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**Stress and Flourishing During First Year College Transition: A Comparison of Former
High School Athletes, Recreational Athletes, and Non-Athletes**

by

Becca Pierce

Accepted in Partial Completion
of the Requirements for the Degree

Master of Science

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Master's Thesis

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Rebecca Pierce

July 7th, 2023

**Stress and Flourishing During First Year College Transition: A Comparison of Former
High School Athletes, Recreational Athletes, and Non-Athletes**

A Thesis
Presented to
The Faculty of
Western Washington University

In Partial Fulfillment
Of the Requirements for the Degree
Master of Science

by
Rebecca Pierce
July 2023

Abstract

The effects of transitioning to college have been reported, but little is known about how levels of high school athletic identity (AI; Taylor & Ogilvie, 1994), athletic satisfaction (AS; Park et al., 2013), and current recreational sport participation relate to the transition to college. The purpose of this study was to compare the psychological well-being of first-year college students based on previous and current athletic participation. Random stratified and snowball sampling of U.S. universities yielded a sample of 347 first-year college students. Mean differences ($p = .007$, $\eta^2 = .035$) in flourishing were found between continued ($M = 40.25$, $SD = 7.82$) and new athletes ($M = 36.50$, $SD = 7.33$) and continued athletes with higher AI had higher flourishing ($M = 47.40$, $SD = 4.78$) and lower distress ($M = 29.58$, $SD = 24.97$) than those with lower AI ($M = 33.38$, $SD = 5.59$, $M = 51.35$, $SD = 16.36$, respectively) both with large ($p < .001$, $d = -2.72$; $p < .001$, $d = 1.01$) effect sizes. Two regression models were found with AS, the AI subscales, and distress which predicted 68% of flourishing, and AI social identity, AS and flourishing which predicted 21% of psychological distress.

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Literature Review

The transition to college is an exciting time in a young person's life that comes with different highs and lows that can affect a first-year college student's overall psychological well-being. Psychological well-being is when an individual feels fulfilled with their life, connected to other people, and strives towards their potential even in the presence of challenges (Ryff, 1989). Flourishing is part of psychological well-being as Diener et al. (2010) defined flourishing as "having supportive and rewarding relationships, contributing to the happiness of others, and being respected by others" (p. 144). Flourishing may occur in first-year college students' experiences if they respond well to new challenges during the transition to college. Alternatively, a barrier to psychological well-being could be high levels of psychological distress. Psychological distress is when an individual has prolonged exposure to stress and experiences intense anxiety (Bore et al., 2016; Maymon & Hall, 2021). Transitions can influence both psychological distress and flourishing, and it is of interest to determine if dual transitions (i.e., transitioning out of sport and into college simultaneously) may have a greater effect on the overall psychological well-being of first-year college students.

First-year students may have positive or negative experiences during the transition to college. Regarding the negative experiences, first-year college students report higher rates of stress during their transition out of high school than the general non-student population (Dyson, & Renk; 2006; Maymon, & Hall, 2021). Further, there are many sources of stress that can make that transition difficult (e.g., little knowledge of how to meet institutional expectations, financial responsibilities, and academic demands; Maymon, & Hall, 2021). Regarding the positive experiences, some first-year university students adjusted well to college because they were open to new experiences, developed new relationships, understood there were times when they only

felt okay and overcame challenges (Volstad et al., 2020). High school students transitioning to college have the opportunity to moderate the experience of stress and support flourishing by participating in university-sponsored activities, like recreational sports.

Additionally, there is an abundance of information about how the transition out of sport causes stress. Athletes report feelings of identity loss, and disconnection from their social support system, and many ask themselves “what do I do with my life now?” (Fuller, 2014; Russell et al., 2018). However, little is known about how both transitions will affect an individual if they happen at the same time (i.e., feelings of loss of sport identity interacting with the stress of new college demands). Past research of athletic transitions has almost exclusively been conducted on intercollegiate and elite athletes, leaving a gap in the research when considering high school athletes’ experiences of transition out of sport. The current review of literature includes research related to psychological well-being (e.g., flourishing and stress), transitions out of sport, transitions into college, athletic identity, athletic satisfaction, participation in recreational sport, and the intersection of all the above factors.

Athletic Transition Theory and Definition

Athletic transition, or retirement, has been a focal point of research in sport psychology for the last 60 years (Stambulova et al., 2020). Athletic transition has been defined as a change in career development that involves the athlete’s evaluation of old and new circumstances, and their coping resources during their transition from sport, which can be categorized as either a successful, crisis, or unsuccessful transition (Stambulova et al., 2020). The term “retirement” is still used colloquially, but within the literature, the term has been replaced by transition, due to retirement being considered a singular event instead of a life-altering process (Taylor & Ogilvie, 1994). The quality of transition out of sport for an athlete is dependent on personal and

developmental factors and is affected by such things as decreasing association with the athlete role, expanding interests and career opportunities outside of sport, and using a support system (Stambulova et al., 2020).

To describe the transition out of sport, Taylor and Ogilvie (1994) developed a model conceptualizing the causes that lead an athlete to retire, resources available to athletes, and intrapersonal factors that affect the athlete's ability to adapt to retirement. Taylor and Ogilvie (1994) defined the causes of athletic retirement as age, deselection, injury, and free choice. Age refers to when an athlete gets older, and they see declines in performance, which causes their retirement. Deselection is when an athlete is cut from a team because their skills are no longer deemed adequate. Injury is when an athlete is no longer able to participate after experiencing a career-ending injury. Finally, free choice is when an athlete chooses to leave their athletic career of their own volition (Taylor & Ogilvie, 1994). Once retirement has occurred, the athlete has a set of personal factors that can influence the transition process.

According to Taylor and Ogilvie (1994), there are five intrapersonal factors that are considered in athletic retirement. Developmental contributors are how an athlete's experiences during their sport career influence their self-perceptions and social skills, which then influences their ability to adapt to sport retirement. These developmental contributors, according to the model, are influenced by self-identity, social identity, perceptions of control, and tertiary contributing factors (Taylor & Ogilvie, 1994). Self-identity is how much an individual identifies their self-worth in their participation in an activity like sport. For example, if an athlete's identity develops solely around their sport, then their identity would be considered unidimensional because they have not developed other identities that extend beyond athletics. Social identity references an athlete's social status and the diversity of their social group (Taylor & Ogilvie,

1994). Many athletes define themselves by their success in sport and surround themselves with a social support system that has little diversity outside of sport. Perceptions of control refers to how much control the athlete believes they have over the end of their career. Finally, tertiary contributing factors such as socioeconomic status, minority status, or gender can influence an athlete's transition due to the potential for fewer opportunities after a life of sport (Taylor & Ogilvie, 1994). These intrapersonal factors that researchers conceptualized interact with an athlete's available resources to determine how they adjust to post sport life. Further, according to the model, because three of the four causes of transition out of sport are often outside the athlete's control (e.g., age, deselection, and injury), there is a high risk for difficult transitions.

Within the athlete retirement model, the resources available to the athlete combined with the individual factors related to transition determine the quality of adjustment to athletic retirement (Taylor & Ogilvie, 1994). Within the model, the relevant resources during an athlete's transition out of sport are coping skills, social support, and pre-retirement planning, which all interact with personal factors to dictate the quality of adaptation (Taylor & Ogilvie, 1994). Consequently, according to the model, a poor adaptation would result in a retirement crisis, and a healthy adaptation would result in a healthy career transition (Taylor, & Ogilvie, 1994). For example, an athlete who has high levels of self-identity invested in sport, little social support outside of their athletics, and low perception of control over their transition, may experience a retirement crisis. In line with Taylor and Ogilvie's (1994) model, a retirement crisis is when a person needs support in maintaining self-worth and developing a new sense of self; that support can come from professionals in sport or the athlete's social group.

Another model developed by Stambulova (2003) describes transitions as either normative or non-normative. Normative transitions are predictable within an athletic career like

transitioning from high school to college athletics or transitioning out of an athletic career, and non-normative transitions are when an athlete experiences a transition that is not predictable, such as getting injured or getting traded to a new team. Stambulova (2003) postulates that if the transition experienced by an athlete is either normative or non-normative the individual has a set of coping skills to use that either meet the specific demands of the transition or not. Further, if the athlete is able to effectively cope, they are considered to have a positive transition. Conversely, if the athlete's coping skills are ineffective during the transition, they will experience a crisis transition where the athlete is unable to resolve their negative emotions on their own. According to Stambulova's sport career transition model (2003), athletes may experience a crisis transition in which they have increased feelings of emotional distress such as anxiety, depressive symptoms, increased doubts about their sporting abilities, and increased fear of failure. Furthermore, elite and intercollegiate varsity athletes who were men, reported higher levels of emotional distress attributed it to a lack of awareness of transitional demands, fewer coping resources or a high number of barriers that make coping difficult, and an inability to process the transition (Knights et al., 2019; Lally, 2007). It is important to note that these symptoms are chronic for an athlete in a crisis transition.

According to Stambulova (2003), there are three interventions that can be utilized at different stages in an athlete's career to either prevent or process a crisis transition. The first intervention is called a crisis-prevention intervention and it is used either before or at the very beginning of the athletic transition. A crisis prevention intervention would help an athlete prepare for the transition by giving them tools, like goal setting and mental skills training to cope with leaving competitive sport. Next, if an athlete begins to experience a crisis transition, they could receive a psychosocial crisis-coping intervention which is used when an athlete is in a

crisis transition but has not begun to experience severe negative emotional and behavioral consequences. If an effective psychosocial crisis-coping intervention is used it can help an athlete in a crisis transition have a delayed positive transition. In contrast, if the intervention proves to be ineffective, or the athlete does not get an intervention they will often struggle with psycho-somatic illness, personality changes, or alcohol and drug use, which are all associated with the inability to cope (Stambulova, 2003). At this time, a psychotherapeutic intervention is necessary to help the athlete through the transition and into the next stage of life. The focus of most athletic transition research has been on elite athletes who experience a crisis transition; therefore, the psychological outcomes and potential treatment options are well understood in elite level athletes.

Athletic Transition Research

Researchers have identified examples of athletic career transition as a complex process that is dependent on multiple factors and that influence the quality of adjustment after the person has left their sporting career. For example, Brown et al. (2018) interviewed eight former elite athletes ($M_{\text{age}} = 36.75$ years, four male and four female, seven individual sport athletes, average time since retirement 6.75 years) to measure their perceptions of how social support influenced their retirement. After analyzing the data for recurrent themes, the researchers found the athletes who knew people outside of their sport career who were supportive, even if the athlete did not talk to those people about retirement, reported the smoothest transition (Brown et al., 2018). In the same study, seven out of eight participants described the support they received from family members as a positive influence on their adjustment to life after sport. In another qualitative study of former elite athletes who competed in various sports (e.g., cycling, gymnastics, hockey, rowing, swimming, track, and field, and volleyball), researchers asked 15 participants (11

females, 4 males, $M_{age} = 22.66$ years, average retirement length 3.5 years) to write a short story about their retirement experience, to understand how confiding in others may have affected their process of athletic retirement and their athletic identity (Lavallee et al., 1997). Athletes indicated that confiding in significant others about their difficulties during retirement improved their ability to cope with leaving sport (Lavallee et al., 1997). The athletes also reported that emotion-focused coping was beneficial during their transition out of sport, which suggests that a vital part of easing the transition process is ensuring athletes have a strong social support system, either via people in an athlete's life or support that may be offered by a Certified Mental Performance Consultant (CMPC) or mental health counselor.

Psychological Well-Being During the Transition out of Sport. Psychological well-being during the transition out of sport has not been extensively documented in sport psychology research despite only a small percentage of athletes (11-15%) reporting severe distress during the transition process (Sinclair & Orlick, 1993). Flourishing is when an individual feels they have a meaningful life, are supported and respected by others, and help others lead a successful life (Diener et al., 2010). Flourishing is similar to the positive dimensions of psychological well-being (i.e., feeling fulfilled in life, connected to others, and working towards goals; Ryff, 1989). The similarities between flourishing and the positive facets of psychological well-being make it an acceptable measure of a positive aspect of psychological well-being.

The majority of current athletic transition research has focused on crisis transitions and only a few studies have examined the relationship between athletic transitions and flourishing. Giannone et al. (2016) studied the relationship between athletic identity, flourishing, and state anxiety in a sample of 72 Canadian intercollegiate mixed sport athletes ($M_{age} = 22.14$, female = 75%, team sport athletes = 57%) and found no differences in levels of flourishing between

athletes with high and low levels of athletic identity. However, the researchers did find that a high athletic identity was positively correlated with state anxiety scores. These findings could indicate that athletes with a high athletic identity during transition may still experience flourishing even with an increased level of anxiety. In contrast, Ryan (2019) recruited 81 retired elite adult mixed sport athletes ($M_{age} = 38$, $M_{retirement} = 9$ years, female = 31%) from New Zealand to study the relationship between athletic identity, cause of retirement, and flourishing after retirement. The researcher found that athletic identity was positively correlated ($r = .30$) with flourishing. Further, elite athletes who retired voluntarily also reported higher levels of flourishing compared to those who were forced to retire (Ryan, 2019). Knights (2021) interviewed retired adult elite male football athletes (rugby, soccer, and Australian football) from Australia ($N = 46$, $M_{years\ in\ sport} = 12.68$). Athletes reported that maintaining a high athletic identity at the time of retirement made the transition more difficult and until they reduced their identification as an athlete, the athletes struggled to adjust to their new life. The common themes that athletes reported led to flourishing were if their life had a purpose, passion for their new career, and successful relationships with friends.

Moreover, many college athletes recognize that they only have limited time in competitive sport and some athletes plan for a life without training and competition (Lally, 2007), which appears to have a positive relationship with psychological well-being outcomes. Elite athletes who experience psychological well-being during their transition have planned and prepared for their transition out of sport, accept their retirement, have a strong identity outside of sport, have clear goals to work towards, and have a sense of autonomy over their life (Knights et al., 2018). Those athletes who planned to leave competitive sport reported that after retirement, they had new opportunities and time to experience other sports and activities (Lally, 2007), while

others reported a feeling of being free (Stokowski et al., 2019). Additionally, many athletes leave their sport and can immediately begin work on a post-graduate degree or start their career because they had planned for their transition and their sport no longer restricted their schedule (Lally, 2007; Sinclair & Orlick, 1993). Finally, the athletes who plan for their retirement may be able to flourish outside the world of sport because they have expanded their identity and are excited to begin the next phase of their life (Knights, 2021; Knights et al., 2016). In regard to the relationship between athletic identity and flourishing, there are inconsistent findings throughout the literature as researchers have found that athletes with high athletic identity have reported high flourishing (Ryan, 2019), low flourishing (Knights, 2021), or no difference (Giannone et al., 2016) compared to athletes with low athletic identity; however, there has been a range of types of athletes studied, with many focusing on elite or college mixed sport, male and female athletes but none relating to high school athletes transitions.

Intercollegiate and elite athletes have reported other positives related to transitioning out of sport. Some athletes transitioning out of sport stated they had feelings of excitement to explore new identities (Lally, 2007), and excitement towards pursuit of their career goals (Menke & Germany, 2019; Stokowski et al., 2019). Many international athletes reported they chose to leave sport because they were tired of the circuit lifestyle and were relieved to be able to move on to the next stage of life (Sinclair & Orlick, 1993). A final positive of leaving sport is that some athletes have reported more balance in their life 12-18 months after the difficult initial phases of retirement (Park et al., 2013). Overall, it appears that the majority of athletes have a successful transition out of sport even though that is not the priority of transition research in sport psychology. There are multiple factors that affect the quality of the transition, and the positive transitions should be examined to help CMPCs develop an understanding of how best to support

athletes during their transition. However, all the researchers identified in this review have focused their studies on intercollegiate varsity and elite athletes, therefore there is little understanding of the positive transition experiences of high school athletes.

Psychological Distress During the Transition Out of Sport. The main focus of sport transition research has been on understanding athletes who had a difficult transition experience. Athletes who experience a difficult transition often have increased feelings of anxiety, depression, and a loss of identity (Park et al., 2013; Stambulova et al., 2020). One challenge that high-level athletes may experience during transition is new career development, which could contribute to increases in psychological distress. In cross-sectional studies, some athletes reported that they initially felt they did not have skills that could apply to life outside of sport and it took them longer to develop a career plan because they had not planned for a life without sport (Park et al., 2013; Stokowski et al., 2019). Moreover, in interviews conducted with six former intercollegiate varsity athletes ($M_{age} = 23.5$ years old, 50% male, 50% swimming, 16.7% track and field, volleyball, and basketball), Lally (2007) found that some athletes experienced distress during their transition due to having fewer responsibilities and more free time. Further, Stokowski et al. (2019) posted a question on Twitter asking former college athletes to describe their transition experiences and found that former college athletes stated they felt lost once competitions had ended, were under prepared for the next phase of life, and missed the feeling of being a part of a team that felt like a family. In a meta-analysis, Park et al. (2013) found that athletes in five separate studies reported distress during retirement related to dissatisfaction with their bodies and had feelings of decreased physical self-worth and self-perceived physical strength. It is important to understand the reasons behind an athlete's crisis transition so if an athlete experiences depressive symptoms, loss of social support from teammates, and body

dissatisfaction while simultaneously transitioning out of sport, practitioners can develop interventions to help athletes into a successful transition.

There are a few factors that could negatively influence the quality of transition for an athlete. For example, athletes reported feelings of loss that were often associated with the loss of their social support of their team (Jewett et al., 2018; Sinclair & Orlick, 1993). Moreover, intercollegiate varsity athletes' level of social support during the transition process affected the quality of athletes' transition (Lally, 2007). Similarly, Sinclair and Orlick (1993) surveyed 199 retired Canadian high-performance athletes (50.3% female, $M_{age} = 28.9$) and found that 37% of the sample reported missing their social support system at a fair to serious level. Taken together, if an athlete's social support system was almost solely based around their team, then the transition was more difficult once they left sport and were no longer associated with those people (Jewett et al., 2018; Lally, 2007; Sinclair & Orlick, 1993). Understanding what type and quality of social support an athlete has may be a key factor in helping athletes have a successful transition out of sport.

Psychological distress during transitions may also be caused by having to adapt to new routines. Athletes have reported that increased psychological distress was related to adjustment to new routines, which can cause feelings of anxiety and of being lost (Jewett et al., 2018; Lally, 2007; Park et al., 2013). Training to compete consumes much of an athlete's time and once that structure in their life is over it can be difficult to create new routines (Jewett et al., 2018; Lally, 2007; Stokowski et al., 2019). During the transition period, athletes have more freedom over their time and that can lead to an athlete's negative interpretation of their transition, especially for those without a direction or purpose after their athletic career (Park et al., 2013; Stokowski et al., 2019). Overall, the majority of athletic transition research has been on the small proportion of

athletes that experience difficult transitions, most likely because those athletes will need the most support throughout their retirement. Disengaged high school athletes who have transitioned out of sport and into college have been mostly overlooked in this area of research and their experiences with difficulties during transition may be different than that of collegiate and elite athletes.

Role of Athletic Career Satisfaction and Transition out of Sport

Athletes who experienced high athletic career satisfaction have reported feeling they had achieved most of their athletic goals throughout their athletic career (Cecić Erpič et al., 2004). For example, retired female athletes were given the British Athletes Lifestyle Assessment Needs in Career and Education scale which had one item to measure athletic career satisfaction (Shander & Petrie, 2021). The retired intercollegiate varsity gymnasts and swimmers ($N = 217$) who attended 26 different universities, reported they achieved their sport goals, which predicted greater life satisfaction and lower levels of depressive symptomology (Shander & Petrie, 2021). Similarly, in a sample of elite retired Canadian athletes, who completed the Athlete Retirement Questionnaire, ($N = 199$, 50.3 % female, $M_{age} = 28.9$, $M_{time\ on\ national\ team} = 6.4$ years) Sinclair and Orlick (1993) found that 46% of retired athletes reported they achieved their sport related goals. The athletes who reported meeting their athletic goals were more likely to report an easier transition and felt more satisfied with life after sport compared to those who had only met some of their goals or had not met their goals (Sinclair & Orlick, 1993). Further, elite retired athletes from New Zealand who had achieved their sport goals had fewer negative emotions and less adjustment difficulty than those who did not achieve their athletic goals (Ryan, 2019). Moreover, of the 85 semi-professional Slovene athletes (36.5% female, $M_{age} = 29$ years old) who competed on the international (88%) or national level (12%; e.g., alpine skiing, basketball, handball, track

& field) who reported having a more negative transition experience, also perceived reaching fewer of their athletic goals (Cecić Erpič et al., 2004). The athletes completed The Sports Career Termination Questionnaire, which asked one question regarding how they perceived if they achieved almost no goals or almost all of their goals (Cecić Erpič et al., 2004). Athletes who reported they met fewer of their athletic goals than expected, focused on their negative performances, also reported lower self-esteem, self-confidence, and experienced more loneliness than those who had achieved most of their sport related goals when asked both at one- and four-years post-retirement (Cecić Erpič et al., 2004). Athletic satisfaction seems to be an important part of the transition process, however many of the studies that have examined athletic career satisfaction only used a single item to score the athlete's level of satisfaction. This could limit our understanding of athletic career satisfaction as achieving sport career goals was the only dimension of athletic career satisfaction studied.

A broader examination of athletic career satisfaction was conducted via two meta-analyses that examined the topic of athletic transitions. Fuller (2014) specifically examined intercollegiate varsity athletic retirement and found nine studies that included athletic satisfaction. Further the researcher found that athletes who focused on the goals they did not achieve reported more difficult transitions and had unresolved feelings. In another meta-analysis of sport retirement, Park et al. (2013) found 122 studies about athletic career transitions and nine specifically included research about athletic career satisfaction. Park and colleagues concluded that athletes who did not meet their sport goals reported higher levels of loneliness, took longer to adjust to life without sport and had a negative perception of their transition process. Overall, research supports the idea that athletes who felt they achieved their sporting career goals and had succeeded in sport, had easier transitions and seemingly higher life satisfaction after leaving

sport than those who did not meet their goals (Cecić Erpič et al., 2004; Fuller et al., 2014; Park et al., 2013; Shander & Petrie, 2021; Sinclair & Orlick, 1993).

Most of the athletes included in the athletic satisfaction and career transitions research competed at the intercollegiate varsity or elite level, and their experiences may be different from athletes who retire after high school depending on their athletic goal achievement. In a study of disengaged high school athletes (i.e., high school athletes who no longer participate in sport after graduating from high school), Cranmer and Sollitto (2015) examined the relationship of sport experience satisfaction and coach social support in a sample of 216 college students (51.4% female, $M_{age} = 19.37$ $SD = 1.27$) who played varsity sports in high school, and found that 46% of the athletes had high levels of satisfaction with their sport experiences. Athlete satisfaction was predicted by the level of social support received from their coach, specifically from emotional and esteem support (Cranmer & Sollitto, 2015). It appears that if an athlete receives quality social support during their athletic career, it could influence the athlete's level of satisfaction with their athletic career (Cranmer & Sollitto, 2015). Little is known about athletic career satisfaction and its influence on the transition out of sport in the high school athlete population. Therefore, gaining a better understanding of the relationship between athletic career satisfaction and the transition out of sport could improve CMPC's understanding of how to best serve the high school athlete population while they are transitioning to college and out of sport.

Athletic Identity and Transition out of Sport

Athletic identity is defined as the level to which an individual associates with the athlete role (Brewer et al., 1993). The relationship between athletic identity and the transition out of sport has been studied often. An athlete will develop an athletic identity when they dedicate time and energy towards their sport, and there could be a negative reaction when the athlete is no

longer able to participate in sport if they maintain a high athletic identity (Brewer et al., 1993). Identity development models may help explain how athletic identity is formed and how the strength of identifying as an athlete may influence the transition out of sport.

Identity Development

Over the course of a person's life, one may develop identities based on the activities that interest them. An identity is when an individual defines themselves by a set of characteristics that are applied to a specific role and meaning is applied to their unique characteristics to identify themselves as a part of specific groups (Burke & Stets, 2009). Each person has multiple identities because people are multifaceted beings who occupy different roles in society (Burke & Stets, 2009). Further, the concept of identity purportedly includes an identity standard, an input, a comparator, and an output (Burke & Stets, 2009). The identity standard is the defining characteristics of a specific identity (Burke & Stets, 2009). For example, an athlete's identity standard could be described as an individual who is hard working, competitive, disciplined, and committed. The adjectives used to describe the identity are situationally determined and the level of how much a person associates with that descriptor is individualized (Burke & Stets, 2009). While these are not the only adjectives used to accurately describe an athlete, they can be applied to an individual with athletic identity, thus giving a stable description of the athlete role (Burke & Stets, 2009). The authors of the concept defined input as meanings that are relevant to the situation through a person's own perception from the environment (Burke & Stets, 2009). An example of this would be a person who has an identity standard that aligns with the athlete role, and their perception of being lazy in practice does not meet the expectation they have for themselves as an athlete. The input is made up of the person's perception of the action and the situation (Burke & Stets, 2009). According to Burke and Stets' (2009) theory, the comparator is

simply a measure of comparison between the input perceptions of meaning and the identity standard an individual holds. If the input is congruent with the individual's own comparator of the identity standard then their behaviors will stay stable, whereas if the input is incongruent with their identity standard, their actions will change to align more with their true self (Burke & Stets, 2009). An athlete who is perceived as lazy in practice will adjust their work ethic to better align with their athlete identity. The output is the behavior in a situation in which the input does not match the individual's identity standard (Burke & Stets, 2009). The identities a person holds are constantly being tested through input and either reinforced through maintaining the identity standard with congruent behaviors or weakened if the identity is no longer relevant to the individual (Burke & Stets, 2009). As individuals move through different stages of life the identities they develop are continuously reinforced or diminished based on the individual's social group, interests, and the transitions they undergo.

Individuals experience a series of transitions (e.g., going to grade school for the first time, moving out of the house after high school graduation) that influence their thoughts, behavior patterns, and identities. Erikson (1968) developed the psychosocial developmental theory to describe each stage of life and how an individual's identity is formed by progressing through those stages. The stages of identity formation relevant to the current research study is adolescence, which Erikson (1968) described as a time in life where an individual experiences either identity formation or role confusion and emerging adulthood (Arnett, 2000). This means individuals in the adolescent stage (i.e., 12 – 18 years old) are trying new activities and roles which they can integrate into their sense of self to help build their individual identity. According to Erickson (1968), adolescence and young adulthood are when individuals begin working on increasingly complex tasks as they build a desire to be accepted by their peers for their

individuality. A third stage of life conceptualized by Arnett (200) called emerging adulthood, is the period between adolescence and young adulthood (i.e., 18-29), and is when individuals learn more about themselves and others from their increasing cognitive maturity and exploration of new interests (Arnett, 2000). During emerging adulthood, an individual explores different possibilities for their path in life that eventually solidify in young adulthood. The exploration of self in these stages is how an individual will develop their identity, which allows them to have a sense of desires and goals in life that define who they are (Arnett, 2000).

Arnett's (2000) theory defines emerging adulthood as the time in an individual's life when they can explore different life directions and continue developing their identity. Due to the changing culture of industrialized nations, individuals at this age do not yet identify themselves as an adult because they have not accepted full responsibility for themselves, made decisions independent of their parents, and have not achieved financial independence (Arnett, 2000). Emerging adulthood is the time in life when people have the most opportunity for identity exploration in love, work, and world views, as they try out different identities, and continue to engage, if they find activities or people they identify with (Arnett, 2000). As a person participates in sport regularly, they can begin to form their athletic identity, which then may increase the time and effort they dedicate to athletic activities to ensure they are perceived as an athlete. When an individual transitions to college, there are many opportunities for identity exploration including participation in new hobbies or joining a new social group based on career interests, however, if the individual is too focused on their sport identity, then exploration of other interests may be limited or their explorations of love, work, and world views are confined to within the sport community.

Athletic Identity

A person develops an athletic identity by choosing to participate in athletics and focusing their time and energy on sport skill acquisition and development. Athletic identity is considered a multidimensional construct with three primary dimensions (Hale et al., 1999). One is an individual's social identity within sport, which is how much an individual views themselves as an athlete (Hale et al., 1999). The second dimension is the exclusivity in which they participate in sport, meaning how much the athletes' self-worth is based solely on their athletic performances. The third dimension is the negative affectivity from sport experiences, which is the extent the athlete experiences negative emotions in response to negative outcomes in sport (Hale et al., 1999). The three dimensions of athletic identity are correlated with different outcomes during athletic transitions. For example, the social dimension of athletic identity was negatively correlated with emotion-focused coping and its influence on perceived negative stress in college freshmen (Russell et al., 2018). Further, the negative affect and exclusivity dimensions of athletic identity were positively related to negative perceptions of stress (Russell et al., 2018), indicating that the relationship between athletic identity and negative emotions is multidimensional as an athlete transitions out of sport and into college simultaneously. How much a person identifies as an athlete is related to the quality of their transition and can influence the development of other identities (Brewer et al., 1993). High athletic identity is when an athlete strongly associates with the athlete role. High athletic identity can be problematic as it occurs when an athlete's identity is almost completely comprised of their sport, which may increase the risk of developing emotional disturbances at the end of an individual's athletic career (Brewer et al., 1993; Murphy et al., 1996; Park et al., 2013). A high athletic identity has been associated with high levels of motivation to continue participating in sport, improving sport performances,

and increasing the likelihood of continued exercise after retirement (Brewer et al., 1993). Conversely, high athletic identity has also been associated with a decrease in career exploration and an increased risk of psychological distress during athletic transition (Brewer et al., 1993; Murphy et al., 1996). If an athlete maintains a high athletic identity throughout the entirety of their career, they can have more negative consequences during the adaptation to life without competitive sport (Brewer et al., 1993; Lally, 2007; Park et al., 2013; Torregrosa et al., 2015). An example of this would be an athlete feeling a loss of identity and taking a longer time to adjust to life after sport (Park et al., 2013).

Athletic identity foreclosure is a term used to describe when an athlete chooses to exclude the exploration of other roles and behaviors entirely (Brewer et al., 1993; Lavalley et al., 1997; Murphy et al., 1996; Park et al., 2013). Athletic identity foreclosure, when the athlete identity is their sole focus (Torregrosa et al., 2015), is associated with limiting career exploration outside of sport (Murphy et al., 1996). Specifically, in a study of retired Olympic athletes ($n = 15$, female = 5, 7 team sport athletes), who had been retired for at least two years, those who chose to focus the majority of their time and energy on sport often felt they were forced to stop competing, had more difficulties during their transition, felt a lack of security, and felt they had little social support after they were no longer involved in competitive sport (Torregrosa et al., 2015). While high athletic identity and athletic identity foreclosure are related, they are separate constructs that influence athletic careers, and the exploration of careers outside of sport independently (Murphy et al., 1996). All athletes identify with the athlete role on some level, but those who choose to maintain a high identification with the athlete role take more time and need more help during the adjustment to life without sport (Brewer et al., 1993; Lally, 2007; Park et al., 2013; Torregrosa et al., 2015). A disengaged high school athlete could be at risk for limited career and identity

exploration if they have high levels of athletic identity or athletic identity foreclosure; however, little is known about the levels of athletic identity in this population.

Psychological Well-Being and Athletic Identity During the Transition Out of Sport.

As an individual begins to participate in sport, they may align themselves more with the role of an athlete (Taylor & Ogilvie, 1994). Few researchers have examined the potential positives associated with having a higher athletic identity and overall well-being during athletic transition. This increased level of athletic identity could result in benefits to the athlete during the transition out of sport. For example, disengaged high school varsity athletes ($N = 82$, 57.3% male, $M_{years\ in\ sport} = 6$), who had transitioned out of competitive sport, were attending college, and participated in recreational sport, reported higher scores for life satisfaction than the disengaged athletes who were not playing recreational sport (Helms & Moiseichik, 2018). Interestingly, higher life satisfaction was reported in disengaged high school varsity athletes who were playing recreational sports in college even though they reported experiencing high levels of transitional loss related to their high school sport (Helms & Moiseichik, 2018). The relationship between athletic identity, feelings of loss, and recreational sport participation in college students is unclear without more research, however, participation in recreational sport may allow disengaged high school athletes to maintain their athletic identity and improve their overall life satisfaction or vice versa (Helms & Moiseichik, 2018). Due to the lack of research on positive experiences during transitions out of sport, there is limited knowledge on how a high athletic identity may influence, or be related, to positive aspects of transition out of sport, or vice versa, if at all.

Detriments of Athletic Identity During the Transition Out of Sport. The major focus of athletic identity and transition research has been on the negative emotions associated with

high athletic identity during the adjustment to life after sport. As Taylor and Ogilvie (1994) stated in their model of athletic retirement, “the presence and quality of the factors related to adaptation to retirement will depend in large measure on the developmental experiences that occurred since the inception of their athletic careers” (p. 7). The developmental experiences of an athlete’s time in sport helps them determine how to define their self-worth in the sporting arena, which will then influence their transition process (Taylor & Ogilvie, 1994). When an athlete eventually does transition, if there is no other area of life to draw a sense of self-worth, they can experience greater feelings of identity loss and struggle more with adaptation (Taylor & Ogilvie, 1994). Further, the authors found a positive relationship between athletic identity and feelings of loss associated with exiting the sport role. Moreover, in a study of over 300 retired male soccer players ($M_{age} = 46.8$ years, $SD = 15.7$) from the United Kingdom, Sanders and Stevinson (2017) surveyed athletes to examine the relationship between athletic identity, retirement reasons, and chronic pain associated with levels of depressive symptoms (Sanders & Stevinson, 2017). The participants had been retired for an average of 21.2 years ($SD = 14.6$ years). A total of 42% of the sample reported that injury was the reason for retirement and 15.6% of those athletes reported depressive symptoms. The researchers also found a positive relationship between athletic identity and depressive symptoms in their sample (Sanders & Stevinson, 2017). Furthermore, in a meta-analysis of athletic transitions, Park et al. (2013) reported that out of 122 studies, 34 found negative correlations between athletic identity and the quality of transitions out of sport related to a loss of identity. In addition, during their transition from sport, many athletes indicated they had an immense sense of identity loss and that something was missing (Stokowski et al., 2019). Although cause and effect cannot be determined, the negative relationships between loss of identity and the adjustment process could imply that those with higher athletic identity are

at risk for poor adjustment after transitioning out of sport. The relationship between high athletic identity and negative psychological outcomes during the transition out of sport in elite athletes has been well examined, however little is known about the relationship between dual transitions and amateur athletes.

As athletes transition out of sport, they experience many negative emotions during the adjustment period. Athletes who leave sport with a high level of athletic identity have reported sadness, anxiety, decreases in motivation, loss of interest in other activities (Menke & Germany, 2018; Murphy et al., 1996), and an increased risk of depressive symptomology and grief (Shander & Petrie, 2021; Giannone et al., 2017; Menke & Germany, 2018). For example, 15 former male college varsity athletes reported that sport retirement was similar to the loss of a good friend causing a grief-like response, and struggled to cope with the sadness and disappointment of what felt like an unfinished career (Menke & Germany, 2018). In a study of 72 college varsity athletes who attended western Canadian universities (54 females, 18 males, $M_{age} = 22.1$ years, $M_{years\ in\ sport} = 13.8$), participants were recruited in their final year of sport participation to determine levels of athletic identity, and anxiety and depressive symptoms (Giannone et al., 2017). Athletic identity was found to positively predict anxiety symptoms after retirement, even after controlling for pre-retirement anxiety levels (Giannone et al., 2017). More specifically, athletic identity and sport transition research has indicated that the higher levels of athletic identity during the transition out of sport are associated with greater mental health concerns, which may contribute to the difficulty of transitioning out of athletics. Relatedly, intercollegiate varsity athletes transitioning out of sport also reported a lack of motivation to find work because they were unsure what type of work to pursue and lacked motivation to seek out help for the difficulties they experienced (Jewett et al., 2018; Menke & Germany, 2018). To date,

there is limited understanding of younger athletes during their transition out of sport who are in earlier stages of identity development.

Transition to College

The transition to college has been a focus of research in part because of the large number of students who choose to pursue post-secondary education. Sixty-three percent of high school students continue their education after graduating (U.S. Bureau of Labor Statistics, 2021). For many, the college transition may be both an exciting and stressful time. High school graduates often move out on their own, leave their friends and family, take on more responsibilities, and continue to explore their interests in the process of developing identity while adjusting to college life. All these changes can lead to first-year college students reporting higher levels of stress (Maymon & Hall, 2021). As high levels of stress are often an indicator of poor mental health (Maymon & Hall, 2021), understanding the levels of first-year university students' stress and distress are important to help educators and administrators improve students' experiences in college.

Stress and Distress During College Transition

To fully understand the experiences of first-year college students, researchers need to discern the difference between stress and psychological distress. Stress is the physical and mental feelings an individual has when presented with challenges in life that they have perceived as having inadequate resources to be able to effectively respond to and overcome (Dyson & Renk, 2006; Maymon & Hall, 2021). Psychological distress is experienced when an individual is feeling anxious or in an upset mood, which can be caused by internal or external sources (Bore et al., 2016), and by prolonged exposure to stress (Maymon & Hall, 2021). In a study of Australians, those who attended college reported greater psychological distress and lower well-

being related to feelings of unmet expectations of their parents, friends, and professors compared to Australians not attending university (Bore et al., 2016). Another sample of Australian college students reported that high levels of stress were caused by a lack of approachability, lack of empathy, and miscommunication about class expectations from professors (Baik et al., 2019).

High school students in the United States (U.S.) have reported similar stressors in their transition to college. First-year college students in the U.S. reported that stress was associated with family life-changes (e.g., family losses, conflicts, financial worries, and breaking away-independence), college change, and avoidant coping were all positively correlated with depression (Dyson & Renk, 2006). In a recent longitudinal study of freshman during their transition to college ($N = 5509$, 33.5% male, 64.8% females, 1.7% non-cis gender $M_{age} = 19.4$ years, 37.3% white, 1.7 % American Indian, 3.7% African American, 9.1% Hispanic/ Latino, 30.0% Asian, 1.5% Hawaiian/Pacific Islander, 16.7% International), Kroshus et al. (2021) examined how acute and chronic stressors during the transition to college influenced anxiety and depression. The researchers also examined if self-compassion and coping skills were buffers to the negative outcomes of stress. After three data collection points over 18 months, the researchers found that depression and anxiety increased during the transition to college in the fall and the students who were exposed to chronic stressors (e.g., issues with a partner or family, financial issues, experiences of discrimination based on race, ethnicity, nationality, or gender) throughout their freshman year had the largest increases in depression and anxiety. Further, self-compassion and coping skills did not buffer the negative symptoms of exposure to chronic stress. Kroshus et al. (2021) offered insight into the college freshman experience, however, the inconsistencies in response rates from different data collection points limit the implications of the results. In another longitudinal study of college freshman in the U.S. ($N = 70$, 23% male,

$M_{age} = 18.49$), researchers found that the students who experienced more loneliness in their transition to college and had low coping efficacy had increased cortisol levels, a common marker for stress, in the morning and the rate of decrease of cortisol during the day was slower than students with lower levels of loneliness (Drake et al., 2017). As high school students transition to college, they begin to develop more of their individuality by separating from their parents and gaining more autonomy (Arnett, 2000), therefore a certain level of loneliness could be expected, however the increase in cortisol due to higher levels of experienced loneliness may cause negative health outcomes later in life (Drake et al., 2017). Overall, it appears that college freshmen often experience increases in stress during their transition to university.

Matching stressed college students to helpful resources may be beneficial for this group. Although students understood what was affecting their mental health (Bore et al., 2016; Dyson & Renk, 2006), and knew what types of resources would help them succeed, they reported their universities have not provided enough information about what was available to them (Baik et al., 2019). Therefore, students may be experiencing some stress during their transition to college that could be prevented or treated. Overall, stress and psychological distress are prevalent among college students; thus, it is imperative that researchers and universities understand how to provide the necessary support to their students.

Moderators of College Transition and Stress

Coping Mechanisms. The transition to college can be a stressful experience, but there are ways that students can improve their experience and decrease the intensity of the stress experienced during that time. For instance, coping mechanisms can be used when an individual experiences a stressful situation and attempt to decrease the significance of the perceived threat by altering the events or circumstances associated with the threat (Dyson & Renk, 2006).

Lazarus and Folkman (1984) conceptualized the idea that there are different types of coping strategies an individual can utilize during times of high stress; three of the most common types of coping discussed are problem-focused, emotion-focused, and avoidant coping mechanisms. According to Lazarus and Folkman's model of coping, when an individual uses problem-focused coping, the person attempts to actively change the stressful situation. Further, emotion-focused coping is the process of managing the emotions caused by the stressor, and avoidant coping is when the individual chooses to ignore the stressor by doing other things like spending time with people or self-soothing (Lazarus & Folkman, 1984). According to the model, one form of emotion-focused coping is used when people seek out social support to process their stressors, which has had mixed reporting on the positives (Aspinwall & Taylor, 1992) and negatives (Russell et al., 2018) of its effectiveness. Avoidant coping has been found to have negative consequences such as more difficult transitions to college (Aspinwall & Taylor, 1992) and higher rates of depression in freshman college students (Dyson & Renk, 2006). Problem-focused coping has been determined to be the most beneficial for helping people work through stressors (Aspinwall & Taylor, 1992; Dyson & Renk, 2006), however, some stressors do not have a solution while in college (e.g., moving away from home), so having positive emotional coping strategies may be the best solution to manage stress. Research that examines how participation in readily accessible sport, such as recreational sport on college campuses, may be utilized as a form of emotion-focused coping that could influence individuals' mental health and perceptions of stress in their first year of college.

Social Support. Another mediator for the transition to college is a first-year students' social support network. There are many sources of support for a freshman college student including peer, familial, faculty, and institutional support (Maymon & Hall, 2021). The benefits

of social support have been extensively documented in the transition to college research. Students with increased levels of social support during their transition to college reported fewer depressive symptoms, better adjustment to college (Maymon & Hall, 2021) and noticed that regular interaction with their peers had a protective effect on mental wellbeing (Baik et al., 2019). In a study of 71 college freshmen ($M_{age} = 18.05$, and 76% female) and the effects of social support on transition maladjustment, Taylor et al. (2014) found that perceived social support from friends and family was negatively correlated with reported anxiety and depression symptoms. Further, in an experimental study of 88 traditional first year, U.S. college students (i.e., students who graduated from high school the previous spring), researchers found the students who attended a nine-week social support group reported significantly lower levels of loneliness than control participants who only met once during the fall semester (Mattanah et al., 2010). Students may find a social support system on college campuses through athletic team participation whether that be recreational or varsity. Athletes are often embedded in a social support system because they are a part of the team and feel like they are “part of a family almost every hour of the day” (Stokowski et al., 2019, p. 413). Thus, playing sport in college could have a benefit during the transition because the athletes will have easier access to a social support system. Recreational sports, such as intramurals or club teams, are more accessible to the majority of college students than varsity teams, therefore student participation in these activities should be studied to understand the potential benefits and consequences, particularly those related to psychological well-being and transitions.

Athlete Status and Transition to College

Many variables can shape the quality of transition to college for high school athletes and influence their stress levels. Athletes in high school have transitioned to college to continue their

athletic career as a college varsity athlete, participated in recreational sport (e.g., intramurals or club sports), or left the athlete role completely. No matter how the former high school athlete transitions to college, they will likely experience stress, but the sources of their stress may be different than non-athletes. Wilson and Pritchard (2005) surveyed 362 freshman students (310 non-varsity athletes and 52 athletes; M_{age} 18.47 years) at the end of their first semester in college to determine specific sources of stress that varsity athletes and non-athletes were experiencing. The authors found that both groups of first-year college students reported stressors related to academic stress but differed in all other categories assessed by The Survey of Recent Life Experiences. The 52 varsity athletes included in the sample, reported that sources of their stress came from a lack of time, number of responsibilities, and the high demands from their sport (Wilson & Pritchard, 2005). In contrast, the 310 non-athletes in the sample reported sources of stress such as financial burdens, transportation difficulties, feelings of isolation or being ignored, and unhappiness with physical appearance when compared to their athlete counterparts. Further, varsity athletes from one small private university reported higher levels of stress related to their relationships, time management issues, and lack of sleep compared to their non-athlete counterparts (Wilson & Pritchard, 2005). Similarly, in a sample of 103 intercollegiate varsity athletes at another large university in the U.S., most participants described their first year of college to be “busy and stressful” (Higbee & Schultz, 2012, pg. 258). The researchers also found that the intercollegiate varsity athletes struggled with time management that affected some of their final grades while others perceived the difficulty of their first semester as a challenge that was exciting (Higbee & Schultz, 2012). Ultimately, both freshman athletes and non-athletes experienced stress related to their transition to college, but their primary sources of stress were different.

To expand the knowledge on first-year student-athletes' stress and the potential positive outcomes, researchers have studied how the transition to college was perceived by varsity athletes. College varsity student-athletes expressed that the stress of their first year was challenging but they still enjoyed the process, while others indicated that their stress was overwhelming (Higbee & Schultz, 2012). Other researchers who used data from the National College Health Assessment from the Fall of 2008 to the Spring of 2009 and the Spring of 2010 found that college students, who were not varsity athletes but who were participating in organized sport, had higher GPAs compared to students who were not participating in organized sport (Vasold et al., 2019). This research indicates that there are positives to participating in recreational sport in college, especially for former high school athletes as it may decrease levels of stress and psychological distress.

First-year college students who chose to play recreational sports, in particular, have reported benefits related to their academics, life satisfaction and gaining a new social group (Helms & Moiseichik, 2018; Rundio & Buning, 2021; Vasold et al., 2019). In one study, college students who participated in recreational sport during their first year of college were more likely to report an A or B versus a C grade point average when compared to students who did not play recreational sports (Vasold et al., 2019). Similarly, interviews with eleven new collegiate club sport members (6 males, 5 females, $M_{age} = 21$ years, with 1 to 3 semesters of club sport experience), indicated that the participants who had previous experience playing a sport, sought out club sports to feel like they were around like-minded people and to be a part of a group (Rundio & Buning, 2021). Overall, first-year college students who were athletes in high school reported both positive and negative perceptions of their experiences during the transition into

college. Altogether, these studies provide a good example of how the transition within or out of sport is an individualized process (Stambulova et al., 2020).

In the process of transitioning to college and changing athletic status to college varsity athlete, college recreational athlete, or disengaged athlete, first-year college students experience stress that can make adjustment to their new life difficult. Examining how the strength of athletic identity and how satisfied the high school athlete was with their athletic career are related to a college student's experiences may be important factors to examine to help grow researchers' knowledge of college freshmen experiences.

Transition out of Sport, Athletic Identity, and Stress

There appears to be a positive relationship between athletic identity, stress, and difficult transitions from sport. In particular, during their transition out of sport, athletes with high levels of athletic identity reported higher levels of stress than those with lower levels of athletic identity (Fuller, 2004; Lally, 2007). These higher levels of stress were found in samples of Italian professional athletes (Pica et al., 2019), Canadian intercollegiate varsity athletes (Lally, 2007), American intercollegiate varsity athletes (Fuller, 2004), and disengaged high school varsity athletes (Russell et al., 2018), indicating that having a high athletic identity during the transition out of sport may prolong the adjustment period (Stambulova, 2003; Taylor & Ogilvie, 1994). For example, a college athlete reported that because they had maintained a high athletic identity throughout their final season of college sport they experienced an identity crisis which they believe caused increased stress levels, a more difficult transition, and delayed the acceptance of their new roles without sport (Lally, 2007). Examining how different populations are influenced by the relationships between athletic transitions and mental health factors is important so that CMPCs can better develop programs to help individual athletes during their transition. More

specifically, understanding how transitioning out of sport influences a former high school athlete's stress levels could help CMPCs support their clients during that transition period.

Multiple Transitions, Athletic Identity, and Stress

Both transitions out of sport and into college have been determined to be stressful, yet few have examined how simultaneous transition to college and out of competitive sport influences levels of stress, psychological distress, and psychological well-being. For example, in a study of college freshmen, Russell et al. (2018) recruited 554 disengaged high school athletes (328 females, 226 males, 59% between the ages of 18-19) to examine athletic identity, coping, and perceived stress during the transition into college. Athletic identity was divided into three dimensions, social identity (e.g., "most of my friends are athletes"), negative affect (e.g., "I would be very depressed if I were injured and could not compete in sport"), and exclusivity (e.g., "sport is the most important part of my life"), to better understand its influence on stress and coping mechanisms (Russell et al., 2018). The athletic identity dimensions of exclusivity and negative affect were positively correlated with perceived negative stress for disengaged athletes who used emotion-focused coping strategies (Russell et al., 2018). However, this research lacks information about the positive experiences of disengaged athletes during their transition out of sport and into college. A limitation of this study was the researchers determined that 55% of the sample was still participating in recreational sport but did not specify if continued sport participation influenced levels of athletic identity or what level of sport the participants were competing in. If an individual continued to participate in sport their level of athletic identity may remain high, which could then influence their adjustment to college either positively or negatively.

The adjustment to college life is influenced by many factors and can shape a new college student's experience. Lubker and Etzel (2007) examined levels of athletic identity, via surveys, related to the students' overall college adjustment in freshmen (male = 165, female = 152) who were classified as non-athletes ($n = 106$), disengaged athletes ($n = 133$), and current college varsity athletes ($n = 78$), and how levels of athletic identity related to the students' overall college adjustment. Three surveys (demographics and descriptive variables of athletic experiences, Athletic Identity Measurement Scale; Brewer & Cornelius, 2001, and The Student Adaptation to College Questionnaire; Baker & Siryk, 1984) were distributed to freshmen via new student advising workshops or first-year orientation classes (Lubker & Etzel, 2007). The level of athletic identity was different between all three athletic status groups with current college varsity athletes reporting the highest level and disengaged athletes reporting higher athletic identity than non-athletes who reported the lowest level of athletic identity. The authors' results indicate that in the first year of college, the disengaged athlete could be considered a separate group needing specialized guidance during their adjustment to college in identity exploration (Lubker & Etzel, 2007). Further, athletic identity was divided into three groups, high, medium, and low for both current varsity athletes and disengaged athletes; the medium-level athletic identity group reported the lowest level of academic adjustment (Lubker & Etzel, 2007) suggesting that there may be a relationship between academic adjustment and athletic identity for disengaged athletes in their transition to college, however, the relationship is not fully understood. Conversely, there was no difference in academic adjustment between the three different athletic status groups (Lubker & Etzel, 2007). Regarding the athletic experience variables, for disengaged athletes, academic performance was positively correlated with control over disengagement and level of perceived social support (Lubker & Etzel, 2007). Disengaged high school athletes who are

transitioning into college represent a group of students who do not fit the typical athlete and non-athlete definition because they may be in the process of shedding their athletic identity while exploring other identities simultaneously. It is important to research and understand this sub-population of athletes during their transition out of sport and into college in order to best serve their needs.

Exiting the athlete role in college can cause a prolonged transition period because many high school athletes had the desire to continue their athletic career. According to the National Collegiate Athletic Association (NCAA, 2022), 3 to 12.8% of male high school athletes and 3.9 to 26.2% of female high school athletes continue their athletic careers into college. This leaves the majority of high school athletes transitioning out of the athlete role while also transitioning to college. There is a potential to have a difficult transition if the athlete was disappointed with the way their athletic career finished (e.g., wanting to continue competing but did not qualify for a team; Fuller 2014). Helms and Moiseichik (2018) examined the relationship between dual transitions and feelings of loss and found that high levels of athletic identity were associated with high levels of loss of sport, and loss of sport was positively correlated with higher participation in recreational sport and life satisfaction while in college (Helms & Moiseichik, 2018). Although the study was a cross-sectional analysis, the positive relationships may mean that high athletic identity may provide a protective factor if the disengaged high school athlete participates in recreational athletic opportunities during the transition to college. Helms and Moiseichik's (2018) study was limited by a small sample size and the use of new scales developed by the researchers. However, findings suggest that recreational sport participation may be a positive coping mechanism for disengaged high school athletes to manage their stress levels as they transition into college. Given researchers have found differences among college students who

had high and low participation in recreational sports in the relationships between athletic identity and life satisfaction (Helms & Moiseichik, 2018), perceived stress (Russell et al., 2017), and academic adjustment in college (Lubker & Etzel, 2007), there is room for future research to expand the current knowledge on the transition experiences of disengaged high school varsity athletes in college. These findings could potentially apply to a population of 8 million high school athletes (National Collegiate Athletic Association, 2022) in the U.S., leading to a better understanding of how athletes transition out of high school sport and into college.

Summary and Conclusion

There has been extensive research on the transition to college and transition out of sport and their relationship with mental health and stress. It has also been found that athletes who were more satisfied with their athletic careers were more likely to have had a shorter, more positive transition experience (Park et al., 2013) and had higher life satisfaction after their athletic career (Sinclair & Orlick, 1993). Expanding the research on athletic career satisfaction to include high school varsity athletes who transition out of sport and into college simultaneously will help CMPCs expand their knowledge base of high school varsity athletes' dual transitions. Researchers have determined that athletic identity was related to the quality of the adjustment period after leaving the athlete role (Taylor & Ogilvie, 1994) and the more an athlete was satisfied with their athletic career the easier the transition out of sport was (Shander & Petrie, 2021; Sinclair & Orlick, 1993). While all four topics have been studied separately, few researchers have examined the relationships between athletic identity, athletic career satisfaction, psychological well-being, and psychological distress during a simultaneous transition out of sport and into college. This study aims to bridge the gap to allow for a better understanding of high school athletes' transition out of sport, the experiences of disengaged athletes in their first

year of college, and to add to the literature on the psychological factors related to college recreational sport participation. If CMPCs who work with high school athletes can develop a better understanding of disengaged high school athletes in their transition to college, there is potential to find ways to decrease the burden of prolonged exposure to negative stressors and understand strategies to build positive outcomes. Given that previous researchers have mostly focused on the negative consequences of the transition out of sport there is a gap in the understanding of how some athletes experience psychological well-being and flourishing after their athletic career. To better understand both the positive and negative aspects of transitioning out of sport, flourishing and psychological distress are worth assessing.

Introduction

The transition to college is a multidimensional process that includes positive and negative experiences that first-year college students must cope with. Transitioning to college can increase the amount of stress an individual experiences due to moving away from home and adjusting to the demands of college courses (Maymon & Hall, 2021). Conversely, the transition to college can lead to psychological well-being, which is the feeling of being connected to other people, while striving for true potential and life fulfillment (Ryff, 1989). For example, students who report psychological well-being were open to new experiences and expanded their social support while in college (Volstad et al., 2020). However, high school athletes who are transitioning into college simultaneously when transitioning out of sport may experience more distress and less well-being than non-athletes because of the dual transition. The level to which an individual associates with the athlete role, known as one's athletic identity (Brewer et al., 1993) and how satisfied an athlete was with their athletic career (i.e., athletic career satisfaction; Cecić Erpič et al., 2004), could be related to the quality of the transition to college and out of sport. Although there is a plethora of knowledge about college and athletic transitions independently, little is known about the dual transition experiences of former high school athletes. Therefore, increasing the knowledge of the psychological distress and well-being of high school athletes' experiences during the dual transition will add to the athletic transition literature, specifically for this group of amateur athletes.

Traditional first-year college students are in the developmental stage defined by Arnett (2000) as emerging adulthood, which is a time in a person's life when they are increasing their cognitive maturity, forming new identities by participating in new activities, and expanding their social circles. During the transition to college, first-year college students often report higher

levels of stress associated with life changes, which is often related to a decline in mental health (Maymon & Hall, 2021). Prolonged stress can lead to psychological distress, which is when an individual experiences extended feelings of anxiety or depressed mood (Maymon & Hall, 2021). First year college students in the U.S. reported that high levels of stress were related to family life changes, conflicts, financial worries, and increased independence (Dyson & Renk, 2006). Additionally, in a longitudinal study of first-year college students, Kroshus et al. (2021) found a positive relationship between chronic stress in the first year of college and depression and anxiety symptoms. Taken together, these studies show that increased levels of stress during the college transition are related to lower well-being, family life changes, and financial worries (; Dyson & Renk, 2006). The reasons behind first year college students experiencing increased stress has been well documented, however there is limited knowledge on the experiences of college student well-being and how a dual transition (i.e., out of sport and into college) within a short time frame relates to psychological distress and well-being.

Alternatively, high school students transitioning to college can experience psychological well-being and may even flourish within their first year of college. Flourishing is defined as having positive relationships, feeling respected by others, and having a meaning or purpose in life (Diener et al., 2010). In a qualitative study of first-year Canadian college students, participants reported they flourished during their first year of college because they developed new relationships, were open to being uncomfortable in new experiences, and understood that there would be challenges to overcome (Volstad et al., 2020). Additionally, students who flourished in their first year of college reported a supportive social support network and expanded their identities by trying new activities (Volstad et al., 2020). Further, in a longitudinal study of first year college students in the United States who were enrolled in a course where

students were taught the principles of flourishing (Hirshberg et al., 2022) researchers found that students in the class reported significant improvements in social emotional skills, flourishing perspectives, and psychological well-being outcomes, compared to a control group of students not enrolled in the course (Hirshberg et al., 2022). In sum, flourishing may be a sign of psychological well-being and a positive transition experience. Former high school athletes may flourish or experience distress in their first year of college, yet it is not well understood how athletic identity and athletic satisfaction relate to psychological functioning.

People develop identities throughout their lifetime based on specific interests and social groups (i.e., athletic identity). According to Brewer and Cornelius' (2001) athletic identity model there are three dimensions within athletic identity. The first dimension is an individual's social identity in sport, which is the extent that an athlete identifies themselves as an athlete (Brewer & Cornelius, 2001). Exclusivity is the second dimension, which is how much the athlete defines their self-worth through sport performances. The final dimension is negative affectivity, which is how intensely an athlete experiences negative emotions after disappointing performances in sport. An athlete with high athletic identity, may have higher motivation to continue participating and improve sport performances (Brewer et al., 1993). High athletic identity in former athletes is also positively associated with exercising after leaving sport (Brewer et al., 1993). However, an athlete with a high athletic identity during their transition out of sport may also experience negative psychological consequences such as increased feelings of loss (Brewer et al., 1993). The relationship between athletic identity and stress while transitioning out of sport has been studied frequently in intercollegiate varsity and elite-level performers. In particular, intercollegiate varsity athletes who reported having a higher athletic identity reported higher levels of stress during their transition out of sport, were more likely to experience an identity

crisis, and took longer to transition into the next stage of life (Lally 2007). This loss of identity may be particularly apparent during the transition from high school when people have the greatest opportunity for identity exploration and development due to the increased level of independence from adolescence and the security of parental support while in college (Arnett, 2000).

Athletic transitions are defined as a change in an athlete's career that requires the individual to adapt to their new circumstances using available resources (Stambulova, 2020). Taylor and Ogilvie (1994) identified four causes of athletic retirement: for example, age, deselection, injury, and free choice. Regardless of the cause, an athlete's transition can be categorized as successful, crisis, or unsuccessful depending on personal and developmental factors such as decreasing identification with the athlete role, exploring interests outside of sport, and utilizing their social support system (Stambulova, 2020). Researchers created multiple models to explain the factors that contribute to a successful or crisis transition out of sport. Taylor and Ogilvie (1994) proposed that an athlete's developmental experiences, self-identity, perceptions of control, and social identity interact with their coping skills, social support, and pre-retirement planning, which together contribute to the quality of an athletic transition. Additionally, Stambulova (2003) identified two types of transitions, normative (i.e., a predictable transition like choosing to transition out of an athletic career) or non-normative (i.e., an unplanned transition like getting injured). Stambulova (2003) also proposed that each athlete has varying coping skills to help them meet the demands of the transition out of sport. Overall, the interaction between the cause, preparation, and resources available to the athlete will guide the individual to either a successful or crisis transition out of sport (Stambulova, 2003; Taylor & Ogilvie, 1994).

Another variable to consider during athletic transition is athletic career satisfaction, which is defined as when an athlete felt they achieved their sport goals (Cecić Erpič et al., 2004). Athletes who felt they met their sport goals reported higher levels of life satisfaction (Shander & Petrie, 2021; Sinclair & Orlick, 1993), fewer depressive symptoms (Shander and Petrie, 2021), fewer negative emotions and less adjustment difficulty (Ryan, 2019) compared to athletes who did not achieve their athletic goals. An athlete with high athletic identity who did not reach their sport goals may experience greater loss and distress or could choose to not explore new identities during their transition to college, thus making the process more difficult.

It is well understood that transitioning into college from high school can cause increases in stress yet, the athletes who transition out of sport and into college simultaneously have been studied infrequently. Researchers have studied components of well-being in disengaged athletes, which are athletes who played sports in high school, but have either chosen not to play recreational sport in college or were not allowed to play intercollegiate varsity sports. Russell and colleagues (2018) examined the relationship between athletic identity, stress, and coping among 554 (59.2% female, 40.1% male) former high school athletes (59% of the sample was between 18-19 years old) during their transition into college (Russell et al., 2018); notably, 55% of the sample reported currently participating in sport. The athletic identity dimensions exclusivity and negative affect were positively correlated with perceived negative stress when the individuals reported using emotion focused coping in disengaged high school athletes (Russell et al., 2018). In addition, Lubker and Etzel (2007) compared first-year intercollegiate varsity athletes, disengaged athletes, and non-athlete students' academic adjustment during their college transition and found that both varsity and disengaged athletes who reported medium levels of athletic identity also reported the lowest level of academic adjustment to college. On the

other hand, in Russell et al. (2018) study, the athletic identity subscale of social identity was negatively correlated with perceived stress and emotion-focused coping. The positive relationship between athletic identity and stress during the adjustment to college could relate to the psychological well-being of former high school athletes during the transition to college. Overall, the dual transition into college and out of sport can affect the amount of psychological well-being that individuals experience during a time when some former high school athletes struggle to adjust to college academics (Lubker & Etzel 2007) and cope with challenges during the transition (Russell et al., 2018).

As high school students transition into college, there are many opportunities for them to explore different activities and expand their identity, and collegiate recreational sport (e.g., intramurals or club sports) is one of those options. Helms and Moiseichik (2018) asked first-year college students who participated in recreational sport about their athletic identity, life satisfaction, and loss in sport. The researchers found that first year college students who reported higher levels of participation in recreational sport also reported higher levels of life satisfaction. Further, the students who reported high levels of athletic identity also reported high levels of feelings of loss in sport; however, increased feelings of loss in sport were positively correlated with participation in recreational sport. Essentially, the former high school athletes with high athletic identity and increased feelings of loss after sport sought out recreational sport which could have led them to feel higher life satisfaction compared to those who did not participate in recreational sport. The relationship between recreational sport participation and psychological well-being in first-year college students is still not fully understood; however increased athletic identity and feelings of loss after sport may lead former high school athletes to participate in recreational sport and feel higher life satisfaction than those with low recreational sport

participation (Helms & Moiseichik, 2018). Altogether, it appears that disengaged high school athletes may use recreational sport participation as a coping mechanism and a way to improve mental health. However, no studies have examined the psychological well-being of first-year college students based on current recreational sport participation status; previous studies have recruited either non-athletes or only varsity athletes. Athletic satisfaction research has also been limited to intercollegiate varsity and elite-level athletes; therefore, examining how former high school athletes felt about their high school athletic career and its relationship to psychological well-being will help professionals potentially identify high school and collegiate recreational athletes who need the most support.

Throughout the literature, few researchers have examined psychological well-being among individuals who experienced a dual transition of individuals leaving sport and entering college. More specifically, it is unknown how former high school athletes experience distress and flourishing in their first year of college depending on current recreational sport engagement. The current study aimed to examine the psychological distress and flourishing levels of disengaged high school athletes and continued athletes compared to non-athletes.

The study had the following research questions: 1) do continued athletes, disengaged athletes, and non-athletes differ in their levels of reported psychological distress and flourishing during their first year of college; 2) are there differences in levels of psychological distress and flourishing in former high school athletes with different current recreational athletic status (disengaged and continued athletes) while controlling for their high school athletic identity; 3) how much variance in psychological distress scores is explained by flourishing, athletic satisfaction, and high school athletic identity in former high school athletes; and 4) how much variance in flourishing scores is predicted by psychological distress, athletic satisfaction, and

high school athletic identity in former high school athletes. It was hypothesized that disengaged high school athletes would report higher levels of psychological distress and lower levels of flourishing than both non-athletes and current recreational athletes, and that disengaged high school athletes would report higher levels of psychological distress and lower levels of flourishing than current recreational athletes while controlling for athletic identity. Finally, exploratory analyses were conducted on the relationship between athletic satisfaction, athletic identity, psychological distress, and flourishing in former high school athletes.

Methods

Participants

Participants were 347 college freshmen enrolled in a university or college in the U.S. who graduated from high school within the last year. Their ages ranged from 18 to 20 years old ($M_{age} = 19.30$; $SD = .67$). The sample included 66.3% continued athletes (former high school varsity athletes who played college intramurals or club sports), 2.9% disengaged athletes (former varsity high school athletes who were no longer playing competitive sport at any level), 13.5% non-athletes (students who did not play any organized sport in college and did not play sports in high school), and 17.3% new athletes (students who were not varsity athletes in high school, but played recreational sport in college). Of the participants who played recreational sport (i.e., continued, and new athletes) 62.5% reported only playing intramurals, 10.1% only played club sports, and 32.9% played both club and intramurals. Of the sample, 66.9% identified as a cisgender man, 29.4% cisgender woman, .9% genderqueer, .6% transgender woman, .3% transgender man, .3% two-spirit, .3% agender, and 1.4% gender not listed or chose not to answer. Participants identified their race/ ethnicity identity as 56.8% White, 12.7% American Indian/ Alaskan Native, 9.2% Black/ African American, 8.6% Hispanic/ Latino/ Latina/ Latinx,

5.2% Asian/ Asian American, 4.6% Native Hawaiian or Other Pacific Islander, 1.7% Arab/ Middle Eastern, and 1.2% preferred not to say. Former high school athletes played one or more sports in high school with the top five sports represented were basketball (42%), baseball (22.5%), football (19.2%), lacrosse (17.1%), and volleyball (12.1%). Current college recreational sport athletes played one or more sports, with the top five being basketball (37.5%), football (19.3%), baseball (18.6%), swimming and diving (14.8%), and lacrosse (14.5%). It was not specified what type of football current recreational athletes in college were participating in, therefore it could indicate either contact or flag football.

Measures

Flourishing Scale

The Flourishing Scale uses a Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*; Diener et al., 2010; see Appendix D). The scale is comprised of eight items that are summed to provide a total flourishing score (Diener et al., 2010). Higher scores indicate greater levels of flourishing. Example items are, “I lead a purposeful and meaningful life” and “I am optimistic about my future” (Diener et al., 2010). The Flourishing Scale is composed of a single factor with an acceptable level of internal consistency (Cronbach’s alpha = .87; Diener et al., 2010). The Flourishing Scale Cronbach’s alpha in this study was .90.

The Depression Anxiety and Stress Scale

The Depression Anxiety and Stress Scale (DASS-21) measures levels of depression, anxiety, and stress symptoms using a four-point Likert scale from 0 (*Did not apply to me at all*) to 3 (*Applies to me very much, or most of the time*; Lovibond & Lovibond, 1993; see Appendix C). Example questions from the DASS-21 are, “I found it difficult to relax” and “I found myself getting upset by quite trivial things” (Lovibond & Lovibond, 1998). The DASS-21 is comprised

of three sub-scales (depression, anxiety, and stress), which all have seven items scored by summing the questions in each sub-scale and multiplying each score by two, and a total can be (Lovibond & Lovibond, 1998). Each of the subscales and the total DASS-21 scores has acceptable internal consistency (total Cronbach's alpha = .88; Henry & Crawford, 2011; depression Cronbach's alpha = 0.94, anxiety Cronbach's alpha = 0.87, and stress Cronbach's alpha = 0.91; Lovibond & Lovibond, 1998). In the current study, the total DASS-21 scores were used in the primary analysis as a measure of total distress, as the dependent variable being measured was overall psychological distress, and not the individual variables of stress, depression, and anxiety (Lovibond & Lovibond, 1998). The DASS- 21 Cronbach's alpha in this study was .94.

Athletic Identity Measurement Scale (AIMS)

Athletic identity was measured using The Athletic Identity Measurement Scale (AIMS) developed originally as a 10-item questionnaire by Brewer et al. (1993) and later revised by Brewer and Cornelius (2001) to a 7-item version. The original AIMS was developed as a unidimensional scale however, further research by Hale et al. (1999) suggested that a three-dimensional scale (e.g., social identity, exclusivity, and negative affectivity) for the 10-item questionnaire, and the 7-item version (Brewer & Cornelius, 2001) was a better fit for the athletic identity construct. The 7-item version of the AIMS is measured on a 7-point Likert Scale starting from 1 (*strongly disagree*) to 7 (*strongly agree*; see Appendix B). Example questions from the AIMS are "I consider myself an athlete" and "I have many goals related to sport" (Brewer & Cornelius, 2001). To score the AIMS, researchers can sum the items from each of three subscales: social identity (e.g., "most of my friends are athletes"; three items), exclusivity (e.g., "sport is the most important thing in my life"; two items), and negative affectivity (e.g., "I

would be very depressed if I were injured and could not compete in sport”; two items; Brewer & Cornelius, 2001) or sum all items for a total athletic identity score (Hale et al., 1999). Higher total scores indicate a higher identification with the athlete role, and higher scores for each subscale indicate more identification with subscales of the AIMS (Brewer & Cornelius, 2001). In the current study, a retrospective version of the AIMS was used to measure the level of perceived athletic identity the participant recalled having as a high school athlete; an example of questions from the retrospective version is, “I had many goals related to sport” (Grove et al., 1997). Internal consistency for each subscale on the 7-item version (social identity = .87, exclusivity = .89, and negative affect = .76; Weinberg et al., 2013) was found to be acceptable. Internal reliability for both a retrospective version of the AIMS and the 7-item version of the AIMS were determined to be acceptable for total scores (Cronbach’s alpha = .79; Grove et al., 1997; Cronbach’s alpha = .81; Brewer & Cornelius, 2001) respectively. The AIMS Cronbach’s alpha for the 7-item version in the current study was .92 and the AIMS subscale Cronbach’s alphas for social identity, exclusivity, and negative affectivity in this study were .84, .85, and .84 respectively.

Athlete Satisfaction Scale

Athletic satisfaction was measured using the Athlete Satisfaction Scale developed by Turman (2006) in reference to participants’ high school athletic careers (see Appendix E). The Athlete Satisfaction Scale is a 6-item scale measured on a 9-point Likert scale from 1 (*not satisfied at all*) to 9 (*completely satisfied*; Turman, 2006). Higher scores indicate higher satisfaction with one’s athletic career. Sample questions from the Athlete Satisfaction Scale are “How would you describe your social interaction with your teammates while playing with them?” and “How would you describe your interaction with your coach at the beginning of the

season?” In the current study, participants were instructed to respond to questions based on their experiences in their primary high school sport. Items 1-6 on the Athlete Satisfaction Scale were modified to be retrospective and specifically referenced high school playing experiences (e.g., “How would you describe your social interaction with your *high school* teammates while playing with them?”). The total athlete satisfaction score was used in the analysis. The Athlete Satisfaction Scale is a single factor scale with good reliability (Cronbach’s alpha = .84; Turman, 2006). The Athletic Satisfaction Scale Cronbach’s alpha in this study was .90.

Demographic and Background Questions

Demographic questions were asked about participants' gender identity, race/ethnicity, age, and years of sport participation if applicable, and sports played in both high school and collegiate recreational sport. Additional items determined the athlete group assignment (i.e., non-athlete, disengaged athlete, or current recreational athlete; see Appendix F).

Procedure

The study’s protocol was approved by the Institutional Review Board. A power analysis was performed, with a statistical significance level of .05, a minimum target sample size of 180 participants would be needed for .80 power. Participants were included if they had graduated from high school within the last year and were enrolled in their first year of college courses (see Appendix G). Intercollegiate varsity athletes and former athletes who only played club sports not associated with their high school were excluded from this study because there is already a plethora of research about the transition experiences of intercollegiate varsity athletes and club sport athletes may have not transitioned in sport during their move to college. All other college freshmen who had graduated from high school in the Spring of 2022 (e.g., must be over 18 years old, did not only play club sports in high school) were included in the study to allow for

comparison of athletes and non-athletes. During recruitment, an unexpected group of athletes participated and were coded as new athletes (see Table 2 for means and standard deviations). These individuals did not play varsity sport in their senior year of high school yet had played college recreational sports. All participants completed the AIMS, Flourishing Scale, and DASS-21. Only former high school athletes completed the Athlete Satisfaction Scale. Data collection occurred from January to April 2023. Random stratified sampling of 33 National Collegiate Athletic Association (NCAA) Division I and 24 Division II public universities in the U.S. was utilized. A random number generator was used to select one school from each conference, and then the researcher searched both Facebook and Discord for a first-year college student specific page. If the group was public, the researcher posted the recruitment message (See Appendix J) with a link to the Qualtrics survey on the group page. If the group was private, the researcher either requested access to the group or asked the group administrator to post the recruitment message on the page. The researcher randomly selected another 79 schools until a minimum of 180 participants completed the survey, however, data collection continued past 180 participants to attempt to increase the number of disengaged athlete participants. In addition, snowball sampling was utilized by asking participants to forward the survey to other college freshmen at any university who met inclusion criteria. All recruitment outlets included a link to an anonymous online survey hosted by Qualtrics.

Participants were defined as non-athletes if they never competed in competitive sport during high school or in college. Participants were classified as disengaged athletes if they reported they were not playing recreational sports (e.g., intramural or club) in or outside college, but were varsity athletes during their senior year in high school. Participants were classified as continued athletes if they reported they were participating/had participated in recreational sports

in college after being a varsity athlete during their senior year of high school. Finally, participants were classified as new athletes if they did not compete in high school varsity sports but participated in college recreational sports. If participants met inclusion criteria, they were directed to a second electronic informed consent form, where they agreed to participate (see Appendix H), followed by the study's surveys. Participants could choose to enter their information into a separate survey for the chance to win a raffle for one of ten, \$25 Amazon e-gift cards as an incentive at the end of the survey.

A total of 136 first-year college student pages (i.e., Discord = 14, Facebook = 122) were found and either posted to or contacted to post recruitment materials. Overall, 987 students started the survey and 620 completed the survey. Of the 620 completed surveys, 347 were usable responses (i.e., met inclusion criteria and submitted complete data). Excluded data was comprised of 273 completed responses where participants reported an age greater than 20, submitted the same responses to multiple surveys at the same time, had inconsistent demographic answers, or submitted a random unrelated response to the open-ended question "if you have any comments or questions about any of the previous items, please explain here" that did not have any relevance to the study.

Data Analysis

Two individual ANOVAs were performed to examine the differences in the dependent variables of total psychological distress and flourishing between the independent variable of athletic status (current recreational athletes, non-athletes, disengaged athletes, new athletes). Two ANCOVAs were conducted to compare levels of psychological distress and flourishing between the two groups of former high school athletes (disengaged athletes and current recreational athletes) while controlling for total athletic identity scores. Finally, for former high school

athletes, two exploratory multiple regression analyses were conducted to predict the dependent variable of psychological distress and flourishing from the independent variables of athletic satisfaction, flourishing or distress, and the three subscales of athletic identity (social identity, exclusivity, and negative affectivity). The effect size was measured using eta squared, which ranges from small = .01, medium = .06, and large = .14 (Cohen, 1988), to examine the magnitude of variance between the different groups of athletes' levels of flourishing and psychological distress, and Cohen's *d* was used to measure the mean difference between former high school athletes, which ranges from small = .2, medium = .5, and large = .8 (Cohen, 1988), with either high or low athletic identity and their levels of flourishing and psychological distress.

Results

Means and standard deviations, and the full correlation matrix for continued, disengaged, and non-athletes can be found in Table 1 and means and standard deviations for each subgroup can be found in Table 2.

Flourishing

On the ANOVA, there were no statistically significant mean differences between all three groups (disengaged athletes, continued athletes, and non-athletes) in flourishing scores: $F(2, 287) = 1.579, p = .208, \eta^2 = .011$ (small effect; Cohen, 1988). See Table 1 for all means and standard deviations. In the ANCOVA analysis, there was a Levene's test violation, therefore the ANCOVA could not be conducted given there was an interaction between the covariate of athletic identity and the dependent variable of flourishing (Pallant, 2016). Consequently, the relationship between athletic identity and flourishing was investigated using Pearson product-moment correlation coefficients for both disengaged ($n = 10$) and continued athletes ($n = 230$). Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. There was a non-statistically significant correlation between the two variables in disengaged athletes ($r = .616, p = .058$), but there was a large, statistically significant correlation for continued athletes ($r = .738, p < .001$).

Given the strong relationship between athletic identity and flourishing, the researcher conducted an extreme group split of plus or minus a half of a standard deviation from the median score (e.g., Zizzi et al., 2006) of total AIMS scores for only continued athletes ($Mdn = 33, SD = 5.719$) to conduct an independent samples t-test for mean differences in the two extreme groups. The extreme split resulted in a sub-sample of 65 participants (28.3%) in the low athletic identity group and 85 participants (37.0%) in the high athletic identity group. Levene's test for equality

of variances was violated, therefore the t value for equal variances not assumed was used; there were statistically significant differences in flourishing scores for high ($M = 47.40$, $SD = 4.78$) and low athletic identity ($M = 33.38$, $SD = 5.59$) groups of only continued athletes [$t(125.686) = -16.180$, $p < .001$, two-tailed]. The magnitude of the differences in the means (mean difference = -14.015 , 95% $CI = -3.167$ to -2.272) was very large (Cohen's $d = -2.722$; Cohen, 1988).

The standard multiple regression model was statistically significant, $R^2 = .680$, $F(5, 234) = 99.240$, $p < .001$, and accounted for 68% of the variance in flourishing scores; the model of higher total athletic satisfaction ($\beta = .389$, $p < .001$), higher athletic identity – exclusivity ($\beta = .175$, $p = .001$), higher athletic identity – negative affectivity ($\beta = .169$, $p = .002$), lower athletic identity – social identity ($\beta = .162$, $p = .006$), and lower total distress ($\beta = -.128$, $p = .002$) scores predicted higher flourishing levels. All five predictors' unique contributions were statistically significant. Former high school athletes' athletic satisfaction uniquely explained 7% of the variance in flourishing, followed by athletic identity – exclusivity (1.5%), athletic identity – negative affect (1.4%), distress (1.3%), and finally athletic identity - social identity (1%).

Psychological Distress

The ANOVA revealed no statistically significant mean differences between all three groups (disengaged athletes, continued athletes, and non-athletes) in distress scores: $F(2, 284) = 2.113$, $p = .123$, $h^2 = .015$ (small effect; Cohen, 1988) Preliminary checks were conducted for the ANCOVA to ensure that there was no violation of the assumptions of normality, linearity, homogeneity of variances, and reliable measurement of the covariate, however, there was a regression slope violation, therefore, the ANCOVA could not be conducted (Pallant, 2016). Pearson correlations were run on both disengaged and continued athletes to determine the relationship between athletic identity and psychological distress. There were no statistically

significant correlations for disengaged athletes ($r = .464, p = .177$), but there was for continued athletes ($r = -.411, p < .001$). The same extreme median split utilized for flourishing was used to create high and low levels of athletic identity in continued athletes. An independent samples t -test was conducted to compare the distress scores for continued athletes with high and low levels of athletic identity. Levene's test for equality of variances was violated, therefore the t value for equal variances not assumed was used; there were statistically significant differences [$t(144.870) = 6.434, p < .001$, two-tailed] in scores for the high ($M = 29.58, SD = 24.97$) and low athletic identity ($M = 51.35, SD = 16.36$) groups. The magnitude of the differences in the means (mean difference = -14.015 , 95% $CI = .661$ to 1.346) was very large (Cohen's $d = 1.005$; Cohen, 1988).

The planned multiple regression analysis to predict distress from five independent variables (total flourishing, athletic satisfaction, and all three subscales of athletic identity) was reduced to three independent variables because both the athletic identity subscales of negative affectivity and exclusivity did not reach a minimum correlation of $.30$. Subsequently, the amended standard multiple regression model was statistically significant, $R^2 = .219, F(3,236) = 21.996, p < .001$, and accounted for 21% of the variance in distress scores; with the model of higher flourishing ($\beta = -.243, p = .011$), higher athletic satisfaction ($\beta = -.180, p = .05$), and higher athletic identity – social identity ($\beta = -.092, p = .273$) predicting lower distress scores. Flourishing uniquely explained 2.2%, athletic satisfaction explained 1.2%, and athletic identity –

Table 1.*Pearson Correlations, Range, Means, and Standard Deviations, for Total Sample of Continued, Disengaged, Never, and New Athletes*

	Range	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. DASS – 21	0-126	347	44.48	23.09	-						
2. Flourishing	8-56	347	39.26	7.84	-.425**	-					
3. Athletic Satisfaction	6-54	240 ^a	37.24	7.46	-.188**	.374**	-				
4. Athletic Identity	7-49	347	29.83	9.04	-.227**	.452**	.788**	-			
5. AI – Social Identity	3-21	347	12.69	4.01	-.263**	.455**	.749**	.947**	-		
6. AI – Exclusivity	2-14	347	8.37	2.91	-.169**	.385**	.758**	.916**	.801**	-	
7. AI – Negative Affectivity	2-14	347	8.77	2.85	-.178**	.400**	.671**	.904**	.779**	.755**	-

Note. DASS = Depression, Anxiety and Stress Scale; AI = Athletic Satisfaction. ** $p < .01$

^a Only former athletes completed the Athletic Satisfaction Scale.

Table 2.

Means and Standard Deviations of Flourishing, Psychological Distress, Athletic Satisfaction, Athletic Identity (Total and Subscales) in First-Year College Students

	Flourishing		DASS-21		Athletic Satisfaction		AI – Total		AI – Social Identity		AI – Negative Affect		AI – Exclusivity	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Disengaged Athlete	38.20	9.02	45.80	16.67	38.00	4.62	33.60	11.97	14.60	5.82	9.40	3.31	9.60	3.10
Continued Athlete	40.25*	7.82	43.30	23.93	37.20	7.57	34.04	5.72	14.43	2.70	9.91	2.00	9.70	1.95
Non-Athlete	38.19	7.52	50.89	19.97	-	-	16.91	6.77	7.28	3.19	5.26	2.67	4.38	2.28
New Athlete	36.50*	7.33	43.73	22.60	-	-	23.18	6.73	9.95	3.08	6.22	2.21	7.02	2.60

Note. * Indicates difference at $p < 0.05$ level.

social identity explained .4% of current distress scores; flourishing was the only variable that made a statistically significant unique contribution to the variance in distress scores.

Exploratory Analyses

Exploratory analyses including a fourth group of athletes were conducted. A one-way ANOVA was conducted to explore the mean differences between the type of athlete (disengaged athletes, continued athletes, non-athletes, and new athletes) and levels of flourishing. Statistically significant differences were found between the four groups of college students, $F(3, 346) = 4.158, p = .007, h^2 = .035$ (small effect; Cohen, 1988); see Figure 1. Post hoc comparisons using Tukey HSD test indicated that the mean flourishing levels for continued athletes was higher than new athletes. No other differences were found. Another one-way ANOVA was conducted to explore the relationship between all four types of athletes and levels of psychological distress. Levene's test of homogeneity was violated therefore the Brown-Forsythe statistic was used. No statistically significant differences were found in distress levels, $F(3, 346) = 1.872, p = .139, h^2 = .012$ (small effect; Cohen, 1988); see Figure 2.

Discussion

This is the first known study to examine the relationship between psychological distress, psychological well-being, athletic identity, athletic satisfaction, and current recreational sport participation in college freshmen. This study included a more diverse, U.S. nationwide sample, compared to previous studies, which have included similar sized convenience samples from only one large university (Helms & Moiseichik, 2018; Russell et al., 2018). Further, continued athletes comprised 69.2% of the total sample, which is surprising as Russell and colleagues (2018) found only 55% of their sample of first-year college students reported current recreational sport participation. Additionally, the sample had a large subsample of American Indian/ Alaska

Native participants (12.7%) due to the selection of one Alaskan university during data collection. While the sample size met the minimum power standards required for this study, the disengaged athlete group was a very small percentage (2.7%) of the overall sample size. The difficulty in recruiting disengaged former high school athletes could be due to this group potentially choosing to enter straight into the workforce after high school. The high cost of youth sport participation (Dorsch & Blazo, 2022) could explain the low percentage of disengaged athletes as there are fewer youth sport athletes decreasing the overall total of athletes. In addition, the low percentage of disengaged athletes may be an accurate representation of former high school athletes who attend colleges and universities with recreational sports available; therefore, perhaps the vast majority of high school athletes do not actually disengage from athletics when recreational sport is available. Further, the timing of data collection (January through April) may have excluded the highly distressed disengaged athletes who may have not returned to their universities after their winter break. Another reason for the lower levels of disengaged athletes may be because all or most of these former high school athletes would have previous experience with transitioning out of high school sport during the COVID-19 pandemic that started three years prior to data collection. At the time of the pandemic onset, these athletes were sophomores in high school and were forced to transition out of sport due to the worldwide shutdown, some not returning to sport for over a year. Therefore, this group of former high school athletes may be unique in already having past experience with the transition out of sport and may feel more competent in their coping skills to process the stress of the transition. Regardless, due to the small sample size of disengaged athletes, any results referencing that group should be taken with caution.

Results of the current study suggest that there are no differences in psychological distress and flourishing between groups of former high school athletes and non-athletes in the second

term of their first year of college; therefore, the first hypothesis was rejected. The lack of differences found between these three groups could indicate that transitioning out of high school sport is only a small part of psychological changes that occur during the dual transition out of sport and into college. Further, it appears that a dual transition is not related to psychological well-being regardless of current recreational sport status as disengaged athletes did not differ in either flourishing or psychological distress from continued and non-athletes, but results should be taken with caution given the sample size of this group. Another reason for the similar levels of psychological distress and flourishing in this sample of first-year college students could be that participants on average reported moderate levels of psychological distress and moderate to high levels of flourishing. As high school students plan and prepare for their transition to college, some may have planned to play recreational sports in college. The high levels of reported flourishing could be related to the students having previously planned and prepared for their transition to college similar to the findings by Knights et al. (2019), where professional athletes who had planned and prepared for their athletic transition reported higher flourishing throughout the transition process. It seems that this sample of first-year college students is not experiencing the high levels of distress as previously documented (Dyson & Renk, 2006; Maymon & Hall, 2021).

The lack of differences in reported levels of psychological distress and flourishing between the planned comparison groups of disengaged, continued, and non-athletes are similar to the findings of Lubker and Etzel (2007; $N = 317$, 52.1% male), who found no differences between intercollegiate varsity athletes, disengaged athletes, and non-athletes and their levels of academic adjustment in the first year of college. It should also be noted that in the current study, this sample was predominantly cisgender men (66.9%) and previous research has indicated that

men and women report different types of coping strategies to be effective. In a sample of 749 undergraduate athletes' women reported using planning and communication more often than men to cope with stressors (Nicholls et al., 2007). Alternatively, in a study of undergraduate students during the COVID-19 pandemic, males perceived stress was negatively correlated with the number of days per week participants weight trained and performed vigorous physical activity (Peyer et al., 2022). This could explain the lower levels of psychological distress and higher levels of flourishing in the current sample of first-year college students as the sample was mostly men who participated in sport during high school and this group of men may have been exercising and weight training more than other genders, which could have been a positive coping mechanism for them.

The current study was limited by only asking participants about their college club sports and intramural participation and excluded other organizations and clubs that students may join while attending college. Non-athletic club participation could be another reason for finding no differences between groups as participants who were coded as non-athletes and disengaged athletes could have chosen to join non-athletic university sponsored clubs (e.g., a cappella or comedy), where they may have found a social support group and explored other interests. Further, as high school students transition to college, they have more freedom to explore new interests and the option to participate in either new or old activities could contribute to overall psychological well-being.

During sampling, an unexpected consequence occurred that resulted in a large enough subgroup of new athletes that could be examined through exploratory analyses. The only differences found between this group and others were that continued athletes reported higher levels of flourishing than new athletes. This difference could be explained by new athletes

having increased time demands of participating in athletics while also adapting to the challenges of college academics. Perhaps continued athletes in recreational sport would have some experience with balancing academics and athletics, which allowed them to rise to the challenges of college more so than new athletes. Past samples of intercollegiate varsity athletes have varied in their response to the new demands of college (e.g., Higbee & Shultz, 2012; Wilson & Pritchard, 2005), but recreational sport athletes have fewer time demands. For example, intercollegiate varsity athletes are required to attend practice and lift weights multiple times each week and often have at least one competition each week during the competitive season. Recreational sport athletes practice less often, are not required to lift weights, and have fewer competitions, which they are not required to attend. Another explanation could be that new athletes could also feel less competent with their ability in sport because it is a new skill they are learning which could reduce their levels of flourishing compared to continued athletes. This new finding allows university personnel or sport professionals to better understand the experiences of new recreational athletes who begin in college, which could lead to developing interventions that support the new athlete.

The second hypothesis that psychological distress and flourishing would differ between disengaged and continued athletes while controlling for athletic identity could not be tested because of the small group of disengaged athletes within the sample, and a strong correlation between athletic identity and flourishing ($r = .640, p < .001$). However, the very large differences in flourishing and psychological distress between high and low athletic identity groups of continued athletes were noteworthy. Continued athletes with high levels of athletic identity in high school had higher levels of flourishing and lower levels of psychological distress than continued athletes with low levels of athletic identity in high school. The high athletic identity

group's higher flourishing and lower distress scores contradict previous researchers' findings that elite, intercollegiate varsity, and college recreational athletes with a high athletic identity during the transition out of sport experience higher levels of anxiety, depression, and loss of identity (Park et al., 2013; Russell et al., 2018; Stambulova et al., 2020). However, it should be noted that the continued athletes in this sample experienced a transition from high school athletics to college recreational sport and did not transition out of sport completely like the athletes in previous studies. As many of the continued athletes reported a high level of athletic identity in high school, the transition to a different level of sport may have been less challenging psychologically than transitioning out of sport. This finding is important as only about 480,000 high school athletes continue to play as an intercollegiate varsity athlete out of eight million high school athletes (0.06%; National Collegiate Athletic Association, 2022)

In the continued athlete group, 84.7% reported that at least one of the recreational sports played in college was their primary sport in high school, meaning the continued athletes not only continued to play sport, but the majority engaged in the same sport, just at a recreational level rather than a high school varsity level. Remaining in the same sport could be related to an increased level of competence as the athlete has more experience playing their primary high school sport. Another explanation that could contribute to the findings of the current study is the top two sports played by continued athletes were basketball (43.5%) and baseball (20.8%), which are both sports that are often played by men, are team sports that could offer a social support system, and universities commonly have intramural and club teams making these sports easily accessible. The high levels of flourishing and low levels of psychological distress in the higher, high school athletic identity group, could be explained by these athletes not really experiencing a dual transition as they were able to engage in a familiar sport activity during their first year in

college. On the other hand, due to the correlational nature of the data, it could also be that because the same individuals are flourishing and have less psychological distress, these first-year college students feel more comfortable participating in recreational sports. Participation in recreational sport could contribute to increased distress and decreased flourishing in the low high school athletic identity group as the familiarity of sport activity drew them to participate, but perhaps this group of students may have better psychological well-being if they engaged in activities that were more aligned with their identity. It could be that these students continued to play recreational sports in college because they may have perceived that exploration of other activities to be more challenging, and given they had little to no experience with something new, that could relate to higher levels of psychological distress. Therefore, continuing to play sport allowed them to manage their psychological distress even if it does not align well with their identity.

The additional exploratory purpose of the study to better understand which variables predicted flourishing, resulted in a model with five independent variables (athletic satisfaction, all three AI subscales, distress) that accounted for a very large 68% of variance in flourishing. A hypothesis was not offered for this examination as there has been no known previous research studying this model, much less during the dual transition out of high school sport and into college. Previous researchers have found that athletic career satisfaction has a strong positive relationship with the quality of transition out of sport (Cecić Erpič et al., 2004; Fuller, 2014; Park et al., 2013). Similarly, Sinclair and Orlick (1993) found that athletes who reported higher athletic career satisfaction after their transition out of sport reported easier transitions than those with low athletic career satisfaction. The predictive relationship between high school athletic satisfaction for current flourishing levels in the current study adds weight to the previous

findings given that a multi-item validated scale (Turman, 2006) was used to measure athletic satisfaction instead of just one item as in previous studies (e.g., Cecić Erpič et al., 2004; Shander & Petrie, 2021). The relationship between athletic satisfaction and flourishing during the transition to college could be related to the former high school athlete feeling a sense of competence from their sport experiences, potentially leading them to feel more confident in college. Flourishing is also partially defined as having a purpose in life (Diener, 2010), and athletic satisfaction is related to achieving goals in athletics; therefore, if a former high school athlete has high athletic satisfaction, they most likely achieved their sport goals and felt they had a purpose in athletics. Consequently, a former high school athlete in college who identifies as an athlete with some exclusivity and negative affect had a satisfying high school sport experience, and is not currently experiencing psychological distress could lead to more flourishing in their first year of college because they felt they had a purpose and social connection through athletics in high school.

A second exploratory regression tested a five-factor model of fit for psychological distress; the model produced was not a good fit. Therefore, a three-factor model of fit between the athletic identity subscale social identity, athletic satisfaction, and flourishing as predictors of psychological distress in former high school athletes was used, which explained 21% of the variance. The unique contributions were individually small, and flourishing was the only statistically significant unique predictor. Having a purpose and good social support in life does not limit an individual to experiencing only positive emotions, but could help a person cope with stress. First-year college students experience many challenges in a short period of time, but if former high school athletes continue to play recreational sport in college, feel supported by their peers, and have purpose through sport it may explain why flourishing uniquely predicted a small

part of psychological distress. However, the combination of athletic social identity, athletic career satisfaction, and flourishing combined contributed more to the prediction of 21% of the variance in psychological distress. This combination of factors could be explained by a high school athlete feeling competent in their sport skill due to their high school athletic identity, athletic satisfaction, and current flourishing levels, which in turn led to fewer feelings of psychological distress for former high school athletes. Future researchers may want to explore the relationship between psychological distress, athletic satisfaction, athletic identity, and the three basic psychological needs of competence, relatedness, and autonomy (Ryan & Deci, 2000) in collegiate recreational sport athletes as need satisfaction could relate to levels of psychological distress.

Limitations and Future Directions

The current study addressed several gaps in the literature examining the mental health and well-being of first-year college students, however, there were limitations. First, this was a cross-sectional study, therefore causation cannot be determined. Future longitudinal studies can include assessment of flourishing, psychological distress, athletic identity, and athletic satisfaction of athletes while they are still in high school, and then again after they had transitioned into college. Second, many of the survey responses had to be removed before analysis due to the recruitment method of posting on first-year college student Facebook and Discord pages, potentially due to the use of artificial intelligence technology to complete the survey in order to win one of the gift cards. A third limitation of this study was that data collection did not begin until the second term of the students' first year in college when participants had more time to process the transition out of sport. Future researchers could collect data starting in the middle to end of the first term in college to limit the amount of recall

participants needed to complete the surveys referencing their high school athletic career. A final limitation of this study could have been due to volunteer bias with participants who were feeling lower levels of flourishing and higher levels of psychological distress may have self-selected themselves out of taking the surveys. The transition to college is a challenging time and the students who may have been struggling both academically and socially may not have taken the surveys due to their increased experiences of distress and the survey being one more task to be completed for someone already feeling overwhelmed.

Future researchers examining the transition experiences of former high school athletes should continue to investigate the psychological well-being of athletes as the majority of all levels of athletes do not experience a crisis transition (Sinclair & Orlick, 1993). The relationship between college recreational sport participation and mental health has not been studied frequently, and there could be more benefits associated with recreational sport participation that are not related to athletic identity and high school athletic career satisfaction. Further, researchers should continue to develop measures to examine athletic satisfaction as it was the largest predictor of flourishing in former high school athletes during their first year in college in this study. Finally, it would be prudent to continue studying the transition experiences of high school athletes, specifically measuring their current athletic identity instead of their high school athletic identity. It may be difficult to accurately recall high school athletic identity especially if the individual is currently participating in recreational sport. Understanding how current athletic identity relates to psychological distress and well-being can further inform practitioners who work with this population during the transition to college.

Conclusion

Overall, the first-year college students in this study reported moderate to high levels of flourishing and moderate levels of psychological distress. Secondly, the vast majority of high school varsity athletes reported engaging in recreational sport in college. Further, former high school athletes' flourishing was largely predicted by athletic career satisfaction, the athletic identity subscales (i.e., exclusivity, negative affect, and social identity), and psychological distress; psychological distress was predicted by athletic satisfaction, flourishing, and the social identity subscale of athletic identity. Further, the level of athletic identity in high school was positively related to flourishing and negatively related to psychological distress in continued athletes. Also, when comparing the athletic status of first-year college students, the only differences in flourishing and psychological distress were between continued athletes and new athletes, who reported lower levels of flourishing than continued athletes. The large percentage of continued athletes within the sample could mean that many former high school athletes continue to play sports in college and the psychological well-being benefits associated with recreational sport participation for former high school athletes should continue to be explored. Given the majority of the continued athlete sample was cisgender men from team sports, the potential higher levels of psychological well-being from continuing to play recreational sport in college should be marketed to this group in particular. Overall, it seems that former high school athletes with low levels of high school athletic identity are the most at risk for increased levels of psychological distress, but there is little understanding of the reasons for their continued participation in sport. More information is needed about this group of former high school athletes so they can receive the support needed to flourish in college.

References

- Arnett, J. J. (2000). Emerging adulthood. *American Psychologist*, 55(5), 469-480.
<http://doi.org/10.1037//0003-066X.55.5.469>
- Aspinwall, L. G., & Taylor, S. E. (1992). Modeling cognitive adaptation: A longitudinal investigation of the impact of individual differences and coping on college adjustment and performance. *Journal of Personality and Social Psychology*, 63(6), 989-1003.
<https://psycnet.apa.org/doi/10.1037/0022-3514.63.6.989>
- Baik, C., Larcombe, W., & Brooker, A. (2019). How universities can enhance student mental welling: The student perspective. *Higher Education Research & Development*, 38(4), 674-687. <https://doi.org/10.1080/07294360.2019.1576596>
- Baker, R. W., & Siryk, B. (1984). [Measuring adjustment to college](https://doi.org/10.1037/0022-0167.31.2.179). *Journal of Counseling Psychology*, 31(2), 179-189. <http://doi.org/10.1037/0022-0167.31.2.179>
- Bore, M., Pittolo, C., Kirby, D., Dluzewska, T., & Marlin, S. (2016). Predictors of psychological distress and well-being in a sample of Australian undergraduate students. *Higher Education Research & Development*, 35(5), 869-880.
<https://doi.org/10.1080/07294360.2016.1138452>
- Brewer, B. W., Van Raalte, J. L., & Linder, D. E. (1993). Athletic identity: Hercules' muscles of Achilles' heel? *International Journal of Sport Psychology*, 24, 237-254.
- Brewer B. W., & Cornelius, A. E. (2001). Norms and factorial invariance of the athletic identity measurement scale (AIMS). *The Academic Athletic Journal*, 15, 103-113.
- Brown, C. J., Webb, T. L., Robinson, M. A., & Cotgreave, R. (2018). Athletes' experiences of social support during their transition out of elite sport: An interpretive phenomenological

analysis. *Psychology of Sport and Exercise*, 36, 71-80.

<http://doi:10.1016/j.psychsport.2018.01.003>

Burke, P. J., & Stets, J. E. (2009). *Identity theory*. Oxford University Press Inc.

Cecić Erpič, A., Wylleman, P., & Zupančič, M. (2002). The effect of athletic and non-athletic factors on the sports career termination process. *Psychology of Sport and Exercise*, 5(1), 45-59. [http://doi.org/10.1016/S1469-0292\(02\)00046-8](http://doi.org/10.1016/S1469-0292(02)00046-8)

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. (2nd ed.). Lawrence Erlbaum Associates, Publishers. <https://doi.org/10.4324/9780203771587>

Cranmer, G. A., & Sollitto, M. (2015). Sport support: Received social support as a predictor of athlete satisfaction. *Communication Research Reports*, 32(3), 253-264.

<Http://doi.org/10.1080/08824096.2015.1052900>

Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., & Biswas-Diener, R. (2010). New measures of well-being: Flourishing and positive and negative feelings. *Social Indicators Research*, 39, 247-266. <https://doi.org/10.1007/s11205-009-9493-y>

Dorsch, T. E., & Blazo, J. A. (2022). *Parenting survey fall 2022*. TeamSnap Project Play Aspen Institute. <https://www.aspeninstitute.org/wp-content/uploads/2023/02/TeamSnap-Project-Play-REPORT-v2.pdf>

Drake, E. C., Sladek, M. R., & Doane, L. D. (2016). Daily cortisol activity, loneliness, and coping efficacy in late adolescence: A longitudinal study of the transition to college.

International Journal of Behavior Development, 40(4), 334-345.

<http://doi.org/10.1177/0165025415581914>

- Dyson, R., & Renk, K. (2006). Freshman adaptation to university life: Depressive symptoms, stress, and coping. *Journal of Clinical Psychology, 62*(10), 1231-1244.
<http://doi.org/10.1002/jclp.20295>
- Erikson, E. H. (1968). *Identity, youth, and crisis* (1st ed.). W. W. Norton & Company Inc.
- Fuller, R. D. (2014). Transition experiences out of intercollegiate athletics: A meta-synthesis. *The Qualitative Report, 19*(46), 1-15. <http://doi.org/10.46743/2160-3715/2014.1131>
- Giannone, Z. A. Life after sport: The relationship between athletic identity and mental health outcomes after sport retirement. [Unpublished master's thesis]. University of British Columbia.
- Giannone, Z. A., Haney, C. J., Kealy, D., & Ogrodniczuk, J. S. (2017). Athletic identity and psychiatric symptoms following retirement from varsity sports. *International Journal of Social Psychiatry, 63*(7), 598-601. <http://doi.org/10.1177/0020764017724184>
- Grove, J. R., Lavalley, D., & Gordon, S. (1997). Coping with retirement from sport: The influence of athletic identity. *Journal of Applied Sport Psychology, 9*(2), 191–203.
<https://doi:10.1080/10413209708406481>
- Hale, B. D., James, B., & Stambulova, N. (1999). Determining the dimensionality of athletic identity: A Herculean cross-cultural undertaking. *International Journal of Sport Psychology, 30*(1), 83-100.
- Helms, K., & Moiseichik, M. (2018). Collegiate recreational sports participation as an adjustment aid for former high school athletes experiencing athlete role exit. *Recreational Sports Journal, 42*(2), 160-173. <http://doi.org/10.1123/rsj.2017-0017>
- Henry, J. D., & Crawford, J. R. (2011). The short-form version of the depression anxiety stress scales (DASS – 21): Construct validity and normative data in a large non-clinical sample.

British Journal of Clinical Psychology, 44(2), 227-239.

<http://doi.org/10.1348/014466505X29657>

Higbee, J. L., & Schultz, J. L. (2012). Taking a pulse: Student-athletes' descriptors for their first semester of college. *Journal of College Teaching & Learning*, 9(4), 253-260.

<http://dx.doi.org/10.19030/tlc.v9i4.7295>

Hirshberg, M. J., Collaianne, B. A., Greenberg, M. T., Inkelas, K. K., Davidson, R. J., Germano, D., Dunne, J. D., & Roeser, R. W. (2022). Can the academic and experiential study of flourishing improve flourishing in college students? A multi-university study.

Mindfulness, 13(9), 2243-2256. <http://doi.org/10.1007/s12671-022-01952-1>

Jewett, R., Kerr, G., & Tamminen, K. (2018). University sport retirement and athlete mental health: A narrative analysis. *Qualitative Research in Sport, Exercise and Health*, 11(3), 416-433. <http://doi.org/10.1080/2159676X.2018.1506497>

Knights, S., Sherry, E., & Ruddock-Hudson, M. (2016). Investigating elite end-of-athletic-career transition: A systematic review. *Journal of Applied Sport Psychology*, 28(3), 291-308.

<http://doi.org/10.1080/10413200.2015.1128992>

Knights, S., Sherry, E., Ruddock-Hudson, M., & O'Halloran, P. (2019). The end of a professional sport career: Ensuring a positive transition. *Journal of Sport Management*,

33(6), 518-529. <http://doi.org/10.1123/jsm.2019-0023>

Knights, S. (2021). *The conceptualization and experiences of flourishing in retired professional male athletes*. [Unpublished master's thesis]. La Trobe School of Psychology and Public Health.

- Kroshus, E., Hawrilenko, M., & Browning, A. (2021). Stress, self-compassion, and well-being during the transition to college. *Social Science & Medicine*, 269, 1-10.
[Http://doi.org/10.1016/j.soscimed.2020.113514](http://doi.org/10.1016/j.soscimed.2020.113514)
- Lally, P. (2007). Identity and athletic retirement: A prospective study. *Psychology of Sport and Exercise*, 8(1), 85-99. <https://doi.org/10.1016/j.psychsport.2006.03.003>
- Lavallee, D., Gordon, S., & Grove, R. (1997). Retirement from sport and the loss of athletic identity. *Journal of Personal & Interpersonal Loss*, 2(2), 129-147.
<http://doi.org/10.1080/10811449708414411>
- Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the depression anxiety and stress scales*. (2nd ed.). Psychology Foundation of Australia.
- Lubker, J. R., & Etzel, E. F. (2007). College adjustment experiences for first-year students: Disengaged athletes, nonathletes, and current varsity athletes. *NASPA Journal*, 44(3), 457-480. <https://doi.org/10.2202/1949-6605.1831>
- Mattanah, J. F., Ayers, J. F., Brand, B. L., Brooks, L. J., Quimby, J. L., & McNary, S. W. (2010). A social support intervention to ease the college transition: Exploring the main effects and moderators. *Journal of College Student Development*, 51(1), 93-108.
<http://doi.org/10.1353/csd.0.0116>
- Maymon, R., & Hall, N. C. (2021). A review of first-year student stress and social support. *Social Sciences*, 10(12), 1-32. <http://doi.org/10.3390/socsci10120472>
- Menke, D. J., & Germany, M. (2019). Reconstructing athletic identity: College athletes and sport retirement. *Journal of Loss and Trauma*, 24(1), 17-30.
<https://doi.org/10.1080/15325024.2018.1522475>

- Murphy, G. M., Petitpas, A. J., & Brewer, B. W. (1996). Identity foreclosure, athletic identity, and career maturity in intercollegiate athletes. *The Sport Psychologist, 10*(3), 239-246. <https://doi.org/10.1123/tsp.10.3.239>
- National Collegiate Athletic Association. (2022). *Estimated probability of competing in college athletics*. Retrieved March 6th, 2022, from <https://www.ncaa.org/sports/2015/3/2/estimated-probability-of-competing-in-college-athletics.aspx>
- Nicholls, A. R., Polman, R., Levy, A. R., Taylor, J., & Cobley, S. (2007). Stressors, coping, and coping effectiveness: Gender, type of sports, and skill differences. *Journal of Sport Sciences, 25*(13), 1521-1530. <http://doi.org/10.1080/02640410701230479>
- Pallant, J. (2016). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS* (6th ed.). McGraw – Hill Education.
- Park, S., Lavalley, D., & Tod, D. (2013). Athletes career transition out of sport: A systematic review. *International Review of Sport and Exercise Psychology, 6*(1), 22-53. <http://doi.org/10.1080/1750984X.2012.687053>
- Peyer, K. L., Hathaway, E. D., & Doyle, K. (2022). Gender differences in stress, resilience, and physical activity during the COVID-19 pandemic. *Journal of American College Health, 1*-8. <http://doi.org/10.1080/07448481.2022.2052075>
- Pica, G., Mallia, L., Pierro, A., Alivernini, F., Borellini, V., & Lucidi, F. (2018). How stressful is retirement! Antecedents of stress linked to athletes' career termination. *Journal of Applied Sport Psychology, 49*(8), 488-497. <http://doi.org/10.1111/jasp.12599>

- Rundio, A., & Buning, R. J. (2021). Initiation and introduction into sport participation: New member experiences with collegiate sport clubs. *Recreational Sports Journal*, 45(2), 85-93. <http://doi.org/10.1177/15588661211016432>
- Russell, A. M., Cottingham, M., Barry, A., Lee, D., & Walsh, D. (2018). Students transitioning to college and out of competitive sport. *Journal of Applied Sport Management*, 10(4), 34-50. <http://doi.org/10.18666/JASM-2018-V10-I4-9117>
- Ryan, L. (2019). *Flourishing after retirement: Understanding the sport career transition of New Zealand's elite athletes*. [Unpublished master's thesis]. The University of Waikato.
- Ryan, R. M., & Deci, E. E. L. (2000). Self-determination theory and facilitation of intrinsic motivation, social development, and well-being. *The American Psychologist*, 55(1), 68-78. <http://doi.org/10.1037//0003-066x.55.1.68>
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069-1081. <http://doi.org/10.1037/0022-3514.57.6.1069>
- Sanders, G., & Stevinson, C. (2017). Associations between retirement reasons, chronic pain, athletic identity, and depressive symptoms among former professional footballers. *European Journal of Sport Science*, 17(10), 1311-1318. <http://doi.org/10.1080/17461391.2017.1371795>
- Shander, K., & Petrie, T. (2021). Transitioning from sport: Life satisfaction, depressive symptomology, and body satisfaction among retired female collegiate athletes. *Psychology of Sport and Exercise*, 57(1), 102045. <http://dx.doi.org/10.1016/j.psychsport.2021.102045>

- Sinclair, D. A., & Orlick, T. (1993). Positive transitions from high-performance sport. *The Sport Psychologist*, 7(2), 138-150.
- Stambulova, N. (2003). Symptoms of a crisis-transition: A grounded theory study. In N. Hassmen (Ed.), *SIPF Yearbook*, (pp. 97–109). Örebro University Press.
- Stambulova, N. B., Ryba, T. V., & Henriksen, K. (2020). Career development and transitions of athletes: The international society of sport psychology position stand revisited. *International Journal of Sport and Exercise Psychology*, 19(4), 524-550.
<http://doi.org/10.1080/1612197X.2020.1737836>
- Stokowski, S., Paule-Koba, A. L., & Kaunert, C. (2019). Former college athletes' perceptions of adapting to transition. *Journal of Issues in Intercollegiate Athletics*, 12, 403-426.
- Taylor, Z. E., Doane, L. D., & Eisenberg, N. (2014). Transitioning from high school to college: Relations of social support, ego-resiliency, and maladjustment during emerging adulthood. *Emerging Adulthood*, 2(2), 105-115.
<http://doi.org/10.1177/2167696813506885>
- Taylor, J., & Ogilvie, B. C. (1994). A conceptual model of adaptation to retirement among athletes. *The Journal of Applied Sport Psychology*, 6(1), 1-20.
<http://doi.org/10.1080/10413209408406462>
- Torregrosa, M., Ramis, Y., Pallares, F. A., & Selva, C. (2015). Olympic athletes back to retirement: A qualitative longitudinal study. *Psychology of Sport and Exercise*, 21, 50-56.
<https://psycnet.apa.org/doi/10.1016/j.psychsport.2015.03.003>
- Turman, P. D. (2006). Athletes' perception of coach power us and the association between playing status and sport satisfaction. *Communication Research Reports*, 23(4), 273-282.
<http://doi.org/10.1080/08824090600962540>

- United States Bureau of Labor Statistics. (2021, April 27). *College Enrollment and Work Activity of Recent High School and College Graduates Summary*. Economic News Release.
<https://www.bls.gov/news.release/hsgec.nr0.htm>
- Vasold, K. L., Deere, S. J., & Pivarnik, J. M. (2019). Club and intramural sport participation and college student academic success. *Recreational Sports Journal*, 43(1), 55-66.
<http://doi.org/10.1177/1558866119840085>
- Volstad, C., Hughes, J., Jakubec, S. L., Flessati, A., Jackson, L., & Matin-Misener, R. (2020). “You have to be okay with okay”: Experiences of flourishing among university students transitioning directly from high school. *International Journal of Qualitative Studies on Health and Well-being*, 15(1), 1-14. <https://doi.org/10.1080/17482631.2020.1834259>
- Weinberg, R., Vernau, D., & Horn, T. (2013). Playing through pain and injury: Psychological considerations. *Journal of Clinical Sport Psychology*, 7(1), 41-59.
<http://doi.org/10.1123/jcsp.7.1.41>
- Weinstein, L., & Laverghetta, A. (2009). College student stress and satisfaction with life. *College Student Journal*, 43(4), 1161-1162.
- Wilson, G., & Pritchard, M. (2005). Comparing sources of stress in college student athletes and non-athletes. *Athletic Insight*, 7(1), 1-8.
- Zizzi, S. J., Keeler, L. A., & Watson, J. C. II. (2006). The interaction of goal orientation and stage of change on exercise behavior in college students. *Journal of Sport Behavior*, 29(1), 96-110.

Appendix A

Author Guidelines:

The mission of the *Journal of Athlete Development and Experience (JADE)* is to advance, promote, and disseminate original empirical research surrounding athlete experience and development both in the United States and abroad. Accordingly, manuscripts that are timely, innovative, and make a strong contribution to the sport industry and academic field will be considered for publication.

All manuscripts should be innovative and offer insight into athlete development and the athlete experience. The scholarship published in *JADE* is intended for both an academic and a practitioner audience. As such, the authors should avoid using technical jargon when possible.

All submissions should adhere to the Publication Manual of the American Psychological Association 7th edition author guidelines. Manuscripts should be double spaced, use 12pt, Times New Roman font, and utilize one-inch margins on all sides of the document.

Each manuscript must be accompanied by a one-paragraph abstract (200 words or less). Please number the pages and use lines throughout the manuscript, including the references. Authors are responsible for obtaining permission to reproduce copyrighted information and materials. All illustrations, figures, and tables should be placed within the text at the appropriate points, rather than at the end.

Manuscripts should typically be 20-30 pages in length, including tables, figures, and references. However, shorter and longer manuscripts will be reviewed. We recognize that some subjects require more background information to be presented and certain methodologies require

a longer results section to adequately present all of the data. Please contact the editors if you have any questions.

JADE utilizes a double blind review process. The editors reserve the right to desk reject manuscripts without full review if the submission does not comply with the editorial and scholarly standards of *JADE*.

Manuscript files (Microsoft Word format only) should be submitted using the online submission form.

<https://scholarworks.bgsu.edu/jade/styleguide.html>

Appendix B

Athletic Identity Measurement Scale (AIMS)

Please respond to each statement based on how much you agree or disagree with the statement on a using the scale below and in in the frame of “when I retired from competitive sport”

Strongly Disagree

Strongly Agree

1 2 3 4 5 6 7

1. I considered myself an athlete
2. I had many goals related to sport
3. Most of my friends were athletes
4. Sport was the most important part of my life
5. I spent more time thinking about sport than anything else
6. I needed to participate in sport to feel good about myself
7. Other people used see me mainly as an athlete
8. I felt bad about myself when I do poorly in sport
9. Sport was the only important thing in my life
10. I would be very depressed if I were injured and could not compete in sport

Appendix C

Depression Anxiety and Stress Scale – 21 (DASS-21)

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all

1 Applied to me to some degree, or some of the time

2 Applied to me to a considerable degree, or a good part of time

3 Applied to me very much, or most of the time

1. I found it hard to wind down
2. I was aware of dryness in my mouth
3. I couldn't seem to experience any positive feeling at all
4. I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)
5. I found it difficult to work up the initiative to do things
6. I tended to over-react to situations
7. I experienced trembling (e.g., in the hands)
8. I felt that I was using a lot of nervous energy
9. I was worried about the situations in which I might panic and make a fool of myself
10. I felt that I have nothing to look forward to
11. I found myself getting agitated
12. I found it difficult to relax
13. I felt downhearted and blue
14. I was intolerant of anything that kept me from getting on with what I was doing
15. I felt I was close to panic
16. I was unable to become enthusiastic about anything
17. I felt I wasn't worth much as a person
18. I felt that I was rather touchy
19. I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)
20. I felt scared without any good reason
21. I felt that life was meaningless

Appendix D

Flourishing Scale

Below are 8 statements with which you may agree or disagree. Using the 1–7 scale below, indicate your agreement with each item by indicating that response for each statement.

7- Strongly Agree

6- Agree

5- Slightly Agree

4- Neither Agree or Disagree

3- Slightly Disagree

2- Disagree

1- Strongly Disagree

1. ____ I lead a purposeful and meaningful life
2. ____ My social relationships are supportive and rewarding
3. ____ I am engaged and interested in my daily activities
4. ____ I actively contribute to the happiness and well-being of others
5. ____ I am competent and capable in the activities that are important to me
6. ____ I am a good person and live a good life
7. ____ I am optimistic about my future
8. ____ People respect me

Appendix E

The Athletic Satisfaction Scale

Please read each statement below and respond based on how satisfied or unsatisfied you were with your high school athletic career.

Not satisfied at all

Completely Satisfied

1 2 3 4 5 6 7 8 9

1. How would you describe the recognition you received by being a member of your high school team?
2. How would you describe the opportunities your team provided for developing skills as a player?
3. How would you describe your social interaction with your high school teammates while playing with them?
4. How would you describe the level of competition you experienced by being a member of your high school team?
5. How would you describe your interaction with your high school coach at the beginning of your final high school season?
6. How would you describe your interaction with your high school coach at the end of your final high school season?

Appendix F

Demographics and Background Questions

1. I played competitive sports while in high school.

- a. Yes
- b. No

2. Which varsity level sport(s) did you play for your high school? Check all that apply.

None (skip to item #9) __ Basketball __ Baseball __ Beach Volleyball __ Bowling __
Competitive Cheer or Dance __ Cross Country __ Field Hockey __ Football __ Golf __
Gymnastics __ Ice Hockey __ Track and Field __ Lacrosse __ Rowing __ Rugby __
Swimming and Diving Soccer __ Softball __ Tennis __ Volleyball __ Water Polo __
Wrestling __ Other (please specify)

3. Referring to the sport(s) you played in high school, how many years total did you play your primary sport of choice (pick the longest one if more than one)?

4. Since I've enrolled in college, I have played/ engaged in campus recreational sport (e.g., club sports, intramurals).

- a. Yes
- b. No (if No, skip to item #6)
- c. Other, please explain

5. I currently play organized sport, either campus related (e.g., club sports, intramurals) or non-university related (e.g., town teams/leagues/sanctioned competitions).

- a. Yes
- b. No
- c. Other, please explain: _____

6. Which type of campus recreational sports have you engaged in during college?

- a. Intramural
- b. Club sports
- c. Both intramural and club sports
- d. Other, please explain.

7. Is a recreational sport you play(ed) in college the same as what you considered your primary sport(s) of choice in high school?

- a. Yes
- b. No

8. Which campus recreational sport(s) have you played in college? Check all that apply.

None ___ Basketball ___ Baseball ___ Beach Volleyball ___ Bowling ___ Competitive Cheer or
 Dance ___ Cross Country ___ Field Hockey ___ Football ___ Golf ___ Gymnastics ___ Ice Hockey ___
 Track and Field ___ Lacrosse ___ Rowing ___ Rugby ___ Swimming and Diving Soccer ___ Softball
 ___ Tennis ___ Volleyball ___ Water Polo ___ Wrestling ___ Other (please specify) _____

9. If you have any questions or comments about any of the previous items, please explain here _____

10. What is your current age in years? _____years

11. What is your gender identity? Check all that apply.

Man ____ Woman ____ Transgender man ____ Transgender woman ____
Agender ____ Non-Binary ____ Two-Spirit ____ Gender Fluid/Queer ____
Prefer not to answer ____ Other (please explain) _____

12. What race/ethnicity(s) do you identify with? Check all that apply.

- _____ American Indian or Alaska Native
- _____ Asian or Asian American (including Indian subcontinent and Philippines)
- _____ Black or African American (including Africa and Caribbean)
- _____ Hispanic or Latino/Latina/Latinx (including Spain)
- _____ Native Hawaiian and Other Pacific Islander
- _____ White or European American
- _____ Arab/Middle Eastern
- _____ Other (please explain) _____
- _____ Prefer not to respond

Appendix G

Inclusion Criteria

1. Are you 18 years old or older?
 - a. Yes. If yes proceed to next question
 - b. No. If no they will be sent to a page informing them, they are not eligible for the study and thanking them for their time
2. Are you currently enrolled in a university or college?
 - a. Yes. If yes proceed to next question
 - b. No. If no they will be sent to a page informing them, they are not eligible for the study and thanking them for their time
3. Are you a college varsity athlete?
 - a. Yes. If yes, they will be sent to a page informing them, they are not eligible for the study and thanking them for their time
 - b. No. If no, proceed to next question.
4. Did you graduate from high school in the 2021-2022 academic school year?
 - a. Yes. If yes proceed to next question
 - b. No. If no they will be sent to a page informing them, they are not eligible for the study and thanking them for their time
5. Are/were you enrolled in a university or college in Fall 2022?
 - a. Yes. If yes proceed to next question
 - b. No. If no they will be sent to a page informing them, they are not eligible for the study and thanking them for their time

6. During your years in high school, did you play competitive sport that was organized outside of school (e.g., club-side sports)?

- a. Yes. If yes, proceed to the next question
- b. No. If no, proceed to informed consent

7. Did you play school sponsored sports in high school (e.g., varsity athletics)?

- a. Yes. If yes, proceed to informed consent.
- b. No. If no, they will be sent to a page informing them they are not eligible for the study and thanking them for their time

Appendix H

Informed Consent for Phase 1

My name is Becca Pierce, and I am a graduate student at Western Washington University (WWU).

I am conducting a research study to increase the understanding of first-year university students' flourishing and stress levels during their transition into college and how non-athletes and different types of athletes and former athlete compare. The name of this research study is "Stress and Flourishing During the Transition Out of Sport and Into College: A Comparison of Athletes and Non-Athletes". I am seeking your consent to participate in this study.

Please read this document to learn more about this study and determine if you would like to participate. Your participation is completely voluntary, and I will address your questions or concerns at any point before or during the study.

Eligibility

You may participate in Phase 1 of this research if you meet all of the following criteria:

1. You must be 18 years old or older.
2. You must have been enrolled in a college or university in the fall of 2022.

I hope to include 180 people in this research.

Activities

If you decide to participate in this study, you will be asked to do the following activities:

- Answer 7 online screening questions that will take 1-2 minutes.

During these activities, you will be asked questions about:

- Your current university/college enrollment status
- Your current university/college and former high school athletic participation status/history
- All activities and questions are optional: you may stop at any time.

If you need to complete the activities above in a different way than I have described, please let me know, and I will attempt to make other arrangements.

Risks

There are no foreseeable risks with this study. To decrease the impact of these risks, you can stop participation at any time.

Benefits

If you participate, there are no direct benefits to you, however, if you are eligible and complete Phase 2 of the study, this research may increase the body of knowledge in the subject area of this study.

Privacy and Data Protection

I will take reasonable measures to protect the security of all your personal information, but I cannot guarantee confidentiality of your research data. In addition to me, the following people and offices will have access to your data:

- The WWU Institutional Review Board
- Dr. Linda Keeler, Dr. Jessyca Arthur-Cameselle, and Dr. Eric Martin
- I will securely store your data for 3 years.

How the Results Will Be Used

Results from the screening questions from Phase 1 will be used to determine eligibility for Phase 2 of the study and will not be published. Participants will not be identified in the results.

Compensation

There is no compensation for Phase 1 of the study. If eligible, after you complete Phase 2 of the online survey, you will be presented with a link to a separate page where you have the option of entering a raffle to win one of ten, \$25 Amazon e-gift cards. Your contact information for the raffle will not be attached to your survey answers and if you are selected, you will receive the \$25 Amazon e-gift card via email.

Contact Information

If you have questions, you can contact me at: piercer5@wwu.edu and/ or 208-596-6003. My Faculty Advisor's name is Dr. Linda Keeler, who works at Western Washington University and is supervising me on the research. You can contact Dr. Keeler at: keelerl2@wwu.edu. If you have questions about your rights in the research or if a problem or injury has occurred during your participation, please contact the WWU Institutional Review Board at compliance@wwu.edu or 360-650-3220.

Voluntary Participation

If you decide not to participate, or if you stop participation after you start, there will be no penalty to you: you will not lose any benefit to which you are otherwise entitled.

****By clicking the arrow at the bottom of the page you are consenting to participate in phase one of this research study****

Appendix I

Informed Consent Phase 2

Thank you. You are ELIGIBLE for Phase 2 of the study. Please read below for details on Phase 2 and to consent

My name is Becca Pierce, and I am a graduate student at Western Washington University (WWU).

I am conducting a research study to increase the understanding of first-year university students' flourishing and stress levels during their transition into college and how non-athletes and different types of athletes and former athletes compare. The name of this research study is "Stress and Flourishing During the Transition Out of Sport and Into College: A Comparison of Athletes and Non-Athletes". I am seeking your consent to participate in this study.

Please read this document to learn more about this study and determine if you would like to participate. Your participation is completely voluntary, and I will address your questions or concerns at any point before or during the study.

Eligibility

You may participate in this research if you meet all of the following criteria:

1. You must be 18 years old or older.
2. You must have graduated from high school in the fall of 2021 or spring of 2022.
3. You must have passed Phase 1 of the screening questions and are: currently enrolled in college/university since Fall 2022, not a college varsity athlete, and not an athlete who only participates in off-campus organized sports.

I hope to include 180 people in this research.

Activities

If you decide to participate in this study, you will be asked to do the following activities:

1. Complete an online survey that will take 6-10 minutes.

During these activities, you will be asked questions about:

- All participants: Your current mental states (e.g., levels of flourishing, stress, depression)
- All participants: Your age, gender, race, and sport participation history
- Only the former/current athletes: Sport related questions (e.g., satisfaction)

All activities and questions are optional: you may stop at any time. If you need to complete the activities above in a different way than I have described, please let me know, and I will attempt to make other arrangements.

Risks

There are no foreseeable risks with this study but you may feel discomfort while answering some of the questions. To decrease the impact of these risks, you can stop participation at any time.

Benefits

If you participate, there are no direct benefits to you, however, this research may increase the body of knowledge in the subject area of this study.

Privacy and Data Protection

I will take reasonable measures to protect the security of all your personal information, but I cannot guarantee confidentiality of your research data. In addition to me, the following people and offices will have access to your data:

- The WWU Institutional Review Board
- Dr. Linda, Keeler, Dr. Jessyca Arthur-Cameselle, and Dr. Eric Martin
- I will securely store your data for 3 years.

How the Results Will Be Used

I will publish the results in my master's thesis and scholarly presentations. Participants will not be identified in the results.

Compensation

After you complete the online survey, you will be presented with a link to a separate page where you have the option of entering a raffle to win one of ten, \$25 Amazon e-gift cards. Your contact information for the raffle will not be attached to your survey answers and if you are selected, you will receive the \$25 Amazon e-gift card via email.

Contact Information

If you have questions, you can contact me at: piercer5@wwu.edu and/ or 208-596-6003. My Faculty Advisor's name is Dr. Linda Keeler, who works at Western Washington University and is supervising me on the research. You can contact Dr. Keeler at: keelerl2@wwu.edu. If you have questions about your rights in the research or if a problem or injury has occurred during your participation, please contact the WWU Institutional Review Board at compliance@wwu.edu or 360-650-3220.

Voluntary Participation

If you decide not to participate, or if you stop participation after you start, there will be no penalty to you: you will not lose any benefit to which you are otherwise entitled.

****By clicking the arrow at the bottom of the page you are consenting to participate in phase two of this research study****

Appendix J

Social Media Text

Are you a current college student who graduated from high school in the 2021-2022 academic year? Here is an opportunity to be entered into a raffle to win one of ten, \$25 Amazon e-gift cards by completing a 7-12 -minute online survey. I am a current graduate student at Western Washington University, and I am conducting research to better understand how college first-year students transition into college. Your participation is voluntary and anonymous (e.g., your name or email will not be linked to your data). Once you have completed the survey, you will have the option to enter your email into a separate survey to enter your information for the raffle. Here is the link to the study:

https://wwu.az1.qualtrics.com/jfe/form/SV_cZyedyoFlvaCRRY