

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

The Impact of Early Athletic Retirement on Underrepresented Students' Transition into College

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For the degree of Master of Arts in Psychological Science

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## Abstract

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Approximately eight million teenagers participate in high school athletics across the United States, while only 480,000 have the opportunity to play collegiate level sports, and the rest are forced into early athletic retirement (NCAA Research, 2020). The literature shows that participation in a high school sport increases the chances of a student being accepted into college (Barron et al., 2000). As the nation, and in particular, the state of California become increasingly more diverse (U.S. Census Bureau, 2019) it is important that underrepresented students are successfully transitioning and completing college. Previous research examined athletic retirement but only in collegiate and professional athletes (Grove et al., 1997; Stephan et al., 2010). The current study sought to understand retired student-athletes' transitional experience into a public university in Southern California. The study compared different groups of retired athletes by measuring if their type of retirement (i.e., willing retirement versus forced retirement) played a role in athletic identity post-retirement. The results revealed that retirement type predicted athletic identity scores. Specifically, student-athletes who voluntarily retired reported higher scores on athletic identity than athletes forced into retirement. Interviews were conducted to better understand how participation in high school sports may facilitate the transition into college, and how underrepresented students appraise their early athletic retirement. The qualitative data showed that the type of school (e.g., public, private) and the effectiveness of administration of the institution influence how prepared a student feels for their transition into college. In addition, retired-student athletes often stated that they cherished their experience as high school athletes, but also understood the importance of preparing for college.

## **Introduction**

It is estimated that approximately eight million students participate in high school athletics across the United States. Out of those eight million, it is estimated that about 5.6% or 480,000 will go on to participate in the National College Athletic Association (NCAA Research, 2020). Research shows that elite high school (e.g. team captains, all-Americans and varsity starters) athletes are more likely to obtain a college degree when compared to non-elite (non-starters, non-varsity and bench players) varsity and junior varsity high school athletes (Carlson et al., 2005). Participation in youth sports provides its participants with positive outcomes, such as better grades, improved self-worth, improved physical health, and enhanced social skills (Merkel, 2013; Siegenthaler & Gonzalez, 1997).

Regardless of talent, all athletes will eventually have to face athletic retirement. Retirement can come at any point in one's career and can occur for a variety of reasons. Most research involving retirement has been done with collegiate and professional athletes (Grove et al., 1997; Kerr & Dacyshyn, 2000; Knights et al., 2016; Yao et al., 2018). There is a dearth in the literature that focuses on athletic retirement at an early age (i.e., high school).

The state of California is home to 10%, or about 800,000 of those high school student-athletes (High School Athletics Participation Survey, 2019). According to a survey by the National Federation of State High School Association (2019), California has the second-largest concentration of high school athletes in the country, only trailing the state of Texas. Furthermore, California has a population of 39 million, of which, 47.5% is comprised of underrepresented groups (i.e., Latinx, Black, Native American), making California the most diverse state in the country (U.S. Census, 2019).

According to the California Department of Education (2018), high school graduation rates continue to improve. As of 2018, 83% of high school students received their high school diploma. Despite this increase, underrepresented students still have graduation rates below the state's average, with 73.3% of African Americans and 80.6% of Hispanic or Latino students graduating compared to 93.6% of Asian and 87% of White students graduating (California Department of Education, 2018). A similar pattern is reflected as these graduating students pursue higher education. Data from the National Center for Education Statistics (NCES) shows that first-generation Black (40%), Latinx (54%), and Native American (39%) students have lower college graduation rates than their Asian (74%) and White (64%) counterparts (de Brey et al., 2019). Underrepresented students are also predominately first-generation college students. First-generation students often come from low-income households, are less confident in their academic skills, and have jobs that require them to work long hours (Jenkins et al., 2009). As the nation continues to diversify, it is imperative that researchers examine these populations in diverse states like California. With one-tenth of all high school athletes and nearly half of the population belonging to an underrepresented group, California provides the perfect opportunity to explore these factors.

The purpose of the study was to understand how early athletic retirement affects underrepresented students as they transition into college and adjust into their new academic environment via a non-experimental research design. Variables of interest include impostor syndrome, athletic identity, and academic adjustment. A semi-structured interview will be conducted on a subset of participants to gain more insight into the experiences of these former athletes.

## Literature Review

### *Athletic Retirement*

Athletic retirement (or sports career termination) occurs when an athlete steps away from a sport due to chronological age, deselection, injury, and free choice (Taylor et al., 2008). When athletes commit to their sport, their lives often become subjugated to the game and it becomes an irreplaceable part of their identity (Stambulova, 1994). Going through retirement, whether planned or unplanned, can lead to a wide range of emotions for each athlete, which include but are not limited to sadness, depression and anxiety (Grove et al., 1997). Athletic retirement will have a different impact on all individuals and the intensity behind their feelings often depends on if the retirement was voluntary or involuntary (Martin et al., 2014)

According to a report by the National Federation of State High School Associations (2019) nationwide there are nearly eight million high school student-athletes. However, there are approximately 480,000 student-athletes across all divisions of the NCAA (NCAA, 2020). Since some pro-sports do not recruit athletes directly from high school (e.g., NBA & NFL), there is an assumption that at least seven million student-athletes experience athletic retirement at the conclusion of their high school career. Therefore, the end of high school is the most common retirement period for athletes. If an athlete has not mentally prepared themselves to face this transition, then it is likely they will have some issues adjusting to life as a non-athlete (Martin et al., 2014). This adjustment is directly related to a person's identity and how much they identify as an athlete. *Athletic identity* is defined as the degree to which an individual identifies with their athletic role (Webb et al., 1998). Research has found that when athletes have high levels of athletic identity and is abruptly forced to retire, they may have a harder time adjusting to life without their sport (Martin et al., 2014).

High level of athletic identity throughout one's career has been found to predict the emergence of anxiety in the months following an athlete's retirement (Giannone et al., 2017). According to Yukhymenko-Lescroart (2014), varsity student-athletes that scored higher on the Athletic Identity Measurement Scale (AIMS) were found to be less focused on academics (i.e., GPA) during their college years compared to their club sport student-athlete counterparts. Another factor that can negatively impact an athlete's retirement is the amount of control they had over their lives while they were in sport. A retrospective study by Kerr and Dacyshyn (2000) found that athletes in college reported never really having much control, due to their coaches or managers scheduling everything for them. This lack of control leads to a sense of disruption when retirement came around, and the individual finally achieved a true sense of autonomy.

Retirement may be difficult for many athletes, because their lives revolved around the sport itself (Stephan et al., 2010). Stephan and his/her colleagues (2010) found in a sample of former athletes, that during the first couple of months after retirement, they can experience feelings of loss and void. Similarly, retired athletes can resort to coping strategies, such as avoidance, suppression of competitive activities, and social support (Grove et al., 1997; Stephan et al., 2010).

The majority of the retirement literature focuses on the negative effects of retirement, yet studies have examined positive aspects of a successful athletic retirement. Although most view retirement as a stressful point in an athletic career, research has found that retirement can be a positive experience if the right preparation is put into effect. Knights and her colleagues found that athletes tend to have an open mind towards retirement when they feel that they have accomplished everything they needed to in their sport (2016). They also found that if retirement is planned, then athletes achieves greater cognitive, behavioral and emotional readiness for their

new phase. Furthermore, studies have found that participating in any level of sports leads to the acquisition of valuable life skills and better mental health than non-sport participants (Gould & Carson, 2010; Jewett et al., 2014; Trottier & Robitaille, 2014). Research shows that the life skills most often learned through sport participation are respect and self-confidence (Trottier & Robitaille, 2014). Jewett and colleagues found that people who participated in high school sports experience lower depressive symptoms, lower perceived stress and higher self-rated mental health than individuals who did not participate in high school sports (2014).

### ***Athletic Transition***

Transition is defined as an event or nonevent resulting in a change in assumptions about oneself and the world and thus requiring a corresponding change in one's behavior and relationships (Schlossberg, 1981). A normative part of an athletes' career is their transition from one level to the next, such as the transition from amateur to collegiate, semi-pro or professional athletics (S. Knights et al., 2016). The current study focused on high school student-athletes' transition from high school to college as non-athletes. According a report by the NCAA (2020), fewer than 3% of the approximately 8 million current U.S. high school athletes will go on to participate in intercollegiate competition (NCAA, 2012). Meanwhile, it has been found that these same eight million athletes develop better relationships with their peers and faculty, and are more likely to be accepted to college than their non-athlete peers (Barron et al., 2000). While the vast number of high school student-athletes do not go on to play collegiate sports, it is important to follow their transition and adjustment to college life without the athletic support system they built throughout high school.

It is well-known that the transition from high school to college can be stressful for any student. The majority of withdrawals from college occur during students' freshman year (Aud et

al., 2012; Oppenheimer, 1984). It is common practice for universities, colleges and community colleges to hold freshman orientations in order to help ease their transition. This transition can be a lot more stressful for retired athletes that will no longer be part of competitions, and have to phase out of their athletic identity (Lubker & Etzel, 2007).

Vickio (1990) found that retired athletes express more frequent feelings of loss and depression at the beginning of their college transition when compared to their peers (Vickio, 1990). A study by Lyons, Dorsch, Bell and Mason (2018) measured retired high school athletes' transition to college at multiple points throughout their first year of college. They found that athletes that were able to renegotiate their identities while in high school were able to have a much easier time adjusting to college life and its demands. Incoming college students that were disengaged athletes in high school (i.e., those who did not have the opportunity compete in college) had a much more difficult time adjusting to their new environment (Lubker & Etzel, 2007).

Prior research suggests that high school athletes who do not have to retire their athletic identity may have a different adjustment process (Lubker & Etzel, 2007). It is common for incoming college student-athletes to have to find a new social support system since they often move away from home to attend school (Skinner, 2004). Student-athletes must also adjust to the new level of play in their respective sport. These students feel the need to demonstrate their skill, earn teammates' respect, adjust to their new coach and keep up with a more intense level of training (Freeman, 2018). Furthermore, student-athletes may face additional pressures.

NCAA athletes have expressed feeling added academic pressure while transitioning to college (Freeman, 2018). These students received less academic supervision and structure, and have an increased amount of athletic responsibility (MacNamara & Collins, 2010). The NCAA

has strict academic requirements. If these are not met, then student-athletes do not have any other option but to miss out on part of their season until the academic minimum is met. Interestingly enough, a recent study found that as college athletes build stronger relationships with their teammates, they begin to feel less motivated towards their academic endeavors (Freeman, 2018). Collegiate athletes must receive the necessary academic support, especially for those athletes that are part of revenue sports such as men's basketball and football. Often these students find themselves academically underprepared for college-level courses due to having had a low-quality high school education (Kelly & Dixon, 2014).

### ***Impostor Syndrome***

Impostor syndrome is defined as a psychological pattern in which one doubts their accomplishments and has a persistent internalized fear of being exposed as a “fraud” (Clance, 1985). Research on impostor syndrome has identified specific demographics that are more likely to experience this phenomenon. In most studies researchers find that ethnic minorities and first-generation college students are more likely to feel like impostors, compared to their non-minority and later generation college students (Gardner & Holley, 2011; Peteet et al., 2015). Studies have found that first-generation college students and ethnic minorities have lower rates of academic retention (de Brey et al., 2019; Pascarella et al., 2004; Wyatt, 2014).

Previous research has found that high school athletes are more likely to be admitted into college than their peers due to their athletic involvement (Barron et al., 2000). Even though sports have been shown to instill protective factors such as lower levels of depression and anxiety, they still do not protect athletes from feelings of impostor syndrome (Davidiuk, 2015). Previous research has found that it is common for athletes to experience these feelings, especially during their time in college (Gotwals & Tamminen, 2020).

A study by Stone and colleagues (2012) found that student-athletes who are reminded of their athlete status may perform worse inside the classroom. Another study found that college generational status and ethnic identity impacted underrepresented students' levels of impostor syndrome in college (Peteet et al., 2015). Meanwhile, first-generation college students are at a clear disadvantage when it comes to college knowledge (e.g., applications, financial aid, resources, etc.) A study by Pearson and Petitpas (1990) suggested that freshman retired athletes may be afraid to let go of their athletic identities due to possible feelings of academic unpreparedness. These students may be holding on to their previous identity as a way to feel safe in their new academic environment. Alternatively, Ramsey and Brown (2018) suggest that these students could be at risk of feeling impostor syndrome due to their fear of forming a new identity in academia. The current study will address these issues to better understand if incoming freshmen and sophomore students who are retired student-athletes experience impostor syndrome.

### *Academics and Cultural Disparities*

Over the last few decades the state of California has been trending in a direction that requires a highly educated work force with at least bachelor's degree (PPIC, 2019). A report by the Public Policy Institute of California (PPIC, 2019) argues that California may have a challenge meeting these demands as its population is shifting towards demographics that have been historically underrepresented in higher education (i.e. Latinx). California is the state with the largest Latinx population at 39%.

According to the 2018 U.S. Census, Latinos (18.3%) and African Americans (13.4%) make up 31.7% of the nation's population (U.S. Census Bureau, 2018). The Latinx population, at 18.3%, is currently the largest minority group in the United States. According to projections,

the Latino community is expected to make up 24% of the nation's population by the year 2065 (Noe-Bustamante & Flores, 2019).

In 2012, for the first time ever, 49 % of Latinx high school graduates enrolled in college and surpassed enrollment rates than of white students (Lopez & Fry, 2013). Since then, Latinx college enrollment rates have continued to rise (Gramlich, 2017). Although Latinx students are increasing their enrollment rates, they continue to lag behind the following groups in sequence, African Americans, Whites and Asians in obtaining a four-year degree (Krogstad, 2016). Research has found that a disproportionate amount of first-generation college students that drop out of college come from ethnic and minoritized backgrounds (Wyatt, 2014). According to the U.S. Census (2019), 18% of Latinos and 26% of African Americans graduate with a bachelor's degree, while their counterparts graduate at much higher rates (40% of Whites and 58% of Asians).

A survey conducted by the NCAA in 2019 reported that 44% of Division I athletes are a member of a minority group (NCAA Database, 2020.). A 2018 report found that across 65 Division I schools, Black student-athlete graduate from college on average in six years or more (Harper, 2018). According to the NCAA, 80% of Division I Black student-athletes and 87% of Hispanic or Latino student-athletes graduate from college. While 93% of their white student-athlete counterparts graduate (Brutlag Hosick, 2020) It is important that these ongoing trends are recognized, and programs are put in place to support these minority student athletes.

In sum, the transition to college may add additional challenges for retired student athletes, including feelings of loss, renegotiation of identity and imposter phenomena, Furthermore, as the nation becomes increasingly more diverse, it is important to address the ethnic/racial educational gaps that currently exist across the nation. Last, being a first-generation

student may add additional challenges for retired athletes due to these students possibly having familial responsibilities, job responsibilities, poor mental health, inadequate academic preparation and financial difficulties (Jenkins et al., 2009; Stebleton & Soria, 2012) .

### ***First-Generation Status***

Another factor to consider is the generational status in college of a student. First generation college students more frequently experience barriers that impede them from achieving academic success (Ma & Shea, 2021; Stebleton & Soria, 2012). These obstacles include, but are not limited to familial responsibilities, job responsibilities, inadequate study skills, weak English skills, inadequate academic preparation and poor mental health (Engle & Tinto, 2008; Stebleton & Soria, 2012). It is possible for a first generation student to experience a variety of these obstacles at once, the combination of these barriers complicates their academic experience (Engle & Tinto, 2008).

Research shows that financial difficulties and lack of interaction with faculty are two of the main factors that distinguishes first generation students from non-first generations students (Jenkins et al., 2009). These students may lack the social capital to find the support that is needed from staff and faculty to be successful in college. Moreover, a first-generation student from a low socioeconomic background is four times more likely to drop out of college than their peers (Wyatt, 2014). First-generation students are also less likely to receive financial and social support, resulting them to work longer hours and spend more time away from campus.

Majority of first-generation college students come from a minoritized group(41% of African American students and 61% of Hispanic students are first generation), are more likely to have dependents, be older than their peers, lack college knowledge, and are more likely to attend

college part time than their non-first generation peers (*First-Generation Students* , 2021) It is imperative that educational administrations pick up on these trends and create programs tailored to provide support to this vulnerable population.

### ***Current Study***

The study extended the existent literature by following the academic and athletic transition of underrepresented retired high school athletes. Specifically, it focused on their academic adjustment and aimed to assess whether their prior athletic experience has provided any protection or hindered their transition to college. The overarching goal was to explore the effects that early athletic retirement has on underrepresented students and their transition to college.

### ***Research Questions and Hypotheses***

Four research questions guiding this study:

1. Do underrepresented retired high school student-athletes that were forced into retirement have higher athletic identity than athletes who willingly retired?

H1. We predicted that underrepresented forced retired student-athletes would report higher AIMS scores than their non-underrepresented counterparts at every level (Grove et al., 1997; Martin et al., 2014; Stephan et al., 2010).

2. Do underrepresented first-generation retired athletes report higher levels of athletic identity than their non-first-generation peers?

H2. We expected first-generation underrepresented students to report higher athletic identity scores than their non-first-generation peers.

H3. The interaction between college generational status and ethnic/racial group membership was expected to show those that are underrepresented retired student-athletes (Harper, 2018; Peteet et al., 2015; Wyatt, 2014) and first-generation college students will report higher athletic identity and impostor syndrome scores.

H4. In assessing impostor phenomenon scores across ethnic/racial group membership, we predicted that underrepresented retired student-athletes will report higher levels of imposter syndrome than their non-underrepresented peers.

3. How does participating in organized sports during high school facilitate underrepresented students' academic transition to college?
4. How do underrepresented first-generation students appraise their early athletic retirement?

## **Method**

### **Study 1 Participants**

Participants in the study included 216 undergraduate students from California State University, Northridge (CSUN). CSUN is a large public university in Southern California and designated as a Minority-Serving Institution (MSI) and a Hispanic-Serving Institution (HSI). The participants were all either enrolled in introductory psychology courses or were making up credits from a previous introductory psychology course. All participants volunteered and signed up for the study through CSUN's psychology research system, SONA. All participants were required to have been part of a high school sport for at least two seasons and be over 18 years of age. The original data set included 228 responses; however, 12 participants were eliminated due to not completing the questionnaire. Participants included 59 males and 157 females, with a mean age of 19.50 years (range: 18 to 33). 138 of the participants identified as Hispanic or Latino, 14 identified as Black or African American, 32 identified as White or Caucasian, 19 identified as Asian or Pacific Islander, 10 identified as Multiracial or Biracial, 2 preferred not to say and 1 identified as "other" but did not provide a written answer. 111 of the participants classified themselves as freshmen, 49 as sophomores, 31 as juniors, 24 as seniors and 1 as "other" (5<sup>th</sup> year senior).

### **Study 2 Participants**

The qualitative part of the study was composed of 32 participants who expressed their interest in participating in the second part of the study. Participants were eligible for inclusion if they were part of an underrepresented group (Black or African and Hispanic or Latino). These 32 participants had an average age of 19.50, with 22 of them being female and 10 being male. With

regard to ethnicity, 28 identified as Hispanic or Latino and 4 participants identified as Black or African American. For class level, 21 self-identified as freshmen, 4 as sophomores, 3 as juniors, and 2 as seniors.

### **Study 1 Materials**

The quantitative study was composed of a 45-item questionnaire that was administered through Qualtrics. Two scales were used, the Clance Impostor Phenomenon Scale (CIPS) and the Athletic Identity Measurement Scale (AIMS). The CIPS is a 20-item measurement scale that assesses an individual's level of impostor syndrome. The survey requires participants to answer on a Likert scale, ranging from 1 (Not at all true) to 5 (Very true). See the Appendix B below for the complete list of items. The CIPS has had good internal consistency (Cronbach's  $\alpha = .92$ ) and test-retest reliability ( $r = .72$ ). Composite scores of the CIPS that are lower than 40 means that the participant has few impostor characteristics, a score of 41-60 means that the participant has moderate impostor feelings, a 61-80 means that the participant frequently has impostor feelings and a score of 80 or higher means the participant has intense impostor feelings (Chrisman et al., 1995). Furthermore, the CIPS is the preferred test for clinical and research purposes due to its shorter length, allowing it to be much easier to administer (Chrisman et al., 1995).

The AIMS was used to measure participants' athletic identity. The AIMS is a 10 item measurement scale that reflects the strength and exclusivity of identifying with the athlete role (Brewer, 1993). The scale is rated on a 7-point Likert scale with "strongly disagree" and "strongly agree" being the extremes at each end of the scale. See the Appendix A below for the list of 10 items. The AIMS has high test-retest reliability ( $r = .89$  over a two week period) and internal consistency (Cronbach's  $\alpha = .81$ ; Brewer, 1993).

Finally, all participants answered demographic questions, which included questions about their age, gender, racial/ ethnic identity, high school sport played, college classification and their GPAs for both high school and college. At the end of the questionnaire participants that belonged to an underrepresented racial or ethnic group were invited to participate in the interview portion of the study. Interested participants would provide their emails and the researcher would reach back out with information on the interview process.

## **Design**

The study used a non-experimental, mixed-method research design with no manipulated variables. The primary research question will be answered by hypotheses 1, 2, 3 and 4 that was analyzed through the use of Analysis of Variance (ANOVAs). The two exploratory research questions were measured through the use of thematic analyses.

## **Procedure**

Participants were recruited through CSUN's Psychology Department research pool. Prior to signing up, participants must agree to meeting the requirements of the study, which include being 18 years or older and having played at least two seasons of high school sports. Once participants signed up, they were redirected to an online survey platform, where they were shown a participant information form. Participants read the information form and agreed to the terms before proceeding to answer any survey questions. Those who did not agree were redirected to the end of the survey. Those who agreed to the participant information form were then redirected to the survey which included the CIPS, the AIMS, and demographic questions. It took approximately 20 minutes to complete the entire questionnaire.

The last portion of the questionnaire included an invitation to the second part of the study, for only the participants that met the inclusionary criteria. Students who identified as “Black or African American” and “Hispanic or Latino” were asked if they were interested in participating in the second part of the study. Those who expressed their interest were asked to enter their emails and SONA identification codes in a different Qualtrics survey that was linked through the original survey. The researcher then followed up with each one of them through email and provided them with the information to sign up for the second part through the research pool, as well as a Qualtrics link to the participant information form for the interview part of the study.

The interviews were all conducted by the primary investigator, a second-year master’s student who has been trained in qualitative methods. All of the interviews were conducted via Zoom and were audio-recorded. The recordings were then transcribed by the primary investigator through Rev, an online transcription service, which was then verified by the primary investigator.

Participants who completed Study 1 (Qualtrics questionnaire) received 2 research credits for their participation. Those who completed Study 2 (Zoom interview) received 5 credits total: two research credits for Study 1 and an additional 3 credits for Study 2.

## **Analysis**

To address the quantitative hypotheses, the primary investigator used a series of analyses of variance (ANOVAs) using SPSS 27, a statistical software package. To address the qualitative research questions, an inductive thematic analysis was conducted (Braun & Clarke, 2013). The primary investigator analyzed the transcripts and identified themes using an open-coding

process, which places emphasis on the information that can be extracted directly from the data. Following the initial identification of themes, these were reviewed and then combined to create sub-themes.

### **Positionality**

Reflexivity is regarded as an imperative criteria for establishing the quality of qualitative research (Gough, 2017). The primary researcher is a first-generation Latino immigrant and a second-year master's student with research interests in both sport and developmental psychology. He is a retired high school athlete who fits the age range of the participants. Given the author's background, he was able to attend to the nuance in the different perspectives and experiences that participants had as they retired from their respective sports and transitioned into college.

## Study 1 Results

An outlier analysis was conducted prior to the start of the analyses and revealed that the participants did not report extreme scores for either the CIPS or the AIMS. To answer the question, do underrepresented retired high school student-athletes that were forced into retirement have higher athletic identity than athletes who willingly retired?, it was hypothesized that underrepresented forced retired student-athletes would report higher AIMS scores than their non-underrepresented counterparts at every level. A two-way ANOVA was conducted to measure the effects of ethnic/racial group membership (underrepresented vs non-underrepresented) and type of retirement on participants' AIMS score. The type of retirement yielded a significant main effect of retirement type on participants' AIMS scores  $F(2,197) = 11.269, p = .000$  (Table 1) There was no significant main effect on ethnic/racial group membership. The interaction between ethnic/racial group membership and type of retirement was also significant with regard to AIMS scores,  $F(2,197) = 4.384, p = .014$ . Specifically, participants who voluntarily retired had higher AIMS scores, compared to students who were forced to retire (see Table 4). Participants' ethnic/racial group membership did not have a significant relationship with their AIMS scores,  $p = .393$ .

The second and third hypotheses were tested via one-way ANOVAs. The analyses examined the relationship between ethnic/racial group membership and participants' AIMS and CIPS scores. The analyses revealed no significant effects for either main effects (see Tables 2 and 3). The findings indicated that underrepresented students ( $M = 60.65, SD = 13.44$ ) did not report higher levels of impostor syndrome than non-underrepresented students ( $M = 58.16, SD = 14.95$ ), which is inconsistent with what was hypothesized.

## Study 2 Results

## **Thematic Analysis**

The analysis revealed five themes and five sub-themes and are displayed in Table 5. These themes represent how the interview was structured, with the initial focus being the participants' experiences as student-athletes and then how their experience affected their academic career. To better understand each retired athlete's unique experience, participants were prompted to explain their retirement experience and what their future athletic and academic goals were. The five themes were: 1) retirement, 2) outcomes from athletic experience, 3) high school academic experience, 4) transition into college, and 5) appreciation of athletic career. The themes are explored in greater depth below.

### ***Retirement***

Out of 32 participants, 20 (63.5%) indicated that they were not ready to retire from their sport when they concluded their final season in high school, whereas 15 (47%) participants expressed they were ready to retire from organized sports. A participant that was ready to retire shared “I think mentally and physically I was gassed out by my senior year.” While another that was not ready to retire stated “No, I wasn't ready. I was definitely expecting to, or my intentions were to continue track and field throughout college.” In addition, three (9%) out of the 32 participants expressed feeling conflicted, being both ready and not ready to retire. The three participants that reported conflicting thoughts on being ready to retire expressed similar opinions. For example, one participant stated,

Did It make me feel like I was ready to retire, no. I'm gonna go to more of the no side because I just, again, it might sound weird, but I did love, you know, running. Running competitively and also running just as in, like I guess, in art.

However, the participant also expressed how important academics was to them and the need for them to focus on their upcoming college career.

As of now? I think I still want to pursue it [soccer], but something deep down in me tells me to rather pursue a career rather than try and do my best working out and getting back into shape.

### ***Outcomes from Athletic Experience***

**Life Skills.** All 32 participants shared they learned at least one life skill through their involvement in an organized sport. The skills mentioned include leadership, communication, teamwork, perseverance, discipline, emotion regulation, time management, conflict resolution, accountability, and respect. Participants conveyed that these skills were taught by one of their coaches or as lessons that were part of their respective sport (losing, dealing with injuries, being benched, etc.).

**Team Bond.** Sixteen participants spoke about the bond they built with their teammates in high school, with most participants sharing that their relationship with their teammates lasted beyond their playing days. Some indicated that these strong bonds extended out to the classroom where these teammates would support each other academically and hold accountability with one another. For example, a female cheerleader said,

I think the big difference here is that at practices and even our coach, our teammates, we all like... what's the word... we all support each other and we kind of push each other to do well in school.

**Passion for sport.** Fifteen of the 32 participants conveyed their passion for their sport. These participants used phrases like, “*having that feeling, it was just something very exciting that*

*I always looked forward to”, “I enjoyed just like being a part of the team. I enjoyed playing and just being around the sport altogether because it was just something that was very fun for me.”* and *“When I was on the field, it felt like I was free.”* Several participants expressed how a parent had forced them into a sport at an early age, but after some time they fell in love with the sport on their own. Other participants saw their sport (e.g. soccer, softball) as part of a family tradition since a parent, sibling, or cousin was either previously involved in it or still was a part of the sport. For example, a female soccer player stated

When I started off, it was because I was kind of, not forced, but it was something my parents made me do. But throughout the time I started loving the game, the competition, it became a part of who I was...I guess it would be not much exactly of the game, but the time I got to spend with my family. Because every weekend, we would all just get into the car just to go watch one of my games. And then all the friendships I was able to make with my teammates.

### ***High school Academic Experience***

**High School Responsibilities.** When faced with multiple responsibilities (academics, athletics, employment, and familial duties), All participants mentioned they built strong time management skills to balance their responsibilities. Some participants went beyond just building time management skills and reached out to their teachers and administrators to ask for support. A few participants mentioned going to tutoring after school or during lunch hours, while others were granted permission to record lectures and even received extensions to assignment deadlines. All 32 participants shared that when in season they would have practice 4-6 times a week and would often have to do their work early in the morning, before school, or later in the evening after they’ve finished practice. Soccer players explained that they would be in season

year-round due to them signing up for club soccer while their high school teams were in the offseason.

**High School Preparation.** Participants attended public(21), charter(6), magnet (2), private(2), and home schools(1) which led to different academic experiences. Those that felt their high school prepared them well for college. replied, *“I did take AP classes. So, I was kind of used to I guess that big workload,”* and *“They did really well. They actually had college courses to take.”* Participants that felt their high school did not do enough to prepare them responded, *“I don't mean to offend anyone... but I really felt less prepared,”* and *“To be honest, not really. The workload and how much... they didn't really prepare us for this.”* Regardless of the academic preparation, most participants had similar feelings regarding the support they received with their college applications. Participants that felt they received enough support during their college application process. For example, participants replied, *“They helped me out a lot. I don't know how I would do it, I think without their help,”* and *“Yeah, they[counselors] were like family, they were very helpful.”*

Several participants reported they felt their school didn't do much or anything to help them with their college application process. For example, a female soccer player said,

There was three people trying to help so many seniors. But I don't know, I guess you could say they weren't really that helpful.

Many of these same participants were first-generation college students and had to navigate through the college application process independently or with the help of peers *“Well, basically I just kind of got help from my friends, honestly. Because my parents don't really know anything about computers or college or anything.”*

## ***Transition***

Majority of the participants (87.5%) described experiencing at least one type of challenge or difficulty during their transitional period into college. Common difficulties participants mentioned include long commutes (including the need to use public transportation), lack of academic preparation, work responsibilities, familial responsibilities, time management and moving away from family for the first time.

Five participants expressed having an easy or more enjoyable transition into college. Some felt that things didn't change, since in high school they had to worry about classes then sport responsibilities, and finally homework. They felt they still carried the same amount of responsibilities into college but in a different way, for example a male football player said,

Actually, with the loss of football, me not having to put in... I still work out on my own, but not as rigorously as I used to for football training. So, I don't have the pressure of having to go to workouts, having to memorize plays, so it gives me more time to study. It opened up my availability to work, so I'm making more money now. So, I feel like the transition was actually easier for me.

Other participants stated that being able to build their own schedule and taking classes that did not have any prerequisites made it much smoother for them *“in terms of like academic level, like I think it's more simple and straight forward. Yeah, you kind of have, you know you have more freedom and like you could pick your own classes, manage your own time.”*

Freshmen that transitioned into college mid-way through the COVID-19 pandemic expressed similar difficulties, but in addition felt like they weren't capable of making social connections, felt they lacked support due to the online environment, lacked motivation,

experienced Zoom fatigue, dealt with mental health problems and had to adapt to online learning (note-taking and instructor efficiency). Most freshman that transitioned into college mid-way through the pandemic expressed they did not feel like they were in college *“I think it feels surreal. I know I'm in college, but it's just, I don't know ... I felt like I'm in limbo.”*

***Appreciation for athletic career.***

The closing statement asked participants if they had any advice to share with a younger version of themselves. Participants responded with words of encouragement, but also mentioned their appreciation for their experience as high school student-athlete. Participants shared that their experience not only helped them grow as an individual but also helped them focus on their academics *“It got me to connect with the school in a way...I probably wouldn't be... or I probably wouldn't have these good grades.”*

## Discussion

The current mixed methods study aimed at exploring the relationship between athletic retirement at an early age and the impact it could have on those transitioning into a university. The study also investigated whether having a minoritized racial and ethnic background could play a role during this pivotal transitional period in a young adult's life. Since this study is one of the first of its kind, the hypotheses were based on prior research that focused on different age groups and demographics. Only one a priori hypothesis was significant and aligned with previous research, with three hypotheses were not supported by the results.

Our first hypothesis examined if the type of athletic retirement, plus ethnic and racial identity, affected individuals' AIMS scores. The results showed statistically significant findings between the groups, but not in the direction as anticipated. Previous studies found that athletes forced into retirement report higher AIMS scores (Grove et al., 1997; Martin et al., 2014). Our results show that underrepresented and non-underrepresented participants both reported higher AIMS scores if they voluntarily retired from their sport (see Table 4). The lack of alignment between prior research and the current study could demonstrate that even though these students understood the importance of academics and their need for retirement, they may have not truly been ready to transition out of their sport. In addition, our survey did not ask students for the type of school they attended, this was only covered during the interview process. It is possible that a sizeable portion of our survey belonged to charter or magnet, which may have required students to focus on academics and transition out of sports sooner than they would have liked.

Hypotheses two, three, and four all had to be modified due to an omission by the research team. These three hypotheses all included college generational status as a variable, but due to this item not being included in the questionnaire, these hypotheses were not able to be examined

by the quantitative data as originally planned. Instead, we focused on whether students identified as underrepresented (Black or African American and Hispanic or Latino) or non-underrepresented (White or Caucasian, Asian or Pacific Islander and Multiracial or Biracial). Also note, the Athletic Identity Measurement Scale (AIMS) was originally meant to be measured on a seven-point Likert scale with “strongly disagree” and “strongly agree” being the extremes at each end of the scale (Brewer, 1993). Instead, this scaled was measured dichotomously with “True” and “False” being the available options to each statement.

Thus, our third and fourth hypotheses ended up overlapping, with both of them measuring if underrepresented status had any relationship with feelings of impostor syndrome. The results for these two came back non-significant. It is possible that the unplanned edits to our survey mentioned above could have played a role in why hypotheses two, three, and four were not supported by the results. It is important to note that previous studies have reported findings in support of our original hypotheses (Gardner & Holley, 2011; Pascarella et al., 2004; Peteet et al., 2015; Wyatt, 2014).

Additional, exploratory ANOVA analyses suggested significant differences in college GPA's between underrepresented and non-underrepresented students,  $p = 0.013$ . Underrepresented students ( $M = 3.28$ ) had a lower GPA on average than non-underrepresented students ( $M = 3.5$ ). These findings support previous literature (Gershenfeld et al., 2016; Wyatt, 2014) which argues that various factors (SES, cultural capital, or academic preparation) may be barriers to an underrepresented students' academic success. Importantly, although the means are still significantly different, both groups compared in the current study are still above a 3.0 GPA. The data was collected through the psychology department's research pool. These students had the semester to sign up and complete their requirement, and this data was collected during the

first half of the spring semester. This could mean that the participants were amongst those students who may have better adjusted to the demands of college, and those students with lower grade point averages may have been less likely to participate in this study. This idea is further supported in our qualitative findings.

Furthermore, exploratory ANOVAs were conducted on gender due to our samples gender breakdown (72.7% of participants were female). The first analysis reported gender having a significant effect on CIPS scores,  $p = 0.012$ . In addition, it was female participants ( $M = 61.66$ ) that reported higher CIPS scores than males ( $M = 56.32$ ). Early literature on the topic of impostor phenomenon supports these findings (Clance & Imes, 1978). The second analysis conducted suggested a significant difference in AIMS scores when looking at gender,  $p = 0.001$ . Female participants also reported higher athletic identity score averages ( $M = 15.08$ ) than their male counterparts ( $M = 13.74$ ). At the moment there is not much literature on this topic, but a study focusing on athletic identity and sport participation did report contradictory findings, with males having higher AIMS scores than female participants (Lamont-Mills & Christensen, 2006). The final analysis suggested no significant difference between college GPA by gender,  $p = .607$ . These findings are unexpected due to female participants having reported higher scores of impostor phenomenon. Even though impostor phenomenon is supposed to be debilitating Knights and Clarke reported it could have positive effects which could motivate those affected to generate high standards and pride in their work (2014). It is possible that these female participants may be having a similar experience, which is allowing them to maintain their grades on par with the male counterparts.

The second part of the study was composed of the semi-structured interview. All 32 students that participated in the survey identified as underrepresented. They had an average high

school GPA of 3.55, and an average CSUN GPA of 3.49. The overall, larger sample had a similar high school GPA, but a lower CSUN GPA than these 32 interviewees (CSUN GPA = 3.34). The 32 interviewees had an average CIPS score of 55.12, and an average AIMS score of 14.15. Meanwhile, the overall sample's average CIPS score was 60.28. These findings further reinforce the possibility that the interviewed participants, especially, were part of a more academically adept group of students.

The majority of high school athletes are forced to face athletic retirement after completing their senior year (NCAA Research, 2020). To date, there is limited qualitative research examining these student-athletes experiences as they transition into college. The current study aimed to examine the experience of underrepresented retired high school athletes as they transitioned into college. To accomplish this aim, the following exploratory research questions were used to guide the study: How does participating in organized sports during high school facilitate underrepresented students' academic transition to college? How do underrepresented first-generation students appraise their early athletic retirement?

The interviews ( $n = 32$ ) provided details on a variety of the reasons behind these former athletes' retirement. These included injuries, family responsibilities, not being talented enough, putting academic responsibilities first, and willingly retiring. 63.5% of participants shared that they were forced to retire; however, their survey responses suggest an incongruency with the interview data, since only 50% of these former athletes marked that they were forced into retirement. It is possible that through the interview, the participants felt more comfortable and were able to explain their experience in greater detail than through a survey.

Previous literature shows that when an athlete willingly transitions into the next phase of their life, they will have a smoother transition (Grove et al., 1997; Martin et al., 2014;

Stambulova, 1994). Those findings were not replicated in this study, since participants who were forced into retirement ( $M = 3.64$ ) reported higher college grade point averages (GPA) as those who willingly retired ( $M = 3.25$ ). In addition, the two college athletes who were included in our sample reported a higher college GPA ( $M = 3.80$ ) than the participants who faced retirement after high school.

Our qualitative findings suggest that retired high school athletes had a very diverse academic high school experience, with some students stating their schools provided plenty of academic support for athletes, while others felt underserved. Participants' transition experience varied based on the type of school they attended (private, charter, magnet, public or home schooling).

Participants who attended a private high school stated they felt a lot of support from their school, especially when it was time for them to apply and transition into college. A participant mentioned that her private school had counselors who were specifically assigned to work with student-athletes and assure that their grades and applications were all in order. These students also had coaches who worked as teachers and had access to their grades, which allowed them to follow up with their student-athletes at any given time. These students expressed having a relatively smooth transition into college, with the biggest difficulties being related to the COVID-19 pandemic; e.g., lack of motivation, adjusting to online classes, or feeling isolated or alone.

It was called a transfer student-athlete counselor and she was with us all the time.

She would check in, making sure all our classes were in line, our grades were in line. So she was really in tune with us. Also, our assistant softball coach, she was

a teacher. So she had all our grades. She made sure we were doing well. So there was a lot of guidance at that school.

Former student-athletes that attended a charter or magnet school, or were home-schooled, shared similar experiences. They felt that their schools put them through rigorous courses that resembled college-level classes. In addition, they expressed learning life skills through their involvement in their sport; e.g., communication, conflict resolution, leadership, or time management. These participants also had the support of their counselors, who provided them with workshops and guidance through their college application process. One participant from a charter school shared that they were not allowed to be a part of a sports team during their senior year, because the school wanted them to focus on college applications and successfully transitioning out of high school.

I didn't play my senior year because they didn't let us because we were going to graduate, so I wasn't going to be able to compete the whole full year. And also because in that school, for our senior year, they took us to different states to see different colleges. So that's the reason why I didn't play my senior year.

Participants who attended a public school had a variety of experiences related to their academic transition. Some participants felt their school did everything in their power to prepare them to successfully transfer to college; for example, college application support, rigorous courses, office hours, workshops or specific electives focusing on college readiness (e.g., Advancement Via Individual Determination; AVID).

I would say it was. It did, it did it. Yeah it did a pretty good job. Academic wise, you know from the top I guess rigorous courses that it offered I took ... Class students... went to prestigious colleges so I would say this school did a pretty well job in preparing us... Yes, I was in [AVID] also three years in middle school.

Other retired student-athletes felt their public schools did not do enough to prepare them academically for college or even support them as student-athletes. These students stated that their schools either did not offer AP and Honors courses or did not advertise them to student-athletes. They also shared that their counselors were not very supportive, often demoralizing them or only providing support if their grades were good enough. Some of these students had to seek support from peers, extended family members and family friends when it came time to apply to college.

I want to say it was very minimal just because the high school I went to... it saw a lot of students going to college and it tried to encourage it, but the atmosphere in itself for the high school was like, C's are passing. That's all you really need... [Counselors] never reached out unless you were a part of a special list. If you were getting A's in all your classes, if you actually had the possibility of making it.

All participants interviewed identified as members of an underrepresented ethnic or racial group. Even though some of these students had to find their own means of support and information, they were all accepted and attended a university. It is important to note that just because these students were able to transition into college, it did not mean that other students from their high schools were able to do the same. All 32 interviewees mentioned that they had learned one or more life skills through being part of a sport, and about half of them indicated that they had a strong bond with their teammates. Similar findings were reported in previous literature (Merkel, 2013; Siegenthaler & Gonzalez, 1997). It is possible that even though some of these students did not feel as prepared for college, their involvement in athletics and life skills that came along with it bolstered their college application enough to get them accepted (Barron et al., 2000).

Some students accepted that high school would be the end of their organized sports career, while others still contemplated pursuing organized sports at the collegiate level. Regardless of whether students were ready for athletic retirement or still planned to pursue sports in college, many expressed an appreciation for their athletic experience in high school. *“Oh, I loved it. I miss it every day. I have so many memories to look back on. I would definitely redo those four years again.”* Similar to previous literature, some students conveyed that they felt strange and like they were missing something after they stopped playing an organized sport (Stephan et al., 2010). But unlike previous studies, these students did not report comparatively higher levels of athletic identity nor report lower GPA's. Overall, most of these participants were able to accept their athletic retirement, and even though some still planned to pursue collegiate sports, many understood the importance of their academics. This was reflected by their strong high school and college GPAs.

I really learned a lot on how to handle my own responsibilities, my own. I've learned a lot of life skills that I would never take back from the experience, the fun experiences and also the life skills that are learned from taking the sport and also juggling that with academics.

## **Limitations**

One limitation for this study was the time frame when the data was collected. While we did have over 200 participants, this data was collected through the university's psychology research pool. Data collection began during the early part of the spring semester and concluded four weeks later, right before spring break. Thus, it is possible that primarily high-achieving students enrolled in the study, which would explain the above-average GPAs that were being reported. Then again, the unique composition of this sample as underrepresented, primarily high-achieving students is unique and could also be seen as adding empirical value to the findings.

Another limitation mentioned above was the unintended modification to the measurement scale of the Athletic Identity Measurement Scale (AIMS), and the absence of a questionnaire item asking about collegiate generational status. As previously mentioned, the AIMS was meant to be rated on a 7-point Likert scale with "strongly disagree" and "strongly agree" being the extremes at each end of the scale. It is possible that this error reduced the variance in AIMS scores and contributed to the non-significance of hypotheses two through four.

In addition, this study relied on participants recalling their experiences as student-athletes, with some participants being as far as four years removed from high school. Future studies might consider conducting a longitudinal version of this study. This would allow them to collect quantitative responses from participants at the end of their senior year, and a follow-up at the end of their freshmen year in college. This would allow researchers to more immediately gauge the impact sports may have on these student-athletes. In addition, researchers would have access to data on student-athletes who were not able to successfully transition into college and could compare it to those who did transition successfully.

## Conclusion

The present study collected quantitative and qualitative data from former high school student-athletes who were accepted into California State University, Northridge. Extrapolating from previous research, this study hypothesized that underrepresented former high school student-athletes who were forced into athletic retirement would report higher levels of athletic identity than those who willingly transitioned into retirement. The statistical analyses concluded that there were differences between the different types of retirement, but they were not supported by the literature. Previous studies found that those who were forced into retirement reported higher AIMS scores than those who voluntarily retired (Grove et al., 1997; Martin et al., 2014), while this study found the complete opposite and those who willingly retired ( $M = 15.48$ ) had higher AIMS scores than those who were forced into retirement ( $M = 13.52$ ). The remaining three hypotheses tested quantitatively, examining generational status and athletic identity as variables, were found to be either unsupported or inconclusive. Furthermore, there was a difference with athletic identity and impostor phenomenon scores across genders. With female participants reporting higher athletic identity ( $M = 15.08$ ) and impostor phenomenon ( $M = 61.66$ ) than their male counterparts. A previous study reports that impostor phenomenon has mixed outcomes, with one debilitating the individual but on the other hand possibly providing them with the motivation to help create high standards and pride in their work (D. Knights & Clarke, 2014).

The qualitative findings suggest that depending on the type of school (public, private, etc.) a student-athlete attended, their academic transition into college will vary. Student-athletes who attended a private high school reported receiving the most academic support, coming from teachers, counselors and coaches. Many of these students went on to describe their transition into college as smooth and being impacted more by the COVID-19 pandemic. Former student-

athletes from public high schools reported mixed experiences. Some felt that their teachers and counselors provided them with the support they needed to successfully transition into college, while others did not. Those who did not shared that they had to reach out to peers, extended family members, and family friends in order to get guidance on the college application system and financial aid.

Looking back at their high school athletic career, many participants expressed appreciation for their experiences. Even though most students were not ready to retire from organized sports, they demonstrated an understanding for the importance of academics; the average college GPA of this subsample was strong ( $M = 3.48$ ). Some students gave up their sport prior to the completion of high school because they felt it was necessary to put their full attention on their academics in order to be prepared for college.

The findings of this study highlight the diverse experiences that student-athletes may have depending on the high school they attend. Policymakers and school administrators need to be aware of these issues, especially since they control the financial resources that are allocated to each school. Administrators also have the power to hire coaches and student-athlete support staff. If administrators emphasized hiring coaches who are genuinely interested in seeing their student-athletes both succeed on and off the court or field, then they might open up another positive avenue of support for these student-athletes. Policymakers must also make sure these schools have the necessary funding to hire properly trained counselors who can handle their students' unique needs. Even though there is more to learn about early athletic retirement, this exploratory study offers practical implications for student-athletes, coaches, policymakers and school administrators.

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Appendix A. The Athletic Identity Measurement Scale

Table 1. Items of the AIMS.

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

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## Appendix B. The Clance Impostor Phenomenon Scale

### Clance IP Scale

For each question, please circle the number that best indicates how true the statement is of you. It is best to give the first response that enters your mind rather than dwelling on each statement and thinking about it over and over.

**1. I have often succeeded on a test or task even though I was afraid that I would not do well before I undertook the task.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**2. I can give the impression that I'm more competent than I really am.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**3. I avoid evaluations if possible and have a dread of others evaluating me.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**4. When people praise me for something I've accomplished, I'm afraid I won't be able to live up to their expectations of me in the future.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**5. I sometimes think I obtained my present position or gained my present success because I happened to be in the right place at the right time or knew the right people.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**6. I'm afraid people important to me may find out that I'm not as capable as they think I am.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**7. I tend to remember the incidents in which I have not done my best more than those times I have done my best.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**8. I rarely do a project or task as well as I'd like to do it.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**9. Sometimes I feel or believe that my success in my life or in my job has been the result of some kind of error.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**10. It's hard for me to accept compliments or praise about my intelligence or accomplishments.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

Note. From *The Impostor Phenomenon: When Success Makes You Feel Like A Fake* (pp. 20-22), by P.R. Clance, 1985, Toronto: Bantam Books. Copyright 1985 by Pauline Rose Clance, Ph.D., ABPP. Reprinted by permission. Do not reproduce without permission from Pauline Rose Clance, [drpaulinerose@comcast.net](mailto:drpaulinerose@comcast.net), [www.paulineroseclance.com](http://www.paulineroseclance.com).

**11. At times, I feel my success has been due to some kind of luck.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**12. I'm disappointed at times in my present accomplishments and think I should have accomplished much more.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**13. Sometimes I'm afraid others will discover how much knowledge or ability I really lack.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**14. I'm often afraid that I may fail at a new assignment or undertaking even though I generally do well at what I attempt.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**15. When I've succeeded at something and received recognition for my accomplishments, I have doubts that I can keep repeating that success.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**16. If I receive a great deal of praise and recognition for something I've accomplished, I tend to discount the importance of what I've done.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**17. I often compare my ability to those around me and think they may be more intelligent than I am.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**18. I often worry about not succeeding with a project or examination, even though others around me have considerable confidence that I will do well.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**19. If I'm going to receive a promotion or gain recognition of some kind, I hesitate to tell others until it is an accomplished fact.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

**20. I feel bad and discouraged if I'm not "the best" or at least "very special" in situations that involve achievement.**

1 (not at all true)      2 (rarely)      3 (sometimes)      4 (often)      5 (very true)

Note. From *The Impostor Phenomenon: When Success Makes You Feel Like A Fake* (pp. 20-22), by P.R. Clance, 1985, Toronto: Bantam Books. Copyright 1985 by Pauline Rose Clance, Ph.D., ABPP. Reprinted by permission. Do not reproduce without permission from Pauline Rose Clance, [drpaulinerose@comcast.net](mailto:drpaulinerose@comcast.net), [www.paulineroseclance.com](http://www.paulineroseclance.com).

### Scoring the Impostor Test

The Impostor Test was developed to help individuals determine whether or not they have IP characteristics and, if so, to what extent they are suffering.

After taking the Impostor Test, add together the numbers of the responses to each statement. If the total score is 40 or less, the respondent has few Impostor characteristics; if the score is between 41 and 60, the respondent has moderate IP experiences; a score between 61 and 80 means the respondent frequently has Impostor feelings; and a score higher than 80 means the respondent often has intense IP experiences. The higher the score, the more frequently and seriously the Impostor Phenomenon interferes in a person's life.

## Appendix C. Interview Questions

Opening question: What got you involved in \*insert sport\* and what were some of the things you enjoyed most about it?

1. Do you believe you're capable of playing \*insert sport\* at the collegiate level? *Why or why not?*
2. Do you feel like you were ready to retire from playing organized \*insert sport\*? *Why or why not?*
3. Aside from techniques and tactics related to your sport, what did you learn from playing \*your sport\*? *Is there any life skills you might have learned that have been useful outside of sport?*
4. How did you balance your school and sport responsibilities while in high school?
5. Can you tell me about your transition into college and what it was like? Did you experience any challenges? (adapting, schedule, classes, personal life, responsibilities, etc.)
6. How well do you think your high school prepared you academically for college?

Closing question: If you could go back in time and give yourself some advice to better prepare you for athletic retirement and transitioning into college, what would you say?

## Appendix D. Tables

Table 1

<i>Results of the ANOVA of Athletic Identity score by underrepresented identification and retirement reason</i>					
Source	Sum of Squares	df	Mean Square	<i>F</i>	<i>p</i>
Underrepresented	10.269	2	5.134	.938	.393
Retirement reason	123.406	2	61.703	11.269	.000
Underrepresented x Retirement reason	48.009	2	24.004	4.384	.014
Error	1078.624	197			

Table 2

<i>Results of the ANOVA of Athletic Identity score by underrepresented identification</i>					
Source	Sum of Squares	df	Mean Square	<i>F</i>	<i>p</i>
Underrepresented	2.918	2	1.459	.217	.805
Error	1430.855	213	6.718		

Table 3

<i>Results of the ANOVA Impostor Phenomenon score by underrepresented identification</i>					
Source	Sum of Squares	df	Mean Square	<i>F</i>	<i>p</i>
Underrepresented	345.772	2	172.886	.887	.413
Error	41495.265	213	194.813		

Table 4

	Underrepresented		Non-underrepresented	
	M	SD	M	SD
Forced into retirement	13.29	1.96	14.82	2.79
Voluntary retirement	15.56	2.59	15.03	2.17

Table 5

*Themes and sub-themes of underrepresented former student-athletes experiences*

Theme	Sub-Theme	Example
Retirement		<p>“I think I have other responsibilities. I do have other responsibilities I need to take care of. For my life for my life further down the road and that mostly revolves around education so. No. I actually wanted to play more. I was really sad. Our season ended and I even started contemplating on, possibilities for me to join clubs outside of school so that I could continue playing soccer, but then COVID happened”</p>
Outcome from Athletic Experience	Life Skills	<p>“That was literally everything. Every year I played sports. There was always a great coach, like a father figure to me. That gave me good life lessons about when I get older to be humble. To never overestimate your boundaries. Always think that you're good but don't really express it to other people to talk about or anything. Be humble.”</p>
	Team Bond	<p>“I think we did. I think we had a close relationship. We always hung out with each other. We had good chemistry on the court, off the court. Yeah. It was like a brotherhood.”</p>
	Passion for Sport	<p>“volleyball itself, as a sport itself, it's, it's a huge thing for me. It's been a part of my life for a long time, so I can't just decide not to do well one game. No, I would feel really bad about it if I did that. And also to the team. I can't just let them down. I have to put my heart out there, so we all do it together.”</p>
H.S. Academic experience	H.S. Responsibilities	<p>“I did have to juggle both. That had to I had to shape myself with the mentality of never wasting time. So time management was. Was a vital thing in in My journey to wanting To Excel in both in both a scholar athlete an I did get Scholar Athletes Award you know, throughout my years in which I'm proud of But yeah, in order to attain that, it was not easy.”</p>
	H.S. Preparation	<p>“Especially math and English. I felt like I didn't know anything, MLA, what is that? They never told us about this in high school. For high school, it was like, "Okay, do two pages, double spaced." For all of them and you</p>

would get an A. In this, it was, "Five pages, MLA. Put work cited page." I'm like, what is work cited?

And the workload, the scheduling, the different materials that were, that were taught all of that.

I saw again in college. So I feel my high school did really well, preparing me for college."

Transition

"No, I saw it as a fresh start, because after all the classes you take in high school, it's kind of all over the place. And then when I got to pick my classes for college, it was basically you didn't really have to, well for the classes that I got, you didn't really have to know previous things from high school, in classes that you took, it was just basically teaching you a new topic, which is what I liked."

"Oh, yeah, for sure. It's just, it's different. It's different than high school in a big way. Just with the level, because obviously it's college level, it's not high school anymore. And so it's more classes or more responsibility and more studying. I think for sure that having to adapt as a first year, you're trying to navigate your way through, especially through online, it was kind of difficult at first, but I think I got the hang of it now... The courses for sure, they're challenging. It would be studying and personal responsibilities. You got to do this or you got to do that, but you have class after class, for example"

Appreciation for  
Athletic Career

"I would've still gone the same way though, because I learned a lot and I've gained so much experience. And just specifically about the sport. Just I learned a lot. I mean, there's not much to say. But, yeah... 10 out of 10. I loved the experience[of being a HS athlete]"