan & Deci, 2000). Extrinsic motivation is doing something because it leads to a separable outcome - simply said, doing something as a means to an end.

Intrinsic motivation is doing something because it is inherently interesting or enjoyable, in other words it is a natural inclination (Brown & Ryan, 2015). Intrinsic motivation drives autonomous behavior that is self-endorsed, volitional, and done willingly. As motivation nears fully intrinsic one perceives an internal locus of causality and self-determination. Autonomy, a basic human need according to self-determination theory (Deci & Ryan, 2012), exists with intrinsic motivation. Intrinsic motivation is believed to aid well-being as it is valued and meaningful, consciously part of our sense of self, aligned with our other values and goals, and because the behavior is integrated with who we are (Brown & Ryan, 2015). In fact, why we choose a goal can impact our effort, persistence, performance, and well-being.

Positive student-related outcomes of intrinsic motivation include greater academic engagement and performance, lower dropout rates, higher quality learning, and greater psychological well-being (Deci & Ryan, 2012). In a study of school children (Ryan & Connell, 1989 as cited in Brown & Ryan, 2015) students with extrinsic motivation showed higher anxiety and maladaptive coping with failure, whereas students with extrinsic but more autonomous motivation (closer to intrinsic motivation) showed more interest and enjoyment in school, greater effort, and a greater tendency for adaptive coping with stress. Intrinsic motivation is associated with positive outcomes including creativity (Amabile, 1996 as cited in Brown & Ryan, 2015), enhanced task performance (Grolnick & Ryan, 1989, Murayama et al., 2015 as cited in Brown & Ryan, 2015) and higher psychological well-being (Vansteenkiste & Ryan, 2013 as cited in

Brown & Ryan, 2015). It is important to note that extrinsic motivation can still entail active personal commitment and meaningfulness (Brown & Ryan, 2015). Heightened awareness of what drives behavior can support setting realistic expectations, energy regulation, and satisfaction in an experience. Understanding motivation orientation through goal setting and how it impacts autonomy in an experience, can allow student-athletes to choose and set goals that are more intrinsically motivated to improve well-being alongside performance.

How does goal setting support character strengths use in student-athletes during retirement?

Because the well-being benefits of character strengths come from active use, goal setting is essential to intentionally cultivate character strengths. With awareness, goals can support intrinsic motivation and drive effort for use. Goal setting directs and regulates effort and is therefore key to activating character strengths in any life domain. Student-athletes can set goals related to character strengths in two ways: a) direct use and development of character strengths to achieve well-being, b) in athletics or other domains using character strengths as a strategy for achievement.

Practice setting goals for character strengths use can upskill student-athletes' goal setting abilities while cultivating well-being. Character strengths are a diverse context from the familiar goal-setting realms of academics and sports, so they provide a new realm to practice the skill. At the same time, character strengths goals are specific, unique, and bring attention to one's own best traits. Improving student-athlete ability to set goals can support performance in other contexts if the skill is translated across domains. Because goal setting supports performance, it is beneficial to student-athletes in their current role as student-athlete and in new life domains after retirement, like career and family.

Pursuing character strengths-related goals can provide autonomy necessary to well-being because related action is integrated to one's sense of self. Self-determination theory posits that, with age, we regulate our behaviors in more autonomous ways as we seek to integrate behavior with our sense of self (Chandler & Connell, 1987, Ryan, 1995 as cited in Brown & Ryan, 2015). When a sense of self is centered on an athlete identity, retired student-athletes may not have a clear sense of self to integrate behaviors. Providing a sense of self through character strengths and using them to drive action can increase autonomy needed for well-being and support identity through the retirement transition.

Retirement from sport means changes in daily tasks for athletes which can impact task-specific confidence needed to pursue and achieve a desired outcome, or *self-efficacy* (Bandura, 1986). Self-efficacy is important to competence and is increased through a) enactive mastery gained in experience and training, b) persuasion, or verbal expressions of confidence, and sharing information on task strategies to use, and c) through role modeling (Bandura, 1986). Self-efficacy directly impacts performance by influencing the difficulty of goals chosen, goal commitment, responses to negative feedback or failure, and choice of task strategies. An experienced athlete likely encounters enactive mastery when competing, receives verbal expressions of confidence from coaches, parents, teammates, and friends, and regularly discusses training regimes and strategies for performance with coaches and teammates to support self-efficacy. Self-efficacy in the athletic domain is high and enhances performance, and character strengths can provide a bridge to self-efficacy during and post-retirement.

At retirement, athletes face new types of tasks in new domains. It is possible the new domains do not include verbal expressions of support or discussions of task strategies.

Additionally, a buildup of training and experience does not yet exist and, as a result, self-efficacy can decline. If self-efficacy is lacking, former athletes may not set challenging goals or commit

to them, resulting in lower performance in new domains. Character strengths, cultivated while a student-athlete, can be leveraged to identify inherent strengths that can support tackling new tasks. Previous application of one's strengths (whether in sports, academics, or other domains) can provide a bank of experience for accomplishing tasks in a new domain where previous training and feedback may not exist. Strengths application can also serve as a reliable task strategy in the absence of strategy sharing with coaches, teammates, professors or counselors. Previous application of a strength in a different domain could provide task-specific confidence boosting self-efficacy in a new domain. Character strengths, if used to achieve desired ends in one domain, could provide the self-efficacy needed to support desired outcomes in new domains post-retirement.

Life beyond sport may take a different cadence. While a student-athlete may win a championship in a five-month season, earning a promotion in the corporate world could take years. Research shows that pursuing short-term goals as a means to achieve long-term goals is an effective use of goal setting to aid performance (Locke & Latham, 1985). Character strengths use could be a short-term goal that supports achievement of a longer term goal in new life domains where long-term goals exist over years instead of seasons.

What are the limitations of goal setting?

Research shows an unclear relationship between goal setting and performance in sports, but the well-being benefits of goal setting in other life domains make goal setting a meaningful and necessary cognitive skill for lifelong success. When student-athletes set goals for character strengths, they will be more likely to direct attention and use them, reaping the positive well-being benefits of character strengths. Effective goal setting requires considering the mechanisms for how goals support performance and the student-athlete context.

When considering goal setting interventions with student-athletes, the first consideration is goal difficulty. Goal difficulty should be determined based on the person's abilities and self-efficacy. A goal at the right level (not too high, not too low) supports effective performance (Locke, 1996). Difficult goals that are attainable are ideal for driving performance, while stretch goals that are unattainable can undermine self-efficacy (Bandura, 1977 as cited in Locke & Latham, 1985). An individual's belief in their capability to accomplish something determines how much effort they are willing to put into it, thereby impacting likelihood of success (Maddux, 2009). As self-efficacy is a driver of positive outcomes (Maddux, 2009), goals should support self-efficacy and not undermine it.

Who selects the goal (e.g., self-selection, group selection, or assignment) has little to no impact on performance, as long as commitment to the goal exists (Locke, 1996). The goal must be accepted by the participant to generate motivation, so a participatory goal setting process supports commitment (Locke & Latham, 1985). Three paths exist to ensuring goal commitment: a) adjust the goal to the person's ability; b) raise the person's ability through training and experience to meet the goal; c) change the person's perspective on their ability by expressing confidence and/or role modeling how to achieve the goal (Bandura, 1986). Commitment to goals can be supported by clarifying one's values or purpose in life and why the goal is important which supports a sense of autonomous motivation (Locke, 1996). Additionally, specifying plans to achieve the goal and partaking in more cognitive processing around the goal (such as generating plans to attain it) increases the likelihood of carrying out action (Gollwitzer, Heckhausen, & Ratajczak, 1990 as cited in Locke, 1996).

Research shows feedback on goals positively correlates to performance (Locke, 1996). Feedback influences an individual's motivation to persevere with a goal, so identifying what or who in the environment can provide the feedback is key. Performance feedback is self-evident

when there is a visible standard against which to measure success. In sport and academic settings winning the game, swimming a faster time, and earning an A on a test contribute to an individual's understanding of progress against the goal. Beyond the classroom and sporting arena, feedback may be less apparent and less abundant. Helping athletes understand the need for feedback and seek it from creative and diverse sources is a skill that will help them smoothly transition into retirement.

Goal attainment requires feedback in relation to the goal (Locke et al., 1981 as cited in Locke & Latham, 1985). Feedback moderates the relationship between goal setting and performance. Some goals have visible feedback available, but others do not. For example, for a goal of mowing a lawn, one can visibly see progress made which motivates continued effort. When a goal does not have visible feedback, a formal means of "keeping score" is important for performance. This could come in the form of a coach or mentor providing verbal descriptions of progress against the goal. Limitations of goal setting can be minimized through determining appropriate difficulty and specificity of goals, by establishing goal commitment, and ensuring feedback exists. By addressing key mechanisms, goal setting is likely to enhance performance.

Goal setting is essential for active use of character strengths and can support well-being through autonomy, self-efficacy, competence, and performance. Character strengths can be used as goal achievement strategies especially in new domains, or character strengths use can be a goal in and of itself to enhance well-being. The attention to character strengths gained from mindfulness and the intention to use them gained through goal setting can lead to positive change. As life presents inevitable setbacks and obstacles, attention and intention can be challenged. A belief that persistent effort leads to positive change is necessary to continual growth and success.

Growth Mindset

What is growth mindset?

Once student-athletes articulate goals, failing well and progressing towards them is best supported by a growth mindset. *Growth mindset* is the belief that one's inherent abilities, such as intelligence or athleticism, can be developed (Dweck, 2008). In the absence of enactive mastery, verbal persuasion, and strategy sharing, a growth mindset can mitigate the likelihood of low performance by supporting an individual's belief that performance against a new task is possible with effort. Growth mindset provides the perspective that when taking on a new endeavor and starting at the bottom, one can make it to the top and continue getting better and better (Dweck, 2008). Supporting the belief that one's abilities can be developed, a growth mindset is essential both when applying character strengths and entering new life domains with unfamiliar tasks.

Research shows that students and athletes who hold a growth mindset outperform their peers who hold a *fixed mindset*, or the belief that their abilities are static and unchanging (Dweck, 2008). One of life inevitabilities is failure. Our lives do not always go as we plan. What growth mindset provides is the sense of how to fail well (Dweck, 2008). Most NCAA athletes have been on a linear goal-achieving path for years, progressing steadily through school years to college acceptance and achieving success in sports. The repeated pattern of goal attainment leaves them vulnerable to a false belief that talent is the source of success, as opposed to repeated effort.

Sports is the breeding ground of "natural talent," or the idea that one's abilities are inherent or endowed. Growth mindset counteracts the dangerous label of being "a natural," which can lead to not asking for help, not identifying deficiencies, and not applying effort (Dweck, 2008). This fixed way of thinking may limit goal selection and continuous growth. Physical endowments like strength, speed, and height are tangible traits. These physical

manifestations can support success but ingrain the idea of natural talent being the only source of success. Physical traits that aid athletic performance can also further ingrain an athlete identity as visible representations of one's role. Tangible physical traits, which only support performance if they are engaged with effort, reinforce the false idea that natural physical gifts alone are the path to success. Rather, it is the continuous application of effort, which is not always visible, that is actually the key to success. Fueled by *grit*, or deliberate practice supported by passion and perseverance (Duckworth, 2016), a growth mindset enables athletes and outperforms natural ability with a fixed mindset (Dweck, 2008).

Why is growth mindset key to well-being?

Growth mindset is linked to multiple dimensions of well-being in the PERMA model including engagement or being immersed in one's activities (Seligman, 2011). In a study examining growth mindset and engagement at work research showed that growth mindset, well-being, and perseverance of effort could all predict work engagement (Zeng, Chen, Cheung, & Peng, 2019). Csikszentmihalyi (1990) argues when we feel engaged in what we are doing we are more likely to feel happy, and that the ability to overcome a challenge through positive emotions, attitudes, and actions leads to happiness and success. Flow, an optimal form of engagement when one's psychic energy is entirely focused towards achievable goals, can impact identity (Csikszentmihalyi, 1990). This is because flow experiences activate our strengths and can help us differentiate ourselves, e.g. honing a skill that sets us apart, and through integration, e.g., uniting ourselves with other people, ideas, or entities (Csikszentmihalyi, 1990). Growth mindset generates well-being benefits and correlates with continued effort towards a goal, engagement in activities, and achievement of flow states that can support identity development.

A growth mindset can be revealed by goal setting exercises. Individuals typically have one of two goal orientations in sport (Locke & Latham, 1985). The first is *ability*, or *ego*

orientation where an individual defines success as winning. The second is *task orientation* where an individual defines success in terms of personal mastery and improvement. Simply put, ego orientation focuses on outcomes whereas task orientation focuses on the process to reach them and the development and growth the process entails. A growth mindset serves task orientation goals well, often leading to positive outcomes. As a result, growth mindset supports another essential dimension of well-being according to the PERMA model- *accomplishment*, or the pursuit of winning, achievement and mastery for its own sake (Seligman, 2011). Most athletes are familiar with objective external standards for achievement because this is how winning is determined in sport. Growth mindset helps shift focus towards one's subjective experience and the process of growth, development, and mastery instead that can support well-being. It can help overcome the urge to quit, give up, or protect one's reputation for "natural talent" when a goal is not achieved (Dweck, 2008). Growth mindset reminds that well-being and success require effort in a continuous process of development over time.

Resilience is a key part of growth mindset and learning (Dweck, 2008) that supports positive change. *Resilience*, or the ability to bounce back from adversity, has been shown to have a significant impact on well-being (Reivich & Shatté, 2002). Change is constant in life and adversity inevitable. Growth mindset helps one view setbacks and failures as less threatening and surmountable through effort (Dweck, 2008). Research shows development of growth mindset in students predicted higher psychological well-being and school engagement through enhanced resilience (Zeng, Hou, & Peng, 2016). Adopting a growth mindset is one way to enhance resilience necessary to navigate life transitions and achieve positive results.

Growth mindset is correlated with engagement and accomplishment as it provides a focus on the developmental process that impacts goal persistence and cultivates well-being. Further, growth mindset can help student-athletes cultivate resilience for navigating challenges like

athletic retirement. Holding a growth mindset around character strengths will perpetuate the ongoing use and improvement of strengths, unleashing an unending stream of well-being benefits.

How can growth mindset support character strengths use in student-athletes during retirement?

Growth mindset can be practiced through the active use of character strengths. As student-athletes apply character strengths in new ways, they can do it holding a growth mindset. A growth mindset supports continual improvement of strengths across a lifetime, in different domains, and in new situations. As student-athletes begin to link success (e.g. athletic or academic performance) to the effort applied to and use of their character strengths, they will be reminded of the important relationship between effort and improvement and encouraged to maintain effort. Athletes run the risk of attributing successful performance to visible physical traits like strength or speed, failing to realize how cognition functions like our attitude and effort play an important role in success.

Growth mindset offers a way of thinking that supports nurturing any strength with the belief that effort will improve it. Character strengths are a tangible concept where student-athletes can begin to see talents and abilities as changeable instead of fixed. Student-athletes can begin to see that through effort to use them optimally, character strengths can be continuously improved for positive outcomes and well-being. A study observing strengths in adolescents found that those who saw their parents taking a strength-based approach to parenting reported greater strengths use of their own, especially when they held a growth mindset about strengths. They also reported greater subjective well-being (Jach, Sun, Loton, Chin, & Waters, 2018). This connection between effort and improvement can spread beyond character strengths and aid well-being and success to new life pursuits of graduates.

A growth mindset supported by mindfulness towards strengths can support identification of strengths other than the few highlighted by societal standards and sports culture. The CSV classifies twenty-four strengths. Growth mindset reminds us of the importance of all strengths (Dweck, 2008). It prevents over-focusing on a single signature strength by encouraging diversification of effortful strategies to meet goals. Research shows focusing on using strengths that most strongly correlate to well-being enhances well-being, and suggests focusing on other strengths may correlate to different positive outcomes such as positive relationships, academic success, and physical health (Ruch, Niemiec, McGrath, Gander, & Proyer, 2020). The idea that a new or different strength can be used and improved could allow athletes to activate potentially unused signature strengths and unleash well-being benefits and other positive outcomes. As we face challenges and grow throughout our lives, growth mindset reminds us to call on signature strengths when needed to support application of effort towards a goal and reminds us that all twenty-four strengths can be continually developed and improved. Ultimately, good character is built through a mindset - it's about digging deep and finding ways to bring more positive character to the fore. Without a growth mindset, character strengths run the risk of becoming static, or even shallow, traits.

If mindfulness supports *attention* to character strengths and goal setting supports *intention* to use them, then growth mindset is the key ingredient to keep the virtuous cycle of intention and attention going. Continuous improvement of strengths will prevent them from becoming fixed or going unused. Growth mindset is key to continued, lifelong use of character strengths and their resulting benefits on individuals, society, and well-being.

What are the limitations of growth mindset?

It is important that character strengths do not become positive labels concealing a fixed mindset. A positive label in sport, e.g. "She's our best jump shot," could also happen with

strengths, e.g. "He has wisdom." Labels, even positive ones, discourage the development of strengths as they are seen as a fixed trait or a skill that has been perfected (Dweck, 2008), and a lack of continued use and development negates the potential for well-being benefits of character strengths. It is also important to recognize when an endeavor is futile, and no amount of growth will lead to desired outcomes. If factors outside the control of a student-athlete are an immovable barrier to growth or success, a student-athlete must know when to shift effort towards different endeavors. Mindfulness can help a student-athlete identify when, despite holding a growth mindset and applying continuous effort, desired results will not be achieved.

Growth mindset is a way of thinking that supports continuous growth, positive change, and success over a lifetime. It is essential to character strengths use because it provides a belief that one can continually improve all strengths across any life domain for greater well-being and success. Growth mindset, supported by goal setting, encourages student-athletes to measure success in the process as well as the outcome and increases motivation for effort despite setbacks and challenges. Growth mindset and mindfulness together create a powerful opportunity for identifying potential for growth and positive change. A growth mindset continuously promotes character strengths use necessary to gain their well-being benefits and is a way of thinking that aids success in life.

Conclusion

Character strengths hold extensive well-being benefits ranging from enhanced self-concept and self-efficacy, improved resiliency and relationships, greater life satisfaction, engagement at work, and positive emotions (Gander et al., 2013; Martínez-Martí & Ruch, 2016; Schutte & Malouff, 2019; Proyer et al., 2013; Wagner, 2011; Wood et al., 2011). This makes character strengths the ideal basis for positive psychology application with student-athletes. As the benefits of character strengths come from active use, mindfulness, goal setting and growth

mindset are necessary supporting skills. Mindfulness aids attention to character strengths, goal setting supports intention to use them, and growth mindset drives continuous use of them with effort to improve them within and across life domains for greater success and well-being. These skills will maximize the potential for character strengths use and the associated well-being benefits. Simultaneously, these cognitive skills, developed through a focus on character strengths, can enhance student-athletes' live in a myriad of ways if they become an ingrained way of being. Mindfulness, goal setting and growth mindset fit well in the context of higher education and sport. They are essential to character strengths use and, whether used in the context of character strengths or in other ways, they can enhance well-being.

Supporting character strengths use in student-athletes has the potential to enhance the athletic retirement transition and support the NCAA's mission of lifelong well-being for student-athletes. Athletic retirement entails challenging shifts to daily routines, physical appearance, relationships, and roles. In reforming their self-concept and seeking new opportunities for growth and development in retirement, character strengths provide student-athletes a tangible construct to redefine oneself positively and skills to confidently use in new pursuits. A character strengths-based model focused on the specific nuances of athletic retirement, along with recommendations for implementation and measurement, and a possible curriculum for use with student-athletes is available in Appendix A. An opportunity exists for the NCAA to go beyond ill health treatment and prevention and actually *promote* well-being in student-athletes. To begin, a PosEd model based in character strengths could be designed and implemented within the NCAA, taking a whole system approach, so that all stakeholders gain the well-being benefits of character strengths.

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Table 1: Character strengths as classified in the CSV (Peterson & Seligman, 2004)

Virtues	Character Strengths
Wisdom and Knowledge (Wisdom)	Creativity Curiosity Open-mindedness (Judgement) Love of learning Perspective
Courage	Bravery Persistence (Perseverance) Integrity (Honesty) Vitality / Zest
Humanity	Love Kindness Social intelligence
Justice	Citizenship (Teamwork) Fairness Leadership
Temperance	Forgiveness / Mercy Humility Prudence Self-regulation
Transcendence	Appreciation of beauty and excellence Gratitude Hope Humor Spirituality

Text in parentheses indicates language modification in the VIA-IS.

Appendix A: Proposed Model for Character Strengths Use with Student-Athletes

Purpose

The purpose of the model is to present a framework for how to use character strengths to enhance retirement transitions and lifelong well-being by considering the specific nuances of the NCAA student-athlete experience. While the model aims to address nuances of the student-athlete retirement experience, it is relevant to anyone who faces life transition with a desire to improve well-being.

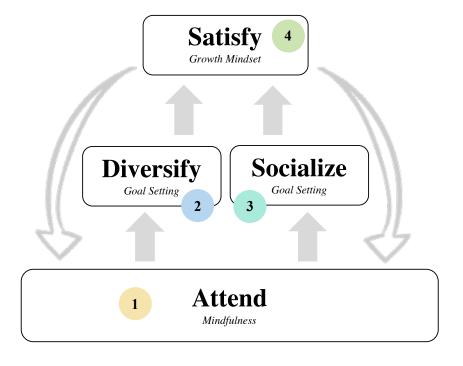
Inspiration & Research Basis

This model is inspired by:

- 1) Research findings on athletic retirement, specifically six themes of challenge identified in a meta-analysis of NCAA student-athletes (Fuller, 2014)
- 2) Best practice in applied frameworks for character strengths, specifically the *Aware*, *Explore*, *Apply* model (Niemiec, 2018)
- 3) Best practice in applied frameworks for PosEd, specifically the Geelong Grammar School (GGS) Model for Positive Education (Norrish, Williams, O'Connor, & Robinson, 2013)

Model Overview

The model includes four sequential (and cyclical) steps to guide character strengths use with student-athletes before, during, and after athletic retirement. The four steps are *Attend*, *Diversify*, *Socialize*, *Satisfy* - abbreviated *ADSS*. Each step is predominantly supported by one of the cognitive skills identified as critical for character strengths use - mindfulness, goal setting, and growth mindset. By applying these cognitive skills to active use of character strengths, student-athletes have a concrete subject to practice these important skills that aid lifelong well-being. Simultaneously, they have an opportunity to cultivate a positive self-concept that supports healthy identity.



Beginning with *Attend*, individuals can identify and focus on character strengths through mindfulness. This supports the opportunity to set goals to *Diversify* their use and may be particularly powerful within new social contexts that support *Socialize*. Ultimately *Attend*, *Diversify*, and *Socialize* lead to *Satisfy*, which includes the evaluation of one's experience and identification of additionally possibilities for character strengths use. This positive change then cycles back to *Attend* for continued development.

Each step in the model addresses one or more of the six common themes within athletic retirement that pose challenges for student-athletes.

Theme (Fuller, 2014)	Description	Attend	Diversify	Socialize	Satisfy
Athletic Identity	Athletes who balanced their athlete identity with other roles experienced easier transitions than those who were more deeply invested in the athlete role.	X	X		
Anticipation & Preparation	Athletes with higher cognitive awareness of their impending retirement, considering its impending approach and their desires for the end of their career and what follows, had smoother transitions.	X			X
Branching Out	Athletes who shifted focus in new directions to things other than being an athlete (e.g., social life, academics, career planning, and new competitive or fitness outlets) experienced smoother transitions.	X	X	X	
Satisfaction with Athletic Performance	Athletes who perceived they had achieved a successful career had smoother transitions.	X			X
Loss of Camaraderie	Athletes who found alternatives for emotional coping and positive affect gained from team camaraderie has smoother transitions.	X	X	X	
Social Support Systems	Athletes who received encouragement, guidance and emotional support from former teammates, family, friends, coaches, sports psychologists, and others had smoother transitions.	X	X	X	

The first theme denoted within the retirement transition is a major **shift in identity**. Assisting athletes in attending to this shift with positive alternative ideologies and roles could support well-being in retirement. Research has shown that individuals with a deeper athletic identity found the retirement transition more challenging (Fuller, 2014), but athletes who balanced their identity as "athlete" with other roles experienced easier transitions than those more invested in the athlete role (Fuller, 2014; Greendorfer & Blinde, 1985). Martin, Fogarty, and Albion (2014) tracked changes in athlete identity and life satisfaction in sixty-two elite athletes across three phases of their athletic careers five years apart. The study showed that as

athletes approached retirement, athletic identity decreased, and athletes who retired voluntarily reported an increase in life satisfaction post-retirement. This study illustrates the importance of attending to retirement with intentionality to increase a sense of autonomy and enhancing transition planning in retirement to support well-being.

In addition to addressing athlete identity, Fuller's (2014) meta-analysis pointed to a second theme of **anticipation and preparation** for retirement. Athletes with higher cognitive awareness of their impending retirement had smoother transitions when they considered the impending approach of retirement, their desires for the end of their career, and ideas for what follows. This presents an opportunity to help athletes place focused attention on their retirement transition towards the end of their career, imagining diverse possibilities for what to pursue next, and setting goals to plan for it.

The third theme, **branching out**, centered on an ability to shift focus to new things other than being an athlete. Athletes who shifted focus in new directions including social life, academics, career planning, and new competitive or fitness outlets experienced smoother transitions. This highlights a need to help athletes recognize where their focus is currently, and if it is solely on athletics, help them diversify their thoughts and behaviors to support branching out in a variety of domains.

The fourth theme is **satisfaction with athletic performance**. Athletes who perceive they achieved a successful career had smoother transitions which oftentimes was supported by considering the breadth of benefits and accomplishments with sports participation beyond winning. This presents an opportunity to help athletes articulate clear goals for what they want in their athletic career which could support motivation and direction of effort to athletic performance goals. It also presents an opportunity to expand a student-athletes awareness for what they are gaining in their experience. Broadening the student-athlete's view of success to accomplishments beyond winning, could support satisfaction in their career. This presents an opportunity for the use of goal setting and growth mindset to enhance career satisfaction through focus on the developmental processes of sport in addition to competition outcomes.

The fifth and six themes relate to social support. A theme of **loss of camaraderie** emerged and athletes who found alternatives to teammates for camaraderie, emotional coping, and as a source of positive affect had smoother transitions. Similarly, athletes who received encouragement, guidance and emotional **support from others** including former teammates, family, friends, coaches, sports psychologists, and others had smoother transitions (Fuller, 2014). Well-being models such as self-determination theory (Deci & Ryan, 2012) and PERMA (Seligman, 2011), point to the importance of relationships and research shows that positive relationships are linked to health and well-being (Gable & Gosnell, 2011). Character strengths can be used to enhance social support. Research shows they positively impact teamwork (Ruch, Gander, Platt & Hofmann, 2018) and relationships (Wagner, 2019). The fifth and six themes illustrate an opportunity to enhance the retirement transition through building and leveraging an expanded social support network which can be done using character strengths.

All six themes show the potential for enhancing well-being through character strengths use, greater mindfulness, and broadening (or diversification) of thoughts, emotions, and action around self-concept, daily activities, and relationships with others which can be supported by goal setting and growth mindset.

Implementation Recommendations

Whole System Approach

Programmatically educating stakeholders who then activate change across an institution is achievable. Most NCAA institutions effectively address athlete health with a whole system approach relying on stakeholders across the institution to play key roles supporting student-athletes' academic and athletic success. Coaches are often the predominant influence in an athlete's experience (Poczwardowski, Barott, & Henschen, 2002), but a support system of trainers, counselors, sports psychologists, academic support staff, professors, and administrators also play influential roles. They observe athletes, provide feedback and encouragement, and support achievement. The same could hold true for mental health and well-being. Additionally, if stakeholders across university silos (e.g., academics, athletics, career development, etc.) all support the active use of character strengths when engaging with student-athletes, it illustrates how character strengths translate across domains.

Facilitators First

Implementing PosEd requires facilitators who can teach and model curriculum concepts. If facilitators learn the concepts and have an opportunity to experience positive benefits in their own lives, they are more likely to buy into the content and teach it effectively (Leventhal et al., 2018). Train-the-trainer models have been successful in implementation of PosEd curriculums with youth (Leventhal et. al, 2015; Seligman & Adler, 2019). As such, implementation of a strengths-focused intervention curriculum in an NCAA setting, should begin with education and interventions on character strengths, mindfulness, goal setting and growth mindset with coaches, trainers, counselors, and other university staff who can then be responsible for curriculum dissemination. Identifying a broad representation of stakeholders from across the institution to serve as facilitators to student-athletes is critical to ensure strengths-based approaches are infused across silos to illustrate ubiquity of character strengths across domains. Identified stakeholders can learn the skills and apply them in their own lives. Then, they can learn how to teach them to student-athletes. In order for staff to model character strengths, they must first learn the concepts and practice the skills themselves.

Top-Down Support

NCAA institutions implementing a strengths-based approach to support their student-athletes should recognize support from superiors is key to strengths use. For coaches and staff to support strengths use in student-athletes, university leadership needs to support strengths use by coaches and staff. Research points to the importance of support from authority figures in strengths use. A study showed workplace supervisor support (as opposed to colleague support) predicted use of strengths (Lavy, Littman-Ovadia & Boiman-Meshita, 2016). Ensuring buy-in from stakeholders across an NCAA institution will maximize effectiveness of a character strengths curriculum as well as bring well-being benefits of character strengths to all involved.

Measurement

A combination of measures is suggested to assess success of implementation of interventions. In order to implement character strengths interventions, all stakeholders and student-athletes would begin by participating in the VIA-IS (Peterson & Seligman, 2004; Peterson & Park, 2009) to discover their own unique strengths mix. VIA-IS results could be celebrated and used as reminders for leveraging signature strengths to aid performance and cope with challenges.

Pre- and post-retirement measures of well-being can be assessed through a variety of validated well-being assessments such as:

- Flourishing Scale (Diener et al., 2010)
- Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985)
- Subjective Vitality Scale (Ryan & Frederick, 1997)
- PERMA Questionnaire (Seligman, 2011)

Academic and athletic performance is already tracked within NCAA institutions, so performance impacts can be evaluated at various points.

Student-athlete completion of the Athletic Identity Measurement Scale (Brewer, Van Raalte, & Linder, 1993), would be one way to assess shifts in athlete identity to see if salience in the role changes over time and has an impact on retirement transition.

Other assessments for consideration are:

- Public-Private Athletic Identity Scale (PPAIS; Webb, Nasco, & Webb, 2006)
- College Student-Athlete's Life Stress Scale (CSALSS; Lu et al., 2012)
- Athletic Mental Energy Scale (AMES; Lu et al., 2018)
- Athlete Burnout Questionnaire (ABQ; Raedeke & Smith, 2001)

Curriculum Outline

Preview

Purpose: Prepare participants with baseline information needed to get the most of the interventions and experience.

Contents:

- Review key psychology terms: athlete identity, positive psychology, well-being, character strengths, VIA, signature strengths, mindfulness, goal setting, growth mindset
- Highlight well-being impacts of character strengths
- Share leading model for character strengths application *Aware, Explore Apply* (Niemiec, 2018)
- Discuss athletic retirement research highlighting key challenges and opportunities in the experience
- Present ADSS model and connect
 - o best practices for strengths use interventions with
 - o the athletic retirement experience, and
 - o the supporting cognitive skills of mindfulness, goal setting and growth mindset
- Provide an overview of the modules and interventions including time commitment
- Encourage participants to articulate expectations (e.g., goals or ground rules for program, self, or other participants)

Desired Outcomes:

1. All participants have same foundational knowledge needed to participate successfully in the program

- 2. Participants are excited and motivated to participate and gain well-being benefits as well as sport and academic performance benefits
- 3. Student-athletes begin to think about retirement
- 4. Cohesion, camaraderie, and support is perceived among participating group or team

Module 1: Attend

Our experience is what we choose to attend to.
-William James (1890)

Purpose: Understand my character strengths and heighten awareness of my experience (including cognitions, emotions and behaviors), so I can assess where I might make positive change.

Key Interventions:

- Complete the VIA survey, explore results
- Discuss: Experience with heightened awareness
 - o moments in sport, other life domains
 - o characteristics
- Intervention(s): Mindfulness and meditation exercise
 - o Mindful eating
 - o Mindfulness walk
 - Meditation (various types)
- Intervention: Strengths spotting (in self, in public figures, in teammates)
- Exercise: Signature strengths exploration
- Discussion/Journaling: Identification of strengths across domains (in sport, academics, relationships, career prep)
- Exercise: Mindfulness at practice (e.g., during warm up or cool down)

Conversation Starters:

- Where do I focus most of my time, effort, energy, and attention now?
- What are my signature strengths? How are they core to who I am?
- What character strengths do I currently use as a student-athlete?
- What thoughts and feelings do I have about my impending retirement?
- How am I approaching my upcoming retirement transition?

Desired Outcomes:

- 1. Language exists for character strengths use with self and others
- 2. Understanding of one's own character strengths and how they support well-being and self-concept
- 3. Understanding of mindfulness and experience with practices to cultivate it
- 4. Clarity in the connection between character strengths and mindfulness

Module 2: Diversify & Socialize

Happiness requires all the virtues, and more of a virtue is not always better than less.
-Barry Schwartz & Kenneth Sharpe (2006)

Humans are social creatures. -Aristotle

Purpose: Use my understanding of character strengths and mindfulness to pursue new activities and roles that help me diversify from athletics and feel strong social support.

Key Interventions:

- Review learnings and observations on
 - o Character strengths
 - Mindfulness
- Learn: Goal setting theory and performance outcomes
 - Motivation spectrum review
 - o Elements of goals (difficulty, specificity, commitment, feedback)
 - o Task vs. Ego orientation
- Discussion: Exploration of current goals
 - o Exercise: Develop achievement strategies that include character strengths
- Discussion: Exploration of current social support
 - o Interpersonal relationships
 - Support network and resources
- Exercise/Journaling: Brainstorm new activities, roles, domains, and potential careers with strengths fit
- Interventions: Goal setting using SMART and/or WOOP (Oettingen, 2017) frameworks
 - o ...for character strengths use
 - o ... for diversification of activities and roles, using strengths
 - o ... for strengthening social support, using strengths
- Discuss: Growth mindset
 - Personal mindset evaluation
 - Exercise: Take growth mindset questionnaire
 - Brainstorm where and how to hold a growth mindset
 - Brainstorm signs of success
 - o Discuss exemplars (famous athletes who hold a growth mindset)

Conversation Starters:

Diversify

- What roles do I have beyond athlete? What roles could I have?
- How might different roles support my well-being and provide fulfillment when my athletic career ends?
- What new or different strengths could I explore in sport and in other domains that could aid my performance, well-being, and success?
- Which signature [happiness] [lesser] strengths could I use and where could I use them?

Socialize

- Which of my signature strengths support my relationships? What signature strengths do I contribute to a team or group?
- Where (and how) do I feel valued for my strengths?

- What resources are available to support me as a student-athlete and how could I best leverage them by using my signature strengths?
- Where do I have sources of social support beyond athletics? Where might I discover new sources of social support?

Desired Outcomes:

- 1. Clarity in the relationship between goal setting and performance and practice setting goals
- 2. Understanding of growth mindset and the importance of continuous effort
- 3. Opportunities identified and goals set to diversify activities and roles
- 4. Opportunities identified and goals set to strengthen interpersonal relationships and leverage social support resources
- 5. Increased motivation and clear plans for character strengths use
- 6. Broadened awareness of positive aspects of self and opportunities for growth post-sport career

Module 3: Satisfy

Retirement thus marks the first time in the athlete's life when (s)he is deprived of the satisfaction which sport has always given him.

-Hill & Lowe, 1974 (as cited in Baillie & Danish, 1992)

Purpose: Reflect on my athletic career and enhance my level of satisfaction by broadening awareness to all that I've gained and will carry forward into future endeavors.

Key Interventions:

- Intervention: Mindfulness exercise
- Review learnings and observations on
 - Character strengths
 - Mindfulness
 - Goal setting
 - Growth mindset
 - o Diversified/new activities and roles
 - Social support and relationships
- Discussion: Retrospection on athletic career
 - o Taking a lens of PERMA
 - o Taking a lens of SDT
- Intervention: Gratitude intervention
- Intervention: Prospection to envision the future
- Intervention/Journaling: Goal setting using SMART or WOOP (Oettingen, 2017), or other framework
 - o Short term (e.g. now through retirement)
 - o Medium term (e.g., immediately post-retirement)
 - O Long term (e.g. 5 to 10 years from now)
 - o Consider character strengths use to support achievement
- Discussion: Reflection on program

- Expectations
- o Reality
- o Feedback

Conversation Starters:

- What have I gained from my athletic career?
- How have my strengths supported the positive aspects of my experience?
- How could I use my strengths to gain even more from my career before retirement?
- Where could I use my character strengths, try new activities, and improve my relationships?
- Where can I bring a stronger growth mindset?

Desired Outcomes:

- 1. Enhanced perspective on athletic career including aspects of growth, development, mastery, and relationships
- 2. Developing self-concept that goes beyond athlete and includes character strengths
- 3. Motivation to
 - a. explore new activities and domains using character strengths
 - b. use cognitive skills of mindfulness and goal setting
 - c. continually hold a growth mindset
 - d. continually use character strengths
 - e. attend to one's well-being using skills gained in program

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