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Pepperdine University
Graduate School of Education and Psychology

THE OUT-OF-SPORT TRANSITION EXPERIENCE OF NCAA ATHLETES:
A SYSTEMATIC REVIEW

A clinical dissertation submitted in partial satisfaction
of the requirements for the degree of
Doctor of Psychology

by

Stephanie Tuncel

June, 2023

Dennis Lowe, Ph.D. – Dissertation Chairperson

This clinical dissertation, written by

Stephanie Tuncel

under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF PSYCHOLOGY

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ABSTRACT

During the 2018-2019 academic year, the National Collegiate Athletic Association (NCAA) reported 1,004,450 student-athletes across Division I, II, and III universities. Of these athletes, only a small percentage will go on to play at a professional level. The majority of these student-athletes will go through an out-of-sport transition that, without proper preparation, can result in a variety of psychosocial difficulties. However, there are opportunities for student-athletes, athletic departments, academic departments, and psychological counseling centers to target different factors that could increase the likelihood of experiencing a positive out-of-sport transition. The focus of this systematic review was to address two primary research questions:

1. What risk and protective factors make the out-of-sport transition more manageable or difficult for NCAA athletes?
2. What intervention programs are universities implementing to help student-athletes prepare for this transition?

To present the findings for these questions, a mixed-methods methodological approach was utilized. Results are presented through a narrative synthesis to ensure easy accessibility and comprehension of the material by athletes and university officials. This systematic review joins emerging literature that recognizes the uniqueness of the college years and experiences and acknowledges the need to do more to prepare and protect student-athletes.

Chapter 1: Background and Rationale

The collegiate years of student-athletes are very distinct compared to those of their peers. Along with the grueling hours of physical training, long travel days for competition, and scrutiny from the public and fans, student-athletes are also expected to manage their academic responsibilities while simultaneously acting as representatives for their respective universities. A large number of student-athletes have reported experiencing psychological difficulties such as depression and anxiety symptoms, concerns with body image, and subclinical disordered eating behaviors such as food restriction, bingeing-purging, and laxative abuse (Bjornsen & Dinkel, 2017; Heird & Steinfeldt, 2013; Hilliard et al., 2019; Huml, 2018; Kilcullen et al., 2022; Plateau et al., 2016; Tomalski et al., 2019). Any combination of these experiences could lead to an increase in vulnerability to adversity, such as one that may occur when the student-athlete walks away from their sport.

Statement of the Problem

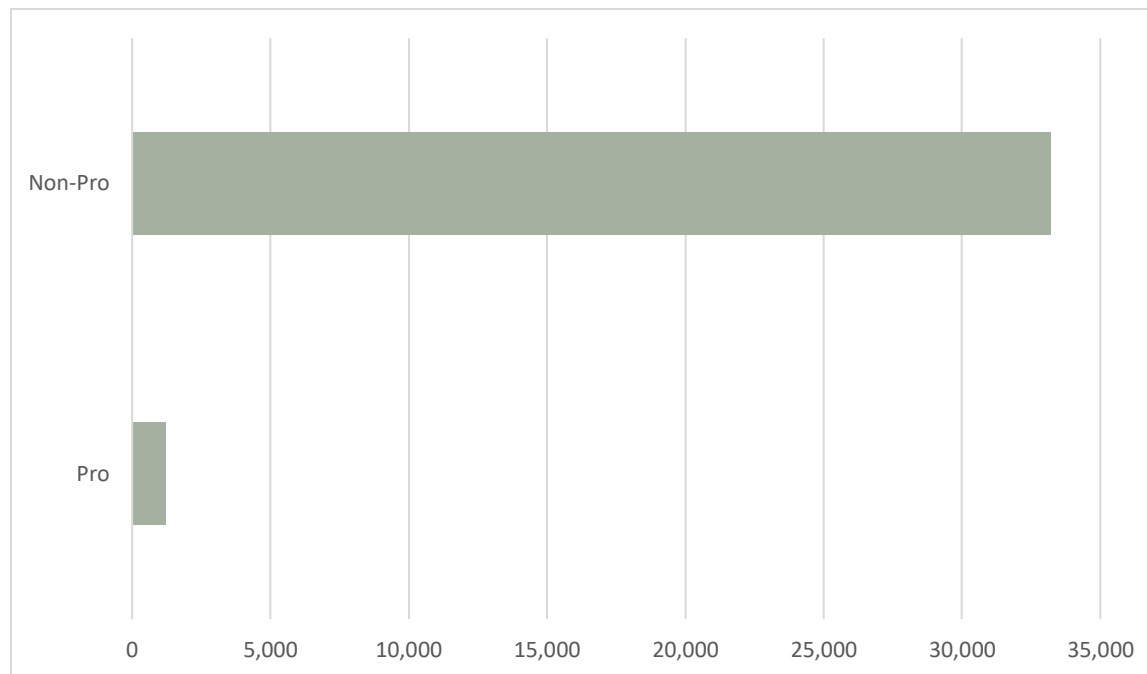
Retirement from sport is an inevitable part of the athletic career. According to the National Collegiate Athletic Association (NCAA) Sports Sponsorship and Participation Rates Report, there were 1,004,450 athletes across Division I, II, and III universities during the 2018-2019 academic year (National Collegiate Athletic Association, 2021).¹ Of these athletes, only a tiny fraction will be selected to play at a professional or Olympic level. According to the NCAA's 2020 Probability of Competing Beyond High School Figures and Methodology, for example, of the draft-eligible collegiate athletes, only 9.9% of baseball players, 1.2% of men's basketball players, 0.8% of women's basketball players, 1.6% of football players, and 7.4% of

¹ Numbers from the 2019-2020 and 2020-2021 seasons were not used, as the NCAA reported that some student-athletes' competitive seasons were disrupted or canceled due to the COVID-19 pandemic.

men's ice hockey players turned professional (Figure 1; National Collegiate Athletic Association, 2021). On the other hand, the staggering majority of athletes will have to contend with transitioning out of their sports career sooner than those who go on to play at an elite level.

Figure 1

Number of Athletes Competing in Professional Athletics



Note. These numbers only reflect athletes competing in the NFL, NBA, WNBA, NHL, and MLB.

Often cited in this literature is Nancy Schlossberg's 1981 model for analyzing human adaptation to transition (e.g., Cummins & O'Boyle, 2014; Hansen et al., 2018; Kidd et al., 2018; A.B. Smith & Hardin, 2020; Stokowski et al., 2019). In her work, she defined a transition as an event or nonevent that can be expected or unexpected and results in psychosocial changes (e.g., changes in relationships, roles). These changes can elicit reactions from the individual as they enter or exit the transitional process (Bjornsen & Dinkel, 2017; Schlossberg, 1981). In the context of athletes, the out-of-sport transition requires athletes to grapple with several

adjustments that may lead to identity crises, declines in psychological and physical well-being, issues related to confidence and body image, financial and occupational hardships, and changes in overall life satisfaction that can occur as they enter, go through, and exit the transition to post-sport life (Cosh et al., 2013; Eggleston et al., 2019; Ferrara et al., 2021; Grove et al., 1997; Lally, 2007; Martin et al., 2013).

Research has documented these changes and difficulties following the transition into sport retirement with professional and elite athletes worldwide (e.g., Aston et al., 2020; Cosh et al., 2013; Eggleston et al., 2019; Grove et al., 1997; Park et al., 2013). However, research has yet to pay the same detailed attention to the experiences of student-athletes who will also go through their own form of retirement, but within a very unique social and developmental context (Tomalski et al., 2019). That being said, the research available on professional athletes has notably produced mixed results regarding the impact of retirement on general life satisfaction and overall well-being (Martin et al., 2013). This aligns with ideas from Schlossberg's model that suggest that different individuals can have varying reaction to the same event or transition depending on the interaction between situation, self, support, and strategies (i.e., the 4S system) (Schlossberg, 1981). Some athletes embrace the idea of retirement and look back at their experiences fondly, recalling feelings of relief and excitement for opportunities to pursue new ventures. Some have even gone so far as to describe this transition as a form of "rebirth," in which they embraced the opportunity for personal growth and development. On the other hand, some athletes experience a host of negative emotions, financial hardships (Kerr & Dacyshyn, 2000; Warriner & Lavalley, 2008). Though it is not explicitly clear why some athletes experience a sense of flourishing after leaving their sport while others experience distress, Schlossberg's 4S system can set the foundation for conceptualizing the out-of-sport transition.

Despite not fully understanding the cause of transition-related stress, researchers have continuously emphasized the protectiveness of certain intervening factors. Career planning, for example, is an effective strategy for preventing the negative consequences that may occur at the end of an athlete's active playing career. However, despite having access to these programs, 45% of professional athletes choose not to plan for a life post-sport (Cecić Erpič et al., 2004; Lavalley, 2018; North & Lavalley, 2004). Subsequent research has suggested that this may occur due to athletes' fear that partaking in postretirement career planning while being active players would be a distraction from peak performance. a definite answer remains elusive (Lavalley, 2018). Other identified coping strategies that aid in moving through the post-sport transition include engaging in new hobbies or career pursuits, seeking and expanding social support systems, and involvement in support programs (Park et al., 2013).

Attempts have been made to comprehensively describe the out-of-sport transition for collegiate and professional athletes through systematic and literature reviews (Miller & Buttell, 2018; Park et al., 2013). However, while there are some similarities between professional and collegiate athletes, there are also definite contextual differences. Acknowledging these differences is imperative in understanding the student-athlete's experience and providing the support and services needed to ensure athletes exit their transition successfully.

Current Theory and Research

A growing body of research has emerged in the past four decades that has predominantly focused on professional athletes' retirement experiences, with a small percentage paying attention to the collegiate athlete experience . This emergence directly responded to a growing number of athletes requiring support during their out-of-sport transition (Grove et al., 1997; Van Raalte & Anderson, 2007; Warriner & Lavalley, 2008). Below are some identified factors related

to the quality of athlete career transition derived from research on professional and collegiate athletes.

Athletic Identity

Athletic identity is often defined as the level to which an individual identifies both cognitively and emotionally with the athlete role (Cosh et al., 2013; Eggleston et al., 2020; Huml, 2018; Martin et al., 2013). With collegiate athletes, athletic identity is often shaped by the athlete's support systems, coaches, and teammates. This is further reinforced by the student-athletes desire to be recognized as athletes by their non-athlete peers (Huml, 2018). A robust athletic identity can also be considered advantageous, as it positively correlates with athletic performance, sports achievement, and exercise adherence (Cecić Erpič et al., 2004). However, a solely exclusive athletic identity can be problematic in other contexts. Rigid athletic identity has been associated with indecisiveness, less awareness of other career options, insufficient coping resources, and more distressing adjustments postretirement (Cosh et al., 2012; Martin et al., 2013; Warriner & Lavalley, 2008). Researchers believe these consequences stem from the athlete's inability to form a more multi-faceted identity due to the dedication and sacrifices made for sport during developmental stages primed for identity formation (Lally, 2007; Lavalley & Robinson, 2007; Warriner & Lavalley, 2008). Furthermore, a negative correlation has been found between athletic identity and GPA within a college setting. This is thought to be attributable to student-athletes sacrificing study time to focus on their sport and training (Huml, 2018).

Athletic identity is considered malleable, however. (Cosh et al., 2012; Martin et al., 2013). Successful adjustments are often seen in athletes who, in preparation for retirement, lower their athletic identity by adopting novel or different activities or pursuits. This also allows

athletes to increase their perception of control over their retirement and create a new sense of self, autonomy, and self-confidence (Lally, 2007; Martin et al., 2013).

Postretirement Career Planning

Postretirement career planning is one of the best predictors for a successful transition out of sport (Lavalley, 2018; Martin et al., 2013; North & Lavalley, 2004). These programs address social aspects (e.g., quality of relationships), components of identity (e.g., self-esteem, self-image), personal management skills (e.g., education, financial planning), secondary occupations (e.g., creating resumes, interviewing skills), and the retirement process. However, there is pronounced variability in what different programs choose to emphasize (Wylleman et al., 1999).

Forms of postretirement career services currently being implemented are Career Assistance Programs (CAPs). Several professional organizations have developed programs to support athletes during their retirement transition, regardless of whether they are playing at a junior, collegiate, or professional level. For example, the Olympic Committee's Athlete365 Career+ program advertises itself as being able to "support you while you prepare for and go through your career transition" and "provide you with resources and training required to develop your life skills, maximizing your education and employment opportunities." They offer workshops for self-discovery (e.g., understanding one's strengths, interests, and skills) and resume writing (Athlete365, 2022). The National Football League promotes Player Engagement (PE), which provides players and their families opportunities for continuing education, financial literacy, professional development, and personal development. PE also offers workshops such as Rookie Readiness, Entrepreneurship and Real Estate Workshop, Wealth Management Workshop, Advocacy in Sport Workshop, and others alike (NFL Football Operations, n.d.).

Physical Activity and Health

Athletes may also perceive their changing bodies as a source of distress. These changes after retirement can include weight gain and reduction in muscle mass, which may occur in tandem with decreased activity levels and changes in eating habits (Plateau et al., 2017).

Although some athletes can reevaluate and accept their new physical capabilities, athletes who have attributed their self-worth to their physical prowess have more difficulty embracing these changes (Stephan & Bilard, 2003; Warriner & Lavalley, 2008). Occasionally, former athletes will develop a negative relationship with exercise behaviors – often engaging in rigorous and punishing exercise – to compensate for the perceived changes in their bodies (Plateau et al., 2017). Furthermore, finding a new outlet or activity that provides a similar level of physicality and gratification as their sport is exceedingly complex and may result in attempting dangerous and high-risk activities to achieve the same stimulation (Senecal, 2021).

Athletes who can formulate a healthy relationship with exercise often go through a process of attributing new meaning to exercise, such as exercise for enjoyment as opposed to incorporating time-consuming and tiring training similar to that of their athlete days. Some athletes also overcome new barriers, such as exercising independently and without external regulation (i.e., coaches, creating personal schedules around exercise routines) (Ferrara et al., 2021; Plateau et al., 2017).

Many athletes may also experience severe injuries during their careers, resulting in lasting chronic pain issues. This is associated with an increased risk of psychological distress, which is further exacerbated if the athlete perceives the injury or pain as a personal "failure" (Cottler et al., 2011; Mannes et al., 2018; Papathomas et al., 2018). Athletes involved in high-contact sports are also vulnerable to sustaining multiple concussions throughout their careers.

Traumatic brain injuries have been associated with adverse neurological functioning, affect, and behavior changes. Prevalence rates of concussions are highly variable, as most will go unreported or unnoticed (Datoc et al., 2020).

Normative and Non-Normative Retirement

Retirement from sports is often referred to as either normative (voluntary) or non-normative (involuntary). Normative transitions include retiring after achieving goal satisfaction (e.g., feeling as though one has accomplished what they have set out to accomplish) or losing motivation. In contrast, non-normative transitions may result from career-ending injuries or team de-selection (e.g., no contract renewal or offer to join another team) (Martin et al., 2013).

Non-normative retirements carry the most significant risk for difficult transitions, leaving athletes vulnerable to various adjustment issues (Cecić Erpič et al., 2004; Martin et al., 2013). This is especially true when the circumstances leading to a non-normative transition are seen as unexpected or sudden (Cosh et al., 2013). Non-normative retirements are also associated with increases in anxiety, depression, and anger and decreases in self-respect and perceptions of control. Conversely, normative retirements are associated with a stronger sense of control, fewer adjustment issues, and increased life satisfaction (Martin et al., 2013).

Social Support

During retirement athletes are encouraged to establish sources of support to guard against difficulties related to transitional loneliness, social network changes, and abrupt losses of relationships with coaches, teammates, and other individuals associated with their sport (Cecić Erpič et al., 2004). Difficulty forming new relationships outside the sporting world and a perceived lack of social support often result in feelings of alienation and depression. On the other

hand, developing new relationships and perceiving substantial social support is a protective factor against distress (Aston et al., 2020).

Rationale

As previously noted, much of the literature about sport retirement has predominantly focused on professional and elite athletes. Though there is overlap between the experience of professional athletes and their collegiate counterparts, the differences between them are significant and unique. To the best of the author's current knowledge, this will be the first systematic review that focuses solely on collegiate athletes using articles that pertain only to NCAA student-athletes.

Much of the differences between student and professional athletes revolve around the unique responsibilities with which student-athletes contend. Attention should also focus on the demands and uniqueness of the psychosocial development student-athletes are simultaneously navigating. Though many theorists have tackled stages of development, Erik Erikson remains one of the most well-known. Collegiate athletes map onto two of what Erikson refers to as stages of development that are initiated by a "crisis," which Erikson described as a "turning point in the life cycle" (Maree, 2021). The first is the tail end of the "Identity v. Role Confusion" stage, in which an individual creates a sense of self by exploring personal values, beliefs, and goals. This sets the groundwork for whom the individual will develop into as an adult. The second stage is "Intimacy v. Isolation," in which the individual navigates forming intimate and loving relationships with others. This sets the groundwork for cultivating a sense of commitment, safety, and care within future relationships (Maree, 2021; Tomalski et al., 2019). Student-athletes are at risk of being unsuccessful in these developmental stages, given the intensity of their responsibilities during their college years. For example, when dedicating so much of their time to

sports, a student-athlete may be unable to explore other goals or may not have the opportunity to formulate relationships with people outside of their teammates. This suggests that programs designed to prepare student-athletes for a life post-sport must also be mindful of providing opportunities to explore other identities and develop the skills to form relationships with those outside of their immediate circle.

Concerning as well is the recent increase in news reports about mental health struggles and completed suicides among collegiate athletes. Just this year, UCLA offensive lineman Thomas Cole made a stunning retirement announcement on social media after a six-month absence. In his announcement, Cole bravely shared that he had "survived [his suicide] attempt" at the beginning of the year. He followed this by stating that he had realized "football [was] not conducive for [his] mental health" (Lenthang, 2022). A month before Cole shared his story, another UCLA athlete announced his decision to step away from football due to concerns for his mental health as well. According to Marlene Lenthang's reporting for NBC News, since March of 2022, multiple high-profile student-athletes have completed suicide. Even more frightening, a study by the National Association of Intercollegiate Athletics (NAIA) and Mantra Health found that 90% of athletic directors believe that their respective universities do not provide enough psychiatric support for their student-athletes and coaches (Burt, 2022). Whether it concerns the out-of-sport transition or simply the overall mental wellness of student-athletes, it has become increasingly clear that there is a desperate need to better prepare and protect student-athletes.

Relevance to Practice

According to an article published by the Associated Press on ESPN in February of 2022, the NCAA generated over \$1.15 billion in revenue in 2021. Though much of this comes from contracts with television networks and so forth, it is undeniable that the draw for viewers is the

student-athletes themselves. With student-athletes bringing in a significant profit to their respective universities, it only makes sense to ensure that these athletes are taken care of. This sentiment is generally supported by athletic directors and university presidents, who reported having positive perceptions of sport psychology services, but for unknown reasons, were reluctant or unable to commit the funds necessary to hire sport psychology consultants on a full-time basis (Wrisberg et al., 2012). The need is there, in any case. For example, at 120 NCAA Division I Football Bowl Subdivision (FBS) universities, only 3.5% provided sport psychology services to their athletes. Furthermore, only 5% of university counseling center websites identified having a formal sport psychology program (Hayden et al., 2013).

As previously mentioned, the growing research in this specific field correlates with athletes' growing need for specialized care during out-of-sport transitions. Student-athletes have also reported wanting providers trained to work with their unique circumstances. When surveyed, student-athletes reported that they desired access to providers with a professional status (e.g., holding an advanced degree, certified by the Association for Applied Sport Psychology, licensed by the American Psychological Association), good interpersonal skills (i.e., being empathetic, approachable, and caring), and an athletic background (Lubker et al., 2011).

This increased attention on the out-of-sport transition also serves as an opportunity for institutions to better prepare their student-athletes. Student-athletes juggle many responsibilities – academics, sports, and taking care of their physical and mental wellness. However, there appears to be a disproportionate amount of time allocated between these domains. The first step for universities would be to increase collaboration and communication between multiple departments, such as the athletic and academic departments as well as counseling and psychological centers. With all of these available resources, universities are in a prime position

to provide student-athletes with the support they need, promoting balance between these different areas and teaching the flexibility needed to increase the student-athletes chances of managing their transition out-of-sport more successfully.

Research Questions

This systematic review examined the limited available literature about the out-of-sport transition of NCAA athletes, with particular attention to factors that have the potential to make this transition smooth or challenging. The review addresses two primary research questions:

1. What risk and protective factors make the out-of-sport transition more manageable or difficult for NCAA athletes?
2. What intervention programs are universities implementing to help student-athletes prepare for this transition?

Chapter 2: Methodology

Systematic Review Approach

As previously noted, this systematic review presents information concerning risk and protective factors that influence the ease with which an athlete moves through the out-of-sport transition. A narrative approach was utilized to create a comprehensive illustration of student-athletes' experiences and to provide readily accessible recommendations to those working closely with them. Moreover, a narrative synthesis approach benefits future research by presenting information in a way that allows for the investigation of similarities, themes, and factors that could shape the creation and implementation of future interventions (Lisy & Porritt, 2016; Popay et al., 2006). Approval for this review was granted by the Pepperdine University Graduate and Professional Schools Institutional Review Board (see Appendix A).

Eligibility Criteria

Source materials for this review included only articles published in peer-reviewed and academic journals for quality assurance and those written in English (see Appendix B for complete list of source materials). Following preliminary searches of available research, the author decided to focus solely on articles published from 2012 to 2022 to create a comprehensive review of the literature that emerged in the past decade.

Articles immediately eligible for inclusion utilized participating student-athletes from NCAA Divisions I, II, and III universities across the United States. In other words, articles discussing professional, elite, or Olympic athletes were excluded from consideration. Furthermore, the decision to only focus on NCAA-participating universities in the United States was made to limit confounding variables (e.g., country-based cultural differences, differences in sports emphasized by nation). It should be noted, however, that differences across regions of the

United States, as well as between Division I to Division III universities, are challenging to control. Demographic, racial-ethnic, gender, or sexual orientation characteristics were noted if provided by the authors but were not used to determine inclusion eligibility.

All articles that presented an intervention program or workshop targeting the out-of-sport transition were considered for the second research question. However, only those that incorporated an evaluative component (i.e., collecting feedback from participants) were ultimately included. This decision was made for several reasons. At the intervention level, collecting feedback from participants allows for changes to be implemented by those who have actually completed the intervention. For the purpose of this systematic review, it allows for the gathering and grouping of suggestions and needs that are coming directly from the student-athletes.

A critical eligibility criterion for this systematic review was synonymous with its title: out-of-sport transitions. Articles that were ultimately included explicitly dealt with this transitional process, not life after sports. Though the articles eventually selected for this review were predominantly qualitative or mixed-methods, restrictions were not placed on the methodology or design of the studies.

Search and Screening Process

Databases, Search Terms, and Search Plan

Preliminary searches indicated that PsycINFO would be the most fruitful electronic database for this review. Other electronic databases were tested (e.g., Sports Discus, PubMed); however, results yielded only articles already identified through PsycINFO searches. A selection of keywords was tested for their ability to yield studies relevant to this review's aims. These keywords included: student-athlete (collegiate athlete, college athlete, NCAA athlete); out-of-

sport transition (retirement); intervention (intervention program, workshop). Preliminary reviews of articles focused on professional and elite athletes suggested the following terms: athletic identity, career planning, social support, voluntary retirement, involuntary retirement, injuries, and physical fitness. A Microsoft Excel sheet titled Search Plan was utilized to track the searches and combination of the keywords mentioned above and the results produced by the searches (see Appendix C).

Screening Process

The screening process was completed in multiple parts. After setting the parameters mentioned above of publication year and peer-reviewed status, the initial screening phase involved a quick assessment of relevancy based on article title, abstraction, and publication location (i.e., authors in the United States). The following phase included full-text reviews in determining eligibility further. Specifically, the author had to ensure the articles focused on NCAA collegiate athletes, discussed the out-of-sport transitional process, and incorporated an evaluative component to their intervention for the second research question. The author then decided whether or not to include the article in the pool of those moving forward to the data extraction phase (see Appendix D).

The above process is summarized in two PRISMA Flowcharts – one for the first research question and another for the second (see Appendix E). It illustratively details the numerical narrowing down that occurred while screening articles. The chart's first level shows the number of articles identified through database searches, articles identified through other sources (e.g., backward searching), and the duplicates removed. The next level lists the number of articles that went through the quick initial screening and the number of articles excluded at this phase.

Following is the number of articles that went through a full-text review and the excluded articles at this phase. The final number indicates the total number of studies utilized for this review.

Data Collection and Extraction

Two Data Collection and Extraction forms for both Research Question 1 (RQ1) and Research Question 2 (RQ2) were developed in the same style as a form provided by Pepperdine University (see Appendix F). After these forms were tested on sample articles, volunteer Pepperdine University master-level students were interviewed for four available research assistant positions. The four research assistants then completed a two-week training during which they learned how to use both data extraction forms and complete a quality appraisal form efficiently and accurately. The research assistants were given four sample articles to complete data extractions on during this training period. Each research assistant then met individually with the author of this review to compare their forms and clarify any questions they may have had. They were also provided the following materials via Google Drive: an assigned article spreadsheet on which they had to notate the day they completed the extraction form, a data extraction form tips sheet, a quality appraisal help sheet, two blank data extraction forms, folders to upload their data extraction forms, and a spreadsheet to complete the quality appraisal form.

Research assistants were paired and responsible for completing data extraction and quality appraisal for articles designated to one of the two research questions. This decision was made to incorporate an element of interrater reliability. If discrepancies between the research assistants were found, the author reviewed the article in question and made the final decision.

Data Extraction Forms

The form for RQ1 included the following categories: General Article Information, Study Characteristics, Participants, Methodology, Factors Assessed, Results, Conclusions, and

Comments. The form for Research Question 2 (RQ2) included the following categories: General Article Information, Study Characteristics, Participants, Methodology, Intervention, Factors Addressed, Results, Conclusion, and Comments. The research assistants were instructed to input the required information verbatim to how the articles were written instead of paraphrasing to preserve the data's integrity.

General Article Information. This section required the input of a Document ID provided by the author, full document title, author(s), publication year, country of origin, source (e.g., peer-reviewed journal, book chapter), and source title. While extrapolating data for this section, the research assistants were reminded to be attentive to the year of publication and the location. This ensured that only articles from the past decade and NCAA-participating universities were included.

Study Characteristics. This section required the input of the study type utilized by the article's authors (e.g., qualitative, quantitative), design approach (e.g., randomized controlled trial, cohort study), and the study aim and question.

Participants. This section required the input of the sample size, setting characteristics (i.e., name of institution, geographical location, and NCAA Division) if provided, participant recruitment process, participant demographics (i.e., age, gender, race/ethnicity, school year), and sports represented by the student-athletes.

Methodology. The section required detailing how the variables of focus were assessed and what analyses the articles' respective authors conducted.

Intervention (RQ2 Data and Extraction Form only). This section required the input of the program/intervention name, aim of the program, how the program was developed, program implementation time (i.e., during what semester and what year the program was implemented),

theoretical frameworks the programs were derived from, a description of the program, and the program feedback (i.e., how feedback was collected and what the feedback was).

Factors Addressed. This section required the input of the risk and protective factors that the respective authors focused on in their articles (e.g., athletic identity, career planning, social support), as well as how the authors chose to define these factors.

Results. This section required the input of the articles' key results.

Conclusion. This section required the input of the articles' general conclusions, clinical implications, limitations of the article, and recommendations for future research.

Comments. This section was provided for the research assistants to input any comments, questions, or concerns about the article they reviewed.

Quality Appraisal

The research assistants were also trained to perform quality appraisals utilizing a form provided by Pepperdine University (see Appendix G). On this form, which was ultimately translated to a Microsoft Excel spreadsheet, research assistants listed the author(s) of the article, publication year, and the Document ID that the author of this review provided. They then identified the methodology and listed the study design. Utilizing a rating scale (i.e., *Strong* = 3, *Good/Adequate* = 2, *Weak* = 1, *Missing* = 0, N/A), different components of the studies were assessed. These components included the following: strength of literature foundation and rationale for study, clarity, specificity of research aims/objectives/questions, quality of research design or methodological approach, sample selection and characteristics, measures/data collection tools, data collection, analysis of data, discussion of study limitations, and consideration of culture and diversity. After each component was given a rating, an "overall

rating" was assigned (i.e., *Exemplary* – all 3's, *Strong* – mostly 3's, *Good/Adequate* – mostly 2's, *Weak* – mostly 1's).

Two research assistants evaluated each article and were instructed to input their ratings on a form which was then reviewed for discrepancies by the author. Additionally, the author of this review selected random articles to complete independent quality appraisals on, which were then compared to the research assistants' appraisals to ensure interrater reliability and the accuracy of the research assistants' work.

Data Management, Synthesis, and Analysis Plan

A database was developed on Microsoft Excel following the review of all data extraction forms, in which both research questions had a separate spreadsheet. As the data extraction forms had already been tailored to match the needs of this systematic review, the author was able to extrapolate an Evidence Table from the database (see Appendix H). This table included the following columns for RQ1: Document ID, Author(s), Full Document Title, Publication Year, General Information (i.e., source, source title), Study Characteristics (i.e., type of study, design/approach, methodology, research questions/aims), Setting Characteristics (i.e., geographical location, NCAA Division), Participant Characteristics (i.e., sample size, gender, age, college year, race/ethnicity, sports represented), Assessment of Research Variables, Research Variables (i.e., athletic identity, career planning, demographics, physical activity, retirement cause, social support, sport goals, other), Results (i.e., general, discussion, clinical implications), and Conclusion (i.e., general, strengths, limitations, future research). For RQ2, this table included the following columns: Document ID, Author(s), Full Document Title, Publication Year, General Information, Study Characteristics, Participant Characteristics, Program Characteristics (i.e., program name, theoretical orientation, problem implementation time,

program structure, program content, relevance to RQ1), Participant Feedback (i.e., methodology, results, feedback and suggestions), and Implications and Recommendations. Once the Evidence Table was completed, the author reviewed the inputted data to extrapolate themes that could be categorized and referred to as risk and protective factors for this review.

Final Article Selection

After conducting several preliminary searches, it was determined that the APA PsychINFO would provide the most results. Test searches on other databases only yielded identical results. The final search for RQ1 used the following terms: (student-athlete OR collegiate athlete OR college athlete OR NCAA athlete) AND (out-of-sport transition OR retirement). The final search for RQ2 used the following terms: (student-athlete OR collegiate athlete OR college athlete or NCAA athlete) AND (intervention OR program OR workshop). Other permutations with previously mentioned search terms were included; however, they yielded only duplicate results. Similarly, the final search for RQ2 produced articles already identified during the final search for RQ2.

The final search produced 4,010 articles. This was then limited to only peer-reviewed journals, academic journals, articles written in English, and articles published between 2012-2022. This eliminated 2,755 articles, leaving 1,255 for initial screening of titles and abstracts. After this screen, 1,210 articles were eliminated, which left 45 remaining for full-text screening. An additional eight articles were identified via backward searching (i.e., using the reference list of other relevant articles to identify articles not produced by the final search). Of the final 53 articles, 21 were found to be eligible and moved to the data extraction phase.

Summary

The second chapter of this review provided a detailed overview of the methodology utilized by the author and research assistants. This process began by defining the eligibility criteria used to initially evaluate peer-reviewed journal articles and the search strategy implemented to select articles relevant to the research questions. Preliminary searches then informed the development of the two data extraction forms that were both tested by the author. Following this, volunteer research assistants were interviewed, and four were ultimately selected and trained to complete the data extraction forms and conduct quality appraisals. The author reviewed the data extraction forms and the quality appraisals for discrepancies before inputting the data into a database. The database was then analyzed in a harmonious way with a narrative methodology.

Chapter 3: Results

Research Question 1: What Are the Risk and Protective Factors That Impact the Quality of a NCAA Athlete's Out-of-Sport Transition?

Table 1

Summary of Identified Risk and Protective Factors

Factor	Risk	Protective	Articles
Athletic Identity	HIGH strong, exclusive identification with the role of an athlete	LOW flexible identity; openness to other hobbies and career options	Tyrance et al., 2013; Barcza-Renner et al., 2020; Bjornsen-Ramig et al., 2020; A.B. Smith & Hardin, 2019; A.B. Smith & Hardin, 2020; Stokowski et al., 2019; Kidd et al., 2018; Cummins & O'Boyle, 2014
Career Planning	UNPREPARED lack of knowledge concerning job opportunities, transferrable skills	PREPARED Participation in activities related to other career options; connecting with mentors	Tyrance et al., 2013; August, 2018; Barcza-Renner et al., 2020; Bjornsen-Ramig et al., 2020; Wendling & Sagas, 2020; Stokowski et al., 2019; Kidd et al., 2018; Cummins & O'Boyle, 2014
Demographics	FEMALE ATHLETE may be less confident about skills and abilities relevant to other career options	MALE ATHLETE -	Tyrance et al., 2013

Factor	Risk	Protective	Articles
Physical Activity and Health	STAGNANT expectations of same exercise regimen; unaccepting of changes in physical abilities/body	EXPANDED renegotiating relationship with food, exercise, body image, and physical abilities	Bjornsen-Ramig et al., 2020; A.B. Smith & Hardin, 2019; Stokowski et al., 2019
Retirement Reasons/Control	LOSS OF CONTROL Career-ending injury; team de-selection; unexpected	SENSE OF CONTROL acceptance of body being unable to continue performing at a high level; ready to move onto different endeavors	Barcza-Renner et al., 2020; Stokowski et al., 2019
Social Support	EXCLUSIVE social support is restricted and limited	INCLUSIVE Expansion of sources of support	Barcza-Renner et al., 2020; Bjornsen-Ramig et al., 2020; Wendling & Sagas, 2020; A.B. Smith & Hardin, 2019; Cummins & O'Boyle, 2014;
Sport Goals	ENJOYMENT Goals based on having fun	LEARNING goals based on learning and growing as an individual	Barcza-Renner et al., 2020

Athletic Identity

Athletic identity classically refers to "the degree to which an individual identifies with the athlete role" (Brewer et al., 1993). Eight articles addressed the influence of athletic identity on the out-of-sport transition of NCAA athletes. Consistent with the overall literature regarding athletic identity and sport retirement, these articles discussed a general sense of loss and the experience of an identity crisis that occur as a sport career ends. Within this loss of identity, athletes

described feeling aimless, purposeless, lost, sad, and depressed (Barcza-Renner et al., 2020; Kidd et al., 2018; A.B. Smith & Hardin, 2019; A.B. Smith & Hardin, 2020). Furthermore, high levels of athletic identity were also found to negatively impact other factors that help foster a smoother transition, such as an athlete's confidence in their abilities outside of sport, the development of other identities (e.g., social, career), adaptability, and optimism (Tyrance et al., 2013).

Conversely, athletes who developed more flexibility in their identities by pursuing other interests outside of sport reported positive transitional experiences (Barcza-Renner et al., 2020; A.B. Smith & Hardin, 2020).

Career Planning

Eight articles referenced various factors related to career planning and preparedness for life post-career. Some student-athletes discussed feelings of unpreparedness and uneasiness regarding the next phase of their lives. Specifically, participants reported feeling unprepared to function outside of their sport while also contending with regrets about not having done more to prepare for the impending transition. These student-athletes felt they lacked skills or connections critical for success in the job market. Moreover, they endorsed dissatisfaction with their respective universities, stating that they wish their schools had done more to prepare them for things such as conducting job searches, preparing for job interviews, and providing career advice and guidance during the transition process (Cummins & O'Boyle, 2014; Stokowski et al., 2019). Similarly, Kidd et al. (2018) found that some student-athletes could not devote time to opportunities outside of sport due to the time commitment required to succeed in their respective sports. Some athletes even reported ramifications and questioning of their devotion to their sport when they expressed a desire to commit to academic and other responsibilities.

Conversely, some athletes described certain personal qualities and steps that they found to have made the transition out of sport and into a new career more successful. Tyrance et al. (2013) addressed career planning in terms of attitudes (career optimism, career adaptability, and career knowledge). They found that these factors are associated with a greater likelihood of a smoother transition. Similarly, August (2018) examined personal qualities associated with career readiness and found that optimism, resilience, adaptability, transferrable skills, knowledge, and personal strengths helped create a positive transitional experience. Cummins and O'Boyle (2014) also found that some student-athletes knew that the college academic and sports experiences were a time to learn transferable skills (e.g., time management, punctuality, cultural awareness, and the ability to question authority) that would ultimately be invaluable to a career after sports.

Career planning was also discussed in terms of concrete action steps. One article examined the experience of preparing to transition in two phases: making plans and taking action (Bjornsen-Ramig et al., 2020). The researchers found that all their student-athlete participants had approached their education with a plan (e.g., pursuing majors required for specific occupations, developing transferrable skills), and most of their participants were also involved in non-sport academic and professional activities (e.g., networking and shadowing). Additionally, some student-athletes discussed the importance of remaining open and curious about life after their sports careers.

Physical Activity and Health

Four articles discussed physical activity and health concerning the out-of-sport transition. Bjornsen-Ramig et al. (2020) found that some student-athletes felt anxious about engaging in physical exercise following their transition. This was explicitly related to losing the support of teammates and coaches and scheduled and structured time for exercise, making it more difficult

for them to continue engaging in physical activity consistently. Similar findings were reported by A.B. Smith and Hardin (2019), in which participants expressed uncertainty about participating in physical activity outside their highly scheduled and regimented lives as student-athletes.

Additionally, some athletes discussed general changes to their overall physical well-being during this transition, including concerns about establishing a new relationship with food and nutrition (Stokowski et al., 2019).

Retirement Reasons

Two articles discussed the impact of retirement reasons on student-athletes' transition out of the sport. Barcza-Renner et al. (2020) reported several reasons for retirement, such as graduating from college, exhausting eligibility, not feeling "good enough" to compete at a higher level or injury. This article posited that student-athletes could interpret retirement reasons as being either successful endings or endings due to perceived failure, which then influenced whether the retirement transition was seen as successful or unsuccessful. Similarly, Stokowski et al. (2019) reported that although some athletes intuitively understood that their bodies could not continue competing at a high level, they were continuously plagued by thoughts about what the outcomes would have been had they continued playing. Those who experienced career-ending injuries also had to contend with feeling that they were robbed of their sports career.

Social Support

Five articles discussed the importance of social support during this transition. Student-athletes who reported no social support or dissatisfaction with support generally found their transition out-of-sport unsuccessful or more challenging (Barcza-Renner et al., 2020).

Additionally, A.B. Smith and Hardin (2019) found that some athletes had difficulty establishing new friendships and entering new social circles. Conversely, athletes who reported receiving

support from family, significant others, friends, teammates, coaches, and their universities also reported experiencing a more positive and supported transition experience (Barcza-Renner et al., 2020; Bjornsen-Ramig et al., 2020; Cummins & O'Boyle, 2014).

Sport-Related Goals

One article discussed several goals student-athletes strive to achieve during their sports career (e.g., performance, enjoyment, and learning goals). Learning goals—learning and growing from their sport participation—was associated with more positive transition experiences. Student-athletes that were more engrossed in enjoyment-based goals (e.g., how much fun they would have from participating in sports) reported more negative transition experiences. Those who had predominantly performance goals varied in their transition experiences (Barcza-Renner et al., 2020).

Demographics

One article examined the role of athletes' demographic characteristics on the out-of-sport transition. Tyrance et al. (2013) found that gender was a predictor variable for concepts such as career knowledge among student-athletes. Specifically, female student-athletes were found to have less confidence in their knowledge of the job market and employment trends when compared to their male counterparts. This study also found that female student-athletes did not feel confident that their development thus far would allow them to meet their maximum potential in future careers. Finally, the female student-athletes who participated in this study were found to have higher levels of athletic identity when compared to male student-athletes.

Miscellaneous Factors

Seven articles discussed other factors that are also believed to influence the out-of-sport transition. Stokowski et al. (2019) found that some student-athletes also endorsed difficulties

adjusting to a loss of a structured routine and no longer having a sense of belonging that they found while being part of a high-level team.

Warheime et al. (2017) examined factors that promoted positive transition experiences and overall wellness (e.g., creativity, coping and self-care, spirituality, relationships and support, physical health). They found that the transition out of sport was often a challenging enough process that led to a decrease in wellness. However, there were qualities that the authors emphasized as protective factors, such as maintaining a realistic understanding of their athletic career, obtaining resources to help with plans, finding meaning in their current and future goals, maintaining optimism, relying on social support, and continued engagement in physical activity. Along the same lines, Wendling and Sagas (2020) looked at the influence of personality factors on this transition. They found that constructs related to conscientiousness, openness, and extraversion significantly impacted career planning in that these student-athletes exhibited more confidence in their abilities to make decisions regarding their future careers. Traits related to extraversion and openness were thought to help facilitate career planning by enhancing self-efficacy, which was found to help with career goal-setting.

Research Question 2: What Intervention Programs Are Universities Implementing to Help Student-Athletes Prepare for This Transition?

Table 2

Summary of Intervention Programs

Intervention Program	Program Characteristics	Program Content
Athlete Transition Workshop Hansen et al., 2018	2-hour workshop divided into 4 sections; material for each section of the workshop was presented in PowerPoint and	(1) Psychoeducation (20-minute session) on the prevalence of maladjustment, causes of adjustment

Intervention Program	Program Characteristics	Program Content
	<p>printed copies were provided to participants. Workshop took place in a classroom within the university athletic department</p>	<p>difficulties, and warning signs of maladjustment; (2) Developing strategies to facilitate a healthy adjustment (CBT techniques, reflective exercises); (3) group reflection (30-min session), which processed the loss of collegiate sport; (4) SA's were provided with information on additional resources and support to aid in their transition (10-min session)</p>
<p>Moving On! Reifsteck & Brooks, 2017</p>	<p>Initially designed for senior SAs with content delivered through 4x1 hour sessions</p>	<p>(1) Intro to college sport transition; an overview of physical activity benefits, risks, recommendations; (2) encouraged SA to explore current identities, the impact that transitioning out of competitive sport is likely to have on their identities, and especially how physical activity and health fit with their views of themselves for the future; (3) emphasized effective goal-setting practices and strategies or overcoming barriers to enhance SAs confidence in their abilities to maintain an active lifestyle after college; (4) connected content from each of the previous sessions focused on planning for the transition out of college and staying physically active</p>

Intervention Program	Program Characteristics	Program Content
<p>Moving On! Update Shriver et al., 2019</p>	<p>Revised from the original program to include a nutrition component; expanded version was tested through 4x90 minute sessions</p>	<p>(1) Introduction and expectations; (2) identity exploration; (3) SMART goals and action plan; (4) next steps</p>
<p>PILATES Connect M.B. Smith et al., 2020</p>	<p>Met once a week for 60 minutes; program consisted of body weight training for 2 weeks and then incorporated small medicine balls for weeks 3-6; principles of control, precision, fluidity, center, concentration, breath, imagination, and integration formed the foundation for the classes</p>	<p>(1) 35 minutes of Pilates training; (2) 15 minutes of reflection and discussion; (3) 10 minutes of evaluation</p>
<p>Life After Sports Transition (LAST) Stellefson et al., 2020</p>	<p>Designed to be offered either as a 1-credit hour academic course or as a free online continuing education opportunity that could be taken by graduating college SAs or alumni</p>	<p>Seven content modules were developed: (1) course introduction; (2) developing a future vision; (3) identifying desired life outcomes; (4) how to establish SMART goals; (5) mental health management; (6) physical well-being after your athletic career; (7) formulating personal action plans</p>

Moving On!

The Moving On! program (Reifsteck & Brooks, 2017) was developed to help athletes transition toward a lifetime of physical activity after completing their time in competitive collegiate athletics. A pilot version was first implemented in the Spring of 2015 with small groups of student-athletes from Division I and III universities. Moving On! was initially

structured around four 1-hour sessions that covered the following topics: introduction to the out-of-sport transition and an overview of physical activity (Session 1); explorations of current identities, and the way that health and physical fitness can fit into future identities (Session 2); goal-setting practices and strategies to maintain an active lifestyle (Session 3); and making plans for a future physical lifestyle (Session 4). The topics covered emphasized components such as identity, self-determined motivation, competence, autonomy, relatedness, knowledge about physical activity, and goal setting and physical activity promotion through a variety of strategies (e.g., facilitating discussions about identity changes, guided physical activity demonstrations, educating athletes on "SMART" goal setting strategies) A later version of this program incorporated several changes, including the introduction of a nutrition component that covered topics such as benefits of healthy eating, dietary guidelines, and ideas for quick healthy snacks and meals (Shriver et al., 2019). Participants provided feedback via a 5-point rating scale (1 = *strongly disagree*, 5 = *strongly agree*) and indicated that they overall enjoyed their experience in this program (4.92). Participants also indicated that the program increased their knowledge of physical activity (4.75) and feelings of preparedness to transition into a different active lifestyle post-transition (4.77). The participants also reported that they would highly recommend this program to their peers (4.92).

PILATES Connect

The PILATES Connect program (M.B. Smith et al., 2020) was developed as a Pilates-based intervention program to encourage and support student-athletes' physical and psychological wellness. This program was piloted with final-year student-athletes from a Division III university and was initially designed as a 3-week program. The group met weekly for 60 minutes, in which participants were involved in Pilates training, reflection and discussion,

and evaluation. Though Pilates was the primary focus, facilitators encouraged athletes to consider other forms of exercise of their choosing. The intervention focused on developing autonomy (e.g., initiative and personal choice), competence (e.g., physical activity and self-efficacy), and relatedness (e.g., developing connections with peers and other strategies for continued support after college). Feedback was collected through different data sources such as attendance, survey ratings, open-ended responses, and focus groups. Participants indicated perceived progression in their competency with Pilates throughout the intervention. They reported an appreciation for the benefits of being with other final-year student-athletes, which fostered a sense of relatedness. Additionally, student-athletes demonstrated an awareness of the focus on autonomy. They reported an appreciation for the facilitator's encouragement of participants in deciding, for example, whether they would engage in more advanced movements or continue at their own pace.

Life After Sports Transition

The Life After Sports Transition (LAST) online course provided distance learning on topics relevant to the out-of-sport transition for student-athletes (Stellefson et al., 2020). It consists of seven modules (Course Introduction, Developing a Future Vision, Identifying Desired Life Outcomes, How to Establish SMART Goals, Mental Health Management, Physical Well-Being After Your Athletic Career, and Formulating Personal Action Plans) that include video lectures, assignments, assessments, and access to other web-based resources. These modules target developmental competencies, such as mental health, emotional awareness and control, fitness, nutrition, and career and personal branding. Using a pre-and post-test design, researchers were able to collect feedback on the efficacy of this program on concepts such as athletic identity, psychological well-being, hope, and psychological self-reflection and insight. The

feedback indicated no significant statistical changes to the levels of athletic identity, psychological well-being, and hope. Regarding psychological self-reflection and insight, researchers found that after completing the LAST program, student-athletes reported being less self-reflective and less insightful.

Athlete Transition Workshop

The athlete transition workshop was first implemented during the Spring of 2016 for NCAA Division I student-athletes in their final year of college or who were about to exhaust their play eligibility (Hansen et al., 2018). This 2-hour workshop was structured into four sections presented via PowerPoint and printed copies and focused on providing practical strategies to prepare student-athletes for their out-of-sport transition; the first section provided psychoeducation about the prevalence, causes, and signs of maladjustment. The second section taught cognitive behavioral techniques (e.g., reframing negative thoughts) and reflective exercises (e.g., value-based goal setting) to help facilitate a healthy adjustment. The third section allowed student-athletes to reflect on their sports career and process the loss of sport. The final section provided contact information for the university counseling center and other sport psychological resources in the area. Anonymous feedback was collected from participating student-athletes via a 5-point rating scale. Feedback indicated that overall, most participants found the workshop helpful and appreciated the opportunity to hear their peers' thoughts and experiences with transitioning out of their respective sports.

Chapter 4: Discussion

This study aimed to identify factors that influence student-athletes transitions out of their sports; that is, what could make the transition more manageable or challenging. This review presents how these factors can be modified to increase the likelihood that student-athletes will perceive their transitions to have been successful. It also includes recommendations for athletes, coaches, university officials, mental health professionals, family members, and such to ease into a life post-sport. Furthermore, several participant-tested interventions were summarized alongside recommendations for future interventions targeting transition and post-sport life preparation.

Discussion of Major Findings

The first research question of this review sought to identify the risk and protective factors that can impact the quality of NCAA student-athletes' out-of-sport transitions. Similar to research on professional athletes, factors that emerged included the following: athletic identity, career planning, demographics, physical activity and health, retirement reasons, social support, sport-related goals, and other factors. Most encouraging is the notion that these factors are all malleable. Things like athletic identity, level of career planning involvement, or type of social support can be modified for an optimal balance of dedication to athletics and preparation for the future.

The second research question sought to identify NCAA member schools' programs to address athletes' out-of-sport transitions. Five articles were identified that discussed programs meant to prepare students for this transition and included an evaluative component (i.e., participant feedback). These programs were Moving On! (that later added a nutritional component), PILATES Connect, Life After Sports Transition (LAST), and Athlete Transition

Workshop. Common themes across these programs included increasing a sense of autonomy, providing opportunities to relate and support one another, and providing knowledge about future opportunities in different areas (e.g., career, exercise). Just as encouraging is the athletes' feedback that indicated excitement, appreciation, and a desire for the continuation of the programs and their expansions.

In sum, the findings from research questions one and two indicate that multiple variables can be targeted to increase the likelihood of a successful and positive transitional experience and that there is a desire among student-athletes for group-based, active programs that can help them prepare for their transition out-of-sport.

The Importance of Identity

Developmentally, forming a solid identity is a critical task in adolescence and emerging adulthood. One hallmark of this stage is moving through identity uncertainty towards forming commitments to life-defining choices, such as careers. Typically, individuals unable to form commitments to identity end up at risk for mental health problems that infiltrate longer-term development (Becht et al., 2021). When considering student-athletes in this context, it is easy to assume that their high commitment to athletic identity would result in a strong identity commitment as the student-athlete progresses into emerging adulthood. However, when adhering rigidly to one identity, the student-athlete misses out on opportunities for exploration and a general openness to renegotiating identity commitments. In this context, the missed opportunities could include, for example, engaging in career planning, developing a wider social support system, and formulating new relationships with physical activity and nutrition.

Student-athletes who exhibit a rigid commitment to athletic identity are less likely to engage or participate in programs that focus on experiences outside the scope of their athletic

responsibilities. This exclusive commitment could complicate the transition to life after sports. Accepting this premise would mean that targeting athletic identity in pursuit of creating a more flexible, multi-faceted identity is the key to negating risk factors and strengthening other protective factors.

Risk Factors

According to the American Psychological Association's Dictionary of Psychology, a risk factor is a "clearly defined behavior or constitutional (e.g., genetic), psychological, environmental, or other characteristic that is associated with an increased possibility or likelihood that a disease or disorder will subsequently develop in an individual" (American Psychological Association, n.d.). For this review, risk factors were defined more so within the context of behavior, psychological, and environmental influences that impact student-athletes' perceptions of their transitional experience.

Certain factors have increased the likelihood of a student-athlete experiencing a difficult out-of-sport transition. Athletic identity has been extensively researched across the different levels of sport. The consensus is that high levels of athletic identity elicit feelings of purposelessness and grief, particularly during this transitional phase. As previously mentioned, the commitment to one predominant identity also results in an inflexibility that makes it even more difficult for athletes to make room for other interests, hobbies, or future plans. In the context of college athletes, this can involve a lack of interest in considering other career options, resistance to forming friend groups outside of one's immediate teammates, and rumination over the end of one's career; all of which have been also identified as protective factor. The inability to see past one's athletic career—be that future or current opportunities—puts the athlete at risk of having a difficult transition out of their sport.

Protective Factors

The American Psychological Association (n.d.) defines a protective factor as a: Clearly defined behavior or constitutional (e.g., genetic), psychological, environmental, or other characteristic that is associated with a decreased probability that a particular disease or disorder will develop in an individual, that reduces the severity of an existing pathological condition, or that mitigates the effects of stress generally. (para. 1.)

For this systematic review, there was an emphasis placed on protective factors' ability to mitigate the effects of stress.

Increasing the flexibility of a student-athlete's identity—that is, encouraging a multi-dimensional identity—increases the likelihood that other factors can act as protective forces. Making room for other interests and hobbies, goals, and people outside of their life in sports can foster a smoother transition as it subtly encourages the student-athlete to look forward to or plan for things outside their athletic responsibilities. This ultimately results in multiple sources of support and coping skills that the athlete can engage with as they begin exiting their sport.

Practical and Clinical Implications

In considering how to approach the risk and protective factors identified through this review, it must be noted that each of the following factors has some mutual influence on each another. For example, lowering athletic identity can make room for new interests and hobbies, leading to the formation of new friendships with those who have shared interests. This can also work the other way around, in that forming friendships with new people outside their sports teams can lead to discovering new interests, which ultimately creates a more multifaceted identity. This is all to say that there are multiple ways in which athletes, athletic departments, academic departments, psychological counseling centers, and other relevant university

departments can work both independently and collaboratively to increase the likelihood of athletes experiencing a successful transition.

Addressing Athletic Identity

Though more research is needed to understand when athletic identity first emerges, it is necessary for athletes and those working with athletes to promote the importance of identity flexibility and other identity explorations. Identity formulation happens so insidiously and without intention that individuals often do not realize how rigid their identity has become until they are put in a situation that requires flexibility, such as when transitioning out of sport. However, athletic departments, academic departments, and psychological counseling centers can collaborate to ensure that incoming student-athletes enter an environment that values balance and identity exploration.

Ultimately this begins with brainstorming the ways in which athletes are taught about the importance of developing a multi-faceted identity as opposed to a rigid one. As previously mentioned, athletic identity can be a strength in the context of exercise adherence and overall athletic performance. Athletes should be taught that the intention is not to “lower” or “eliminate” athletic identity, but rather to incorporate flexibility and make room for other identities. This can include identifying the multiple identities that the student-athlete already hold, such as athlete, student, and friend, as well as those based off of interests (e.g., amateur chef, movie connoisseur, reader). On their own, student-athletes should feel empowered to explore other interests or career options without fear of repercussions from their coaches or teammates.

The overall purpose of supporting student-athletes in their explorations of other identities is to ensure that when the time comes to step away from their athletic careers, there will be other

identities that they can adopt or rely on as they move through renegotiating what their athletic identity will look like post-sports.

Addressing Career Planning

Career planning is crucial to ensuring a successful transition out of sport. However, many athletes have reported that after transitioning out of their sport, they often are unsure of what to do next or are left feeling unprepared (Cummins & O'Boyle, 2014; Kidd et al., 2018; Stokowski et al., 2019). With athletes dedicating so much time to their sports, it is up to the athletic and academic departments to collaborate and create opportunities for athletes to learn about future career possibilities and opportunities in a way that does not take away from their athletic responsibilities. This can be done in multiple ways. For example, part of maintaining one's eligibility to play can require athletes to participate in a part-time internship program, workshops, seminars, or career skills training (e.g., how to write resumes, interview skills, and identify transferrable skills). Athletes can also be provided with a list of alums willing to talk to or mentor current student-athletes based on shared interests before the transition out-of-sport and afterwards. Part of providing a balanced university experience is ensuring that student-athletes are receiving information about how to prepare for the next phase of their life and being supported by both academic departments and career centers as they explore post-sport options.

Addressing Physical Activity and Health

A significant challenge in leaving one's athletic career is the loss of structured and rigorous exercise led by trainers, loss of access to state-of-the-art facilities and equipment, and changes to a physical body ready for peak athletic performance. Student-athletes must renegotiate their idea of what exercise and physical fitness look like when exercise stops being the focus of their schedules. In order to do this successfully, coaches, trainers, and university

health centers can educate athletes about nutrition, alternate forms of training (e.g., body-weight training, Pilates), and how an individual's body and metabolism change due to aging. By providing workshops or classes focused on physical activity and health, there is the added benefit of creating an environment in which athletes can find support with one another as they navigate these changes and even brainstorm other forms of exercise. Programs identified in this systematic review, such as PILATES Connect and Moving On! address these aforementioned factors in a way that, according to participant feedback, is well-received and enjoyed by the student-athletes.

Addressing Retirement Reasons

It should be noted that promoting positive transitions out of sport does not negate the difficulty of walking away from sport. However, preparing athletes for the eventual end of their athletic career can make it easier for athletes to accept the transition when it does occur. This includes challenging the thought of not playing professionally as a personal failure. Coaches and university officials can help promote this by educating their incoming student-athletes about the realities of how few student-athletes ultimately play professionally. Creating a mentorship program with alums who did transition out of sports after graduating or exhausting eligibility can provide athletes with a source of support as they navigate processing the end of their careers. This can be especially critical for athletes whose athletic careers ended for things out of their control, such as career-ending injuries or not being drafted.

Encouraging flexible and multifaceted identities may also help student-athletes come to terms with ending their athletic careers. For example, mental health professionals working with student-athletes can help them process the ending of their career in sports while also reminding

them that this is simply one door closing with many remaining open by virtue of their multiple identities and interests.

Addressing Social Support

Cultivating additional sources of support outside the sports system would benefit athletes who may experience perceived loss of friends and support or have difficulty forming new friendships as they exit their athletic roles. This review found that athletes who perceived themselves as having at least one social support group reported having an easier transition out of sport (Barcza-Renner et al., 2020; Bjornsen-Ramig et al., 2020; Cummins & O'Boyle, 2014).

Understandably, some athletes may find it easier to spend time with their immediate circle of teammates. However, through inter-university collaboration, university officials and coaches can facilitate opportunities for athletes to meet alumni mentors, athletes from other teams, and other students who share similar interests outside of sports. As with the other factors, this also has implications for athletic identity and beyond. By encouraging athletes to explore relationships outside their immediate sports teams, they must rely on something aside from their athlete status or the convenience of shared training space to connect and bond with others. Pushing the athlete to develop skills needed to form new relationships also has implications for the skills needed in future careers, such as finding common ground and interests with new individuals.

Addressing Sport-Related Goals

As previously mentioned, athletes who focused on achieving goals related to learning and personal development reported having more positive transition experiences than those whose goals emphasized purely enjoyment (Barcza-Renner et al., 2020). Knowing this, incoming collegiate athletes can—with the help of their coaches, mental health professionals, and academic

counselors—formulate personal goals after reflecting on ways in which the college sports experience can be transformative for them.

Creating academic and personal development goals can benefit the student-athlete in multiple ways. Most importantly, it can remind student-athletes to think of themselves as someone more than just a athlete by focusing on other areas of growth and not just sports achievements. Depending on what goals the athlete decides to pursue, it can also lead them to discover other areas of interest, hobbies, or even friend groups. The student-athlete can also adopt this style of formulating goals and apply it to future goals. This process can also initiate the beginning of planning for life after sports. On the university side, it can also help encourage inter-university communication between athletic departments, academic departments, counseling centers, and other specialized departments to create a more balanced experience for the student-athletes.

Addressing Demographics

One article addressed the difference between female and male student-athletes and their experience of the out-of-sport transition (Tyrance et al., 2013). In short, female student-athletes were found to have less knowledge about career opportunities outside of sport and less confidence about their ability to be successful after sports. Female student-athletes were also found to have higher levels of athletic identity. Though a reason for this was not explicitly stated, it can be speculated that high level of athletic identity, lack of knowledge, and lack of confidence can be attributable to systemic issues.

The lack of gender equity in sports has been documented in academic research journals and in the media thanks to the United States women's national soccer team and their fight for equal pay. What is known for both professional and college female athletes is that a message is

sent at different levels that their male counterparts are worth more, whether that is done through assigning favorable playing time slots to male teams, travel means and lodging for competitions, differences in budgets, and so forth (Hoerber, 2007). Female athletes are also on the receiving end of gender-based microaggressions (e.g., “You throw like a girl!”) that insinuate that sports are inherently a male-athlete thing and assume that female athletes are inferior to male athletes (Kaskan & Ho, 2014).

Thinking of gender inequity and gender-based microaggressions, it can be hypothesized that female athletes may be bolstering their athletic identity for the purpose of proving themselves just as qualified to succeed in sports as male athletes are. As stated before, this rigidity and overcommitment to the athletic identity becomes risky as it may make it more difficult female student-athletes to engage in the same level of career exploration as male student-athletes. In order to combat this, it is up to the universities to ensure that female sports team are receiving the same allocation of resources as male sports teams. By helping female-student athletes feel on par with their male counterparts, it can free up some mental space for them to develop the skills, knowledge, and confidence needed to be successful out-of-sport. However, as this is a complex systemic issue, university departments should be mindful of checking in with their female student-athletes and intentionally providing them opportunities for career planning and skills training.

Table 3*Comparison of Intervention Programs: Risk and Protective Factors Included*

Program	Athletic Identity	Career Planning	Demo-graphics	Physical Activity/ Health	Retire. Reasons/ Control	Social Support	Setting Goals
Athlete Transition Wrkshp.	x				x	x	x
Moving On!	x			x		x	x
PILATES Connect				x	x	x	
LAST	x	x		x			x

Creating Intervention Programs

In comparing risk and protective factors identified in the collegiate-athlete literature with components of current university intervention programs, it is clear that a more comprehensive program inclusive of researched-backed risk and protective factors is needed to prepare students for their transitions (Table 3). That being said, the interventions included in this systematic review offer creative ways to incorporate multiple factors through one activity. An example is teaching student-athletes at-home-friendly workouts in a group setting and then having the group reflect on the experience. Through this, the student-athletes not only show an openness to learning new forms of exercise but can also reflect on exercise goals for the future while forming connections with peers.

Participant feedback collected on the interventions discussed in this review offered valuable insight that should be integrated into current and future programs. Generally, student-athletes expressed a desire for programs to be delivered more frequently with consistent recruitment to ensure a large enough attendance. They also supported an early intervention and discussed the importance of early preparation for the impending transition. Feedback also indicated a preference for more active interventions than programs delivered via computer. Student-athletes also encouraged facilitators to provide multiple opportunities for the student-athletes to provide feedback and suggested using pre-and-post measures as well as follow-up evaluations to assess long-term efficacy and outcomes.

As mentioned in the initial chapters, Nancy Schlossberg's model for analyzing human adaptation to transition can be used as a theoretical foundation for the development of this program. Her 4S system—situation, self, support, and strategies—organizes factors that influence an individual's ability to cope (Schlossberg, 1981). In creating interventions, university officials should consider the situation the student-athlete is in (e.g., what led to the out-of-sport transition, what is their perception of control over this, what are the inevitable changes in role), factors related to the self that are important to the transition (e.g., gender, SES status, other demographic information), social support (e.g., family, network of friends, communities), and coping strategies.

Combining what is known about participant's feedback on existing interventions as well as the areas that are and are not covered in current interventions, the following considerations should be considered when creating future interventions. To begin with, any program should be developed in collaboration with athletic departments, academic counseling centers, career counseling centers, student health and counseling and psychological centers to ensure that every

factor identified in this systemic review can be addressed in a standardized and efficient way. For example, brainstorming ways to target athletic identity and developing future goals can be delegated to mental health professionals, career planning can be delegated to academic and career counseling centers, and renegotiating relationships with exercise and nutrition can be delegated to athletic departments and student health.

University officials should also look to implement these programs at the beginning of the student-athletes' collegiate years or even beforehand (i.e., the summer before freshman year). As per the student-athletes' feedback, these should be scheduled frequently and consistently and should involve physical components as opposed to being delivered in an isolated and sedentary way. When possible, movement disseminating the movement through active ways may be more effective when considering that they excel in physicality and movement by nature of their athletics. Most importantly, however, is developing a consistent and standardized way of collecting feedback. Ultimately, the most important collaboration in creating these interventions is that with the student-athletes themselves.

Strengths and Limitations

This dissertation presents a systematic review of the out-of-sport transition of student-athletes. This addresses an existing gap in the literature and provides a resource for student-athletes, athletic departments, academic departments, and psychological counseling centers alike to use when contending with the out-of-sport transition. To the best of the author's knowledge, this is the first systematic review that focuses solely on college athletes utilizing data derived strictly from NCAA student-athletes, which ultimately is this review's most significant strength. This increases the generalizability of the findings to collegiate athletes across the United States. Additionally, the information presented in this review contributes to the understanding of the

differences between student and professional athletes by emphasizing the role of identity during a psychosocial developmental stage in which identity formation is key.

That being said, the country's entirety is not adequately represented, as many of the studies were conducted with universities in the Midwest and East Coast. Increasing representation of schools from other parts of the country would further bolster the generalizability of the findings and identify regional cultural differences and region-specific resources. Other limitations of this article include utilizing articles with small population sizes, which also impacts its generalizability. Additionally, not all articles included in this review offered the demographics of their participating athletes, which makes it impossible to form conclusions about the impact of culture, privilege, and systemic issues. Finally, the author of this review labeled each factor based on similarities reported in other articles. This means there is a potential for mislabeling and misconstruing the authors' intentions of the articles included. For example, for some authors, career planning was only discussed in terms of concrete action steps such as attending job fairs, searching for internship opportunities, and strengthening transferrable skills. However, other authors discussed more abstract concepts such as career adaptability, career knowledge, and career optimism. As the author grouped both of these under "Career Planning," there is the possibility that the nuanced differences were not accurately represented.

Conclusion

This systematic review aimed to present various factors that can make an athlete's out-of-sport transition overall more positive and successful. Research has traditionally either focused on professional athletes' experiences or deemed the experiences of professional, Olympic, and collegiate athletes to be synonymous. Future research must focus on the uniqueness of the student-athlete experience, considering developmental and social contextual factors.

Furthermore, greater clarity is needed in understanding the formation of athletic identity.

Identifying when this identity begins to emerge would indicate the best time to begin intervening and promoting cognitive and identity flexibility without sacrificing some of the benefits of a strong athletic identity. The general hope is that in continuing the conversation of athletes in a psychological context, a secondary benefit of the destigmatization of help-seeking behaviors will occur and improve overall wellness.

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APPENDIX A
IRB Documentation

PEPPERDINE UNIVERSITY

Graduate & Professional Schools Institutional Review Board

March 24, 2022

Protocol #: 32322

Project Title: Out-of-Sport Transition of NCAA Athletes: A Systematic Review.

Dear Stephanie:

Thank you for submitting a "GPS IRB Non-Human Subjects Notification Form" for *Out-of-Sport Transition of NCAA Athletes: A Systematic Review* project to Pepperdine University's Institutional Review Board (IRB) for review. The IRB has reviewed your submitted form and all ancillary materials. Upon review, the IRB has determined that the above titled project meets the requirements for *non-human subject research* under the federal regulations 45 CFR 46.101 that govern the protection of human subjects.

Your research must be conducted according to the form that was submitted to the IRB. If changes to the approved project occur, you will be required to submit *either* a new "GPS IRB Non-Human Subjects Notification Form" or an IRB application via the [eProtocol](http://irb.pepperdine.edu) system (<http://irb.pepperdine.edu>) to the Institutional Review Board.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite our best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the IRB as soon as possible. We will ask for a complete explanation of the event and your response. Other actions also may be required depending on the nature of the event. Details regarding the timeframe in which adverse events must be reported to the IRB and documenting the adverse event can be found in the *Pepperdine University Protection of Human Participants in Research: Policies and Procedures Manual* at <https://community.pepperdine.edu/irb/policies/>.

Please refer to the protocol number denoted above in all further communication or correspondence related to this approval.

On behalf of the IRB, we wish you success in this scholarly pursuit.

Sincerely,

Institutional Review Board (IRB)
Pepperdine University

cc: Mrs. Katy Carr, Assistant Provost for Research
Dr. Judy Ho, Graduate School of Education and Psychology IRB Chair

APPENDIX B

Summary of Studies

Research Question 1

Author(s)	Title	Study Type & Size	Factors Addressed
Barcza-Renner et al., 2020	A Qualitative Examination of Sport Retirement in Former NCAA Division I Athletes	Qualitative (<i>n</i> = 15)	Athletic Identity; Career Planning; Retirement Reason; Social Support; Sport Goals
Tyrance et al., 2013	Predicting Positive Career Planning Attitudes Among NCAA Division I College Student Athletes	Quantitative (<i>n</i> = 538)	Athletic Identity; Career Planning; Demographics;
August, 2020	Understanding Career Readiness in College Student-Athletes and Identifying Associated Personal Qualities	Qualitative (<i>n</i> = 18)	Career Planning
Warehime et al., 2017	A Qualitative Exploration of Former College Student-Athletes' Wellness	Qualitative (<i>n</i> = 12)	Miscellaneous
Bjornsen-Ramig et al., 2020	A Qualitative Exploration of the Impending Transition Experiences of Division I College Student-Athletes: A Wellness Perspective	Qualitative (<i>n</i> = 29)	Athletic Identity; Career Planning; Physical Activity; Social Support; Other
Wendling & Sagas, 2020	An Application of the Social Cognitive Career Theory Model of Career Self-Management to College Athletes' Career Planning for Life After Sport	Qualitative (<i>n</i> = 538)	Career Planning; Social Support; Other
Thompson et al., 2021	Eating Disorder Diagnosis and the Female Athlete: A Longitudinal Analysis from College to Sport Retirement	Mixed-Methods (<i>n</i> = 193)	Other
A.B. Smith & Hardin, 2019	Female Student-Athletes' Transition out of Collegiate Competition	Qualitative (<i>n</i> = 10)	Athletic Identity; Physical Activity; Social Support; Other
Stokowski et al., 2019	Former College Athletes' Perceptions of Adapting to Transition	Qualitative (<i>n</i> = 178)	Athletic Identity; Career Planning; Physical Activity; Retirement Cause; Other

Author(s)	Title	Study Type & Size	Factors Addressed
Kidd et al., 2018	Profit-Athletes' Athletic Role Set and Post-Athletic Transitions	Quantitative (<i>n</i> = 17)	Athletic Identity; Career Planning; Other
Cummins & O'Boyle, 2014	Psychosocial Factors Involved in Transitions From College to Postcollege Careers for Male NCAA Division-I Basketball Players	Qualitative (<i>n</i> = 9)	Athletic Identity; Career Planning; Social Support; Other
Thompson et al., 2020	Psychosocial Predictors of Eating Classification in Femal Athletes: From Collegiate Sport to Retirement	Quantitative (<i>n</i> = 194)	Other
Weigand et al., 2013	Susceptibility for Depression in Current and Retired Student Athletes	Quantitative (<i>n</i> = 280)	Other
A.B. Smith & Hardin, 2020	The Transitioning Experiences of Division I and III Collegiate Athletes	Qualitative (<i>n</i> = 19)	Athletic Identity; Other
Saxe et al., 2017	Transition Blues: The Experience of Female Collegiate Student-Athletes	Qualitative (<i>n</i> = 10)	Other

Research Question 2

Author(s)	Title	Intervention	Program Structure
Hansen et al., 2018	Facilitating a Successful Transition Out of Sport: Introduction of a Collegiate Student-Athlete Workshop	Athlete Transition Workshop	(1) Psychoeducation (20-minute session) on the prevalence of maladjustment, causes of adjustment difficulties, and warning signs of maladjustment; (2) Developing strategies to facilitate a healthy adjustment (CBT techniques, reflective exercises); (3) group reflection (30-min session),

Author(s)	Title	Intervention	Program Structure
			which processed the the loss of collegiate sport; (4) SA's were provided w/ information on additional resources and support to aid in their transition (10-min session)
Reifsteck & Brooks, 2017	A Transition Program to Help Student-Athletes Move on to Lifetime Physical Activity	Moving On!	(1) Psychoeducation (20-min session) on rates of maladjustment, causes of adjustment difficulties, warning signs of maladjustment; (2) Developing strategies to facilitate a healthy adjustment (CBT reflective exercises); (3) group reflection (30-min session), which processed the loss of collegiate sport; (4) SA's were provided w/ information on additional resources and support to aid in their transition (10-min session)
M.B. Smith et al., 2020	An Intervention to Support Collegiate Student-Athletes in the Transition to Meaningful Lifetime Physical Activity	PILATES Connect	(1) 35 minutes of Pilates training; (2) 15 minutes of reflection and discussion; (3) 10 minutes of evaluation
Murdock et al., 2014	Collegiate Athletes and Career Identity	Not Specified	Voluntary, one-hour workshops targeted specifically at helping student SAs prepare for transition

Author(s)	Title	Intervention	Program Structure
Stellefson et al., 2020	Development of the Life After Sports Transition (LAST) Online Course of Collegiate Student-Athletes: Pretest-Posttest Study	Life After Sports Transition (LAST)	Seven content modules were developed: (1) course introduction; (2) developing a future vision; (3) identifying desired life outcomes; (4) how to establish SMART goals; (5) mental health management; (6) physical well-being after your athletic career; (7) formulating personal action plans
Shriver et al., 2019	Moving On! A Transition Program for Promoting Healthy Eating and an Active Lifestyle Among Student-Athletes After College	Moving On!	(1) Introduction and expectations; (2) identity exploration; (3) SMART goals and action plan; (4) next steps

APPENDIX C

Search Documentation Record

List of Search Terms

SEARCH TERM ID	PRIMARY TERM	SYNONYMS/ALTERNATE FORMS
001	Student-Athlete	Collegiate Athlete; College Athlete; NCAA Athlete
002	Out-of-Sport Transition	Retirement; Sport Retirement; Out-of-Sport; Transition
003	Intervention	Intervention Program; Workshop
004	Athletic Identity	
005	Career Planning	
006	Social Support	
007	Retirement Reasons	Voluntary Retirement; Involuntary Retirement; Career-Ending
008	Injury	Career-Ending Injury; Chronic Pain
009	Physical Fitness	Exercise; Body Image

Final Search Documentation Record

SEARCH TYPE	DATABASE/SOURCE	SEARCH TERMS	FIELDS TO SEARCH
Electronic database	APA PsychInfo	(student-athlete OR collegiate athlete OR college athlete OR NCAA athlete) AND (out-of-sport transition OR retirement)	All
Electronic database	APA PsychInfo	(student-athlete OR collegiate athlete OR college athlete OR NCAA athlete) AND (intervention OR program OR workshop)	All

Sample Search Records

SEARCH SYNTAX OR OTHER GUIDELINES FOR THE SEARCH	FIELDS SEARCHED	# of RECORDS
student-athletes OR college athletes or collegiate athletes OR NCAA athletes AND retirement OR out-of-sport OR out-of-sport transition	all	4,010
student-athletes OR college athletes or collegiate athletes OR NCAA athletes AND retirement OR out-of-sport OR out-of-sport transition AND intervention OR workshop OR intervention program	all	30
student-athletes OR college athletes or collegiate athletes OR NCAA athletes AND athletic identity	all	2,375

APPENDIX D

Screening and Selection Record

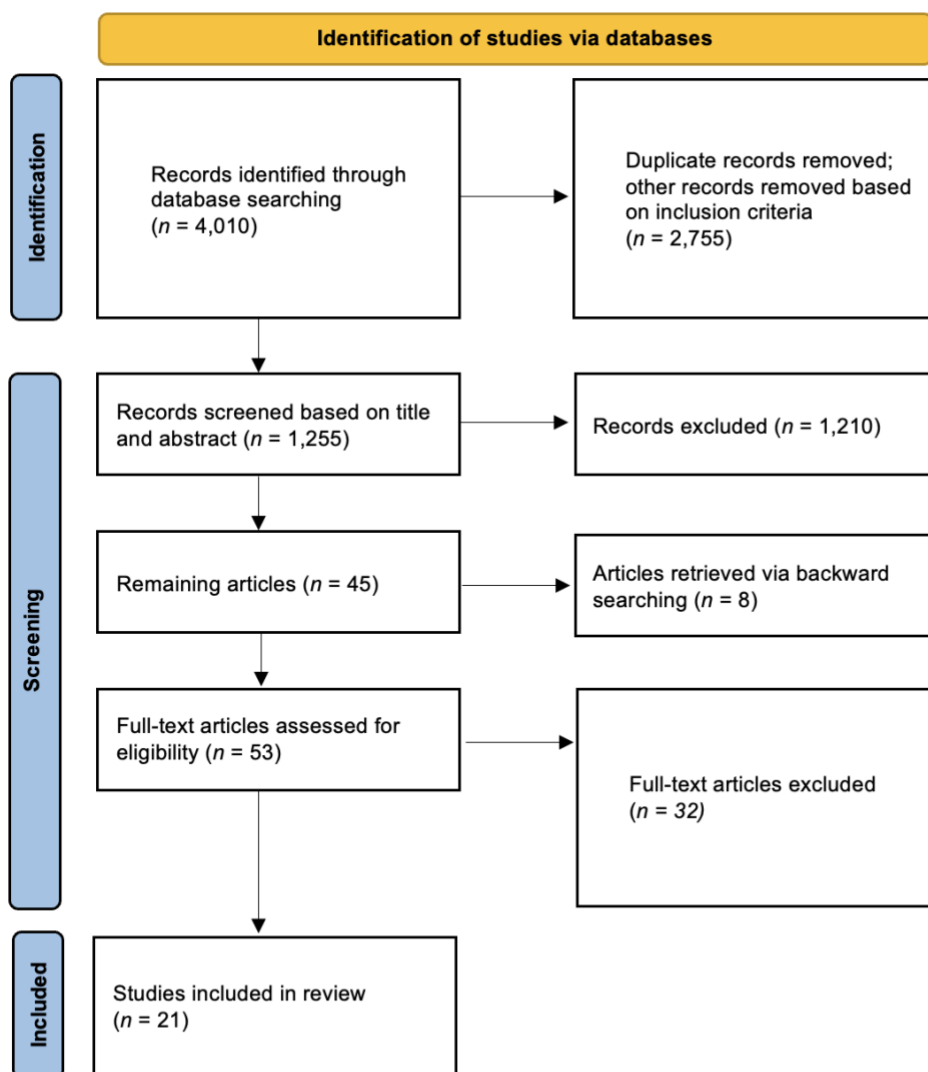
Phase I: Title/Keywords/Abstract (Screening)

Phase II: Full-Text Review (Eligibility)

Phase III: Final Decision (Selection)

AUTHOR(S)	YEAR	FULL DOCUMENT TITLE	DATABASES/SOURCES	TITLE/KEYWORD SCREEN	ABSTRACT SCREEN
			APA PsychINFO		
FULL-TEXT SCREEN?	INCL (SO): English	INCL (SO): Peer Reviewed	INCL (SO): Pub. 2012 - 2022	INCL (PAR): NCAA Athletes	
INCL (RQ 1): Context	INCL (RQ 2): Intervention	INCL (RQ2): Evaluation	SECONDARY/CONFIRM. DECISION	FINAL DECISION	
Explicitly deals w/ out-of-sport transition		Authors incorporated evaluative component			

APPENDIX E
PRISMA Flow Diagram



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71

For more information, visit: <http://www.prisma-statement.org/>

APPENDIX F

Data Collection and Extraction Forms

Research Question 1 Form

Document ID:
RA Initials:

RESEARCH QUESTION 1 DATA EXTRACTION FORM

RA Name: _____

Date: _____

GENERAL ARTICLE INFORMATION

Document ID	
Full Document Title	
Author(s)	
Publication Year	
Country of Origin	
Source	
Source Title	

STUDY CHARACTERISTICS

Type of Study		
Design/Approach		
Study Aim & Question		

PARTICIPANTS

Sample Size	N =	
Setting Characteristics	Institution: Geographical Location: Division:	
Recruitment Process		
Participants - AGE		
Participants - GENDER		
Participants - RACE/ETHNICITY		
Participants - GRADE		
Sports Represented		
Notes:		

METHODOLOGY

Assessment of Variable		
Analyses Conducted		
Notes:		

FACTORS ADDRESSED

Factor #1		
Factor #2		
Factor #3		
Factor #4		
Factor #5		
Notes:		

Document ID:

RA Initials:

+ RESULTS

Key Result #1		
Key Result #2		
Key Result #3		
Key Result #4		
Key Result #5		
Notes:		

CONCLUSION

General Conclusion		
Clinical Implications		
Limitations		
Future Research		
Notes:		

COMMENTS, QUESTIONS, CONCERNS

--

Research Question 2 Form

Document ID:

RA Initials:

RESEARCH QUESTION 2 DATA EXTRACTION FORM

RA Name:

Date:

GENERAL ARTICLE INFORMATION

Document ID	
Full Document Title	
Author(s)	
Publication Year	
Country of Origin	
Source	
Source Title	

STUDY CHARACTERISTICS

Type of Study		
Design/Approach		
Study Aim & Question		

PARTICIPANTS

Sample Size	N =	
Setting Characteristics	Institution:	
	Geographical Location:	
	Division:	
Recruitment Process		
Participants - AGE		
Participants - GENDER		
Participants - RACE/ETHNICITY		
Participants - GRADE		
Sports Represented		
Notes:		

METHODOLOGY

Assessment of Variable		
Analyses Conducted		
Notes:		

INTERVENTION

Program Name		
Program Aim		
Program Development		
Program Implementation Time		
Theoretical Framework(s)		
Program Description		
Program Feedback		
Notes:		

Document ID:
RA Initials:

FACTORS ADDRESSED

Factor #1		
Factor #2		
Factor #3		
Factor #4		
Factor #5		
Notes:		

RESULTS

Key Result #1		
Key Result #2		
Key Result #3		
Key Result #4		
Key Result #5		
Notes:		

CONCLUSION

General Conclusion		
Clinical Implications		
Limitations		
Future Research		
Notes:		

COMMENTS, QUESTIONS, CONCERNS

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APPENDIX G
Quality Appraisal

APPENDIX H

Evidence Table

RQ 1 Evidence Table

ID #	AUTHOR(S)	FULL DOCUMENT TITLE	YEAR	GENERAL Source	GENERAL Source Title	
STUDY CHARACTERISTICS						
Type of Study	Design/Approach	Methodology	Research Questions /Aims			
Quantitative v. Qualitative						
SETTING CHARACTERISTICS	SETTING CHARACTERISTICS	PARTICIPANT CHARACTERISTICS	PARTICIPANT CHARACTERISTICS	PARTICIPANT CHARACTERISTICS	PARTICIPANT CHARACTERISTICS	
Study Location (Geographical)	NCAA Division	Sample Size	Gender	Age	College Year	
PARTICIPANT CHARACTERISTICS	PARTICIPANT CHARACTERISTICS	PARTICIPANT CHARACTERISTICS	ASSESSMENT OF RESEARCH VARIABLES	RESEARCH VARIABLE I		
Race/Ethnicity	Sports Represented	Other		Athletic Identity		
RESEARCH VARIABLE II	RESEARCH VARIABLE III	RESEARCH VARIABLE IV	RESEARCH VARIABLE V	RESEARCH VARIABLE VI	RESEARCH VARIABLE VII	RESEARCH VARIABLE VIII
Career Planning	Demographics	Physical Activity	Retirement Cause	Social Support	Sport Goals	Other
RESULTS General		RESULTS Discussion		RESULTS Implications		
CONCLUSION General		CONCLUSION Strengths	CONCLUSION Limitations	CONCLUSION Future Research		

RQ 2 Evidence Table

ID #	AUTHOR(S)	FULL DOCUMENT TITLE	YEAR	GENERAL Source	GENERAL Source Title	GENERAL Type of Study
						Quantitative v. Qualitative
STUDY CHARACTERISTICS <i>Design/Approach</i>		STUDY CHARACTERISTICS <i>Methodology</i>	SETTING CHARACTERISTICS <i>Study Location (Geographical)</i>	SETTING CHARACTERISTICS <i>NCAA Division</i>		
PARTICIPANT CHARACTERISTICS <i>Sample Size</i>	PARTICIPANT CHARACTERISTICS <i>Gender</i>	PARTICIPANT CHARACTERISTICS <i>Age</i>	PARTICIPANT CHARACTERISTICS <i>College Year</i>	PARTICIPANT CHARACTERISTICS <i>Race/Ethnicity</i>		
PROGRAM CHARACTERISTICS <i>Program Name</i>	PROGRAM CHARACTERISTICS <i>Theoretical Orientation</i>	PROGRAM CHARACTERISTICS <i>Program Implementation Time</i>	PROGRAM CHARACTERISTICS <i>Program Structure & Materials</i>	PROGRAM CHARACTERISTICS <i>Program Content</i>		
PROGRAM CHARACTERISTICS <i>Relevant to RQ 1</i>	PROGRAM CHARACTERISTICS <i>Relevant to RQ 1</i>	PROGRAM CHARACTERISTICS <i>Relevant to RQ 1</i>	PROGRAM CHARACTERISTICS <i>Relevant to RQ 1</i>	PROGRAM CHARACTERISTICS <i>Relevant to RQ 1</i>	PROGRAM CHARACTERISTICS <i>Relevant to RQ 1</i>	PROGRAM CHARACTERISTICS <i>Relevant to RQ 1</i>
PARTICIPANT FEEDBACK <i>Methodology</i>	PARTICIPANT FEEDBACK <i>Results</i>	PARTICIPANT FEEDBACK <i>Feedback & Suggestions</i>	IMPLICATIONS & RECOMMENDATIONS			