

Call It an “Evolution”: Promoting Student-Athlete Well-Being During the Transition From Collegiate Sport

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After highly publicized stories of student-athletes' struggles with mental health, the spotlight on mental health and well-being in this special issue coincides with a broader growing concern for the long-term impact of competitive sport participation on student-athlete health and wellness. The end of a competitive sport career represents a potentially vulnerable life transition. As demonstrated in the literature, the unique aspects of elite sport culture shape student-athletes' perceptions of their identity, health, and health behaviors, which have implications for how student-athletes navigate their health and well-being as they transition away from the embedded health care structure inherent to elite sport. Given evidence indicating that student-athletes may face mental and physical health concerns after retirement from sports, targeted transitional strategies are needed to provide patient-centered care in this population. In

this article, we briefly summarize current understanding of sport transition and highlight some key findings from studies conducted by the contributing authors' research groups exploring the impact of sport career transitions on student-athlete well-being. We also reflect on limitations of the existing research and transition models and, in turn, propose potential directions for adopting a nuanced and multidimensional framework to explore interconnected transition domains. We conclude by offering recommendations for sports medicine professionals to consider in future research, programming, and policies to promote student-athletes' holistic well-being through this critical transition.

Key Words: former student-athletes, mental health, physical health, career transition

Key Points

- Student-athletes can benefit from targeted, evidence-based resources that promote their well-being during and after their transition out of collegiate sport.
- A more robust understanding of this transition is necessary for athletic trainers and other sports medicine professionals to promote student-athlete well-being through a holistic approach to health care.

Recent headlines highlighting collegiate student-athletes in crisis,¹ newly released statistics summarizing the compounding mental health effects of the COVID-19 pandemic,^{2,3} and personal stories of former student-athletes' transitional challenges⁴ suggest growing interest in the immediate and long-term effects of sport participation on student-athletes' mental health and overall well-being. Existing research points to the unique physical and mental health challenges faced by collegiate student-athletes and the role of the sports medicine team in addressing these concerns.^{5,6} Comparatively, fewer researchers have focused on the role of sports medicine professionals in helping student-athletes navigate health and well-being during the transition out of collegiate athletics.^{7,8} This is particularly concerning because when they transition out of sport, former elite athletes may face mental and physical health concerns (eg, osteoarthritis, pain, functional limitations, and depressive symptoms), which have been found to be especially prevalent among individuals with a history of sport-related injury or concussion.^{9–11}

This understudied concern in the literature also translates to a critical gap in clinical practice for health providers in the former athlete space. Given that mental health concerns may manifest or be exacerbated during times of transition,¹² it is important to understand how student-athletes support their holistic well-being as they transition from their competitive sport career and lose access to resources embedded in the structure of collegiate athletics.

Important to this student-athlete transition conversation is an understanding that the unique aspects of elite sport culture¹³ shape student-athletes' perceptions of their identity, health, and health behavior, which have implications for how student-athletes navigate their well-being during and beyond their competition days. Current student-athletes have reported elevated levels of mental health concerns (eg, mental exhaustion, anxiety, depressive feelings) in comparison with historical trends¹⁴; subgroups of student-athletes who have been historically and systematically marginalized and minoritized (ie, female student-athletes; student-athletes of

color; lesbian, gay, bisexual, transgender, or queer student-athletes) were at particular risk for experiencing depression, anxiety, stress, and poorer quality of life.¹⁵ Despite the documented prevalence of these concerns among the student-athlete population, challenges remain in addressing student-athlete mental health and holistic well-being. Although two-thirds of student-athletes said they knew where to seek mental health services, fewer than half felt comfortable seeking support from a campus provider.¹⁴ Barriers to student-athlete help seeking may include a lack of time, long waiting lists to see a provider, negative stigma, fear of negative repercussions, and concern about being perceived as weak by others.¹⁶ Further, the values and norms embedded in the culture of competitive sport reinforce perceptions that student-athletes must strive to be the best and sacrifice their health in pursuit of athletic excellence.¹³ As such, competitive athletes are prone to risk their health for the sake of performance.^{17,18} Indeed, in 1 study,¹⁹ 70% of former Division I student-athletes reported that they practiced or competed with an injury. Perhaps unsurprisingly, achieving a healthy transition out of sport may require student-athletes to reframe their commitment to the cultural values and norms that define what it means to be an “athlete.”²⁰ Ultimately, a more systemic shift in sport culture is needed to destigmatize mental health care and reinforce health-promoting behaviors.^{16,18} To that end, an opportunity exists for sports medicine providers to better understand and facilitate such cultural shifts through their work with athletic administrators, coaches, and student-athletes in all phases of the collegiate sport experience, including the transition out of sport.

A BRIEF OVERVIEW OF RESEARCH ON SPORT TRANSITION AND STUDENT-ATHLETE WELL-BEING

The transition out of competitive sport can represent a sensitive phase in the career of any athlete. During this phase, student-athletes may encounter various physical and mental health challenges while concurrently navigating a substantial shift in their personal identities.^{21,22} For the purposes of this brief review, we begin by outlining foundational work describing the various stages of sport transition and the associated experiences of athletes as they progress through transition stages. Thereafter, subsequent evolutions in this line of research are characterized, with emphasis on research that has explored the relationship between transition processes and former student-athlete wellness as well as potential strategies for promoting adaptive sport transition.

Existing Athletic Transition Models and Frameworks

Frameworks that describe the temporality of athletic transitions can facilitate effective communication about the transition process among relevant stakeholders and can be helpful in identifying the most meaningful and influential points of intervention for guiding positive transition experiences. The literature on this topic points to a phase-like structure of the transition process,²³ as opposed to an acute-event model, and indicates that student-athletes’ perceptions of the process as well as planning for the transition may have downstream effects on health and wellness posttransition. For example, Reints²⁴ proposed a 4-stage transition model: planning for athletic retirement, career

termination, start of the postathletic career, and reintegration into society. Similarly, Park et al²⁵ outlined a 5-stage model based on the transtheoretical model for behavior change, encompassing precontemplation, contemplation, preparation, moratorium, and action phases. Though post-career adjustment varies among individuals,^{23,24} perceived adjustment to athletic transition generally improves with passing time and progression through transition stages. Moreover, stage-specific factors surrounding sport discontinuation and the student-athlete’s perceived effect of these factors can greatly influence the reported quality of the transition. Specifically, perceived autonomy regarding career choices along with prediscontinuation planning appears to have a considerable effect on transition experiences.^{23,26–28}

Factors Associated With Sport Transition Experiences

Given the sensitive nature of the athletic transition process, it is reasonable that student-athletes’ experiences during this process can influence their health and wellness post-sport exit. For example, involuntary discontinuation (eg, career-ending injury)²⁶ can adversely affect transition outcomes. In particular, recent research²⁶ among former American football athletes indicated that involuntary discontinuation was associated with more severe depressive and anxiety symptoms; having no transition plan before discontinuation was also associated with maladaptive mental health outcomes. With respect to strategic priorities for guiding athletic transition, transferable competencies (eg, communication and management skills, emotional awareness) may be facilitators of successful postcareer adaptation.^{29,30} Similarly, our research showed that former women’s soccer student-athletes viewed social support and the provision of mental, nutritional, and physical health resources as catalysts for successful postcareer transition.³¹

Sport Transition Interventions

Early research on the topic of guiding athletic transition revealed positive outcomes associated with programs designed to support athletes during this process. For instance, Lavalley³² reported improved situational adaptivity, personal characteristics of self, coping strategies, and social support in male professional soccer players who engaged in a life-development intervention. However, empirical evidence is lacking to validate interventions designed to assist with student-athlete career transition. Leaning on the phaselike structure of the transition process to inform meaningful points of intervention, recent scholars have strived to advance the development and evaluation of evidence-based programs designed to assist student-athletes in the transition process, with emphasis placed on physical and mental health domains.

Our team^{33,34,36} has demonstrated promising findings from a theory-driven transition program aimed at improving health-promoting behaviors such as lifetime physical activity and healthy eating in student-athletes as they transitioned out of collegiate sport. For example, through interactive discussions and activities, adaptive skills including identity exploration, setting goals that align with personal values, and engaging with peers who had shared experiences were fostered. These elements were viewed by program participants as especially beneficial to increasing their awareness of transitional challenges and enhancing

their transition experience. As research into various programming evolves, it will be prudent for investigators to conceptualize methods for adapting promising elements of such programs to the needs of various student-athlete populations and to document the long-term effects of specific intervention strategies.

Collectively, previous authors aimed to appraise the process of athletic transition and conceptualize strategies for guiding successful transition from sport. Although some have examined health status post-sport exit, the dynamics of health and wellness through various stages of transition and retirement remain relatively understudied. As such, the complex interplay among transition experiences and physical and mental health after athletic transition requires continued attention and exploration.

CURRENT AND FUTURE DIRECTIONS FOR ATHLETIC CAREER TRANSITION FRAMEWORKS

Expanding Transition Frameworks

Multiple theoretical and conceptual perspectives provide a heuristic and testable overview of the athlete transition process, such as the Taylor and Ogilvie³⁷ model as well as subsequent critiques and extensions, such as the work of Wylleman and Reints³⁸ and Stambulova et al.²³ All of these models highlight mental health as salient to athlete transition. Notably, Taylor and Ogilvie³⁷ described mental health concerns as signs of poor postcareer adjustment; however, this model offers opportunities to discuss the breadth of physical and mental health experiences throughout the athlete transition process, including both potentially positive (ie, adaptive adjustment, resilience, well-being) and maladaptive (eg, depression, anxiety, identity concerns, physical health challenges) experiences. Subsequent and more contemporary conceptualizations²³ highlight that transition outcomes are not binary (ie, adaptive versus maladaptive) and that all athlete transition outcomes, including mental and physical health, vary across the transition window as well as within a much broader range of experiences.¹⁸ For example, Keyes³⁹ discussed mental health outcomes as residing on a continuum ranging from (1) poor or maladaptive mental health (ie, marked distress, serious impairment) to (2) emotional problems or concerns (ie, ranging from moderate distress affecting functioning to mild distress involving temporary impairment) to (3) good or adaptive mental health (ie, well-being, thriving, resilience). Poor or maladaptive mental health involves an experience that is chronic and results in impaired functioning in significant areas of the individual's life. Emotional problems or concerns include a similar constellation of symptoms occurring either more often than not or only generally or minimally affecting one's life. Finally, good or adaptive mental health is characterized by normal fluctuations in mood and positive psychological outcomes such as thriving and resilience. This continuum is especially relevant in sport, where student-athletes, coaches, and friends and family members may misperceive that mental health is binary (poor and maladaptive or good and adaptive mental health) and poor mental health signifies a lack of "mental toughness."⁴⁰ Such a misconception can be problematic for student-athletes' mental health disclosure and help seeking⁴¹ in times of need, such as transition from sport.

Limitations of Athletic Transition Frameworks and Future Directions

Ultimately, existing athlete transition theories provide an appropriate basis from which to begin to understand holistic well-being during the transition from sport but are limited by a rather cursory description of the types of outcomes experienced. Such theoretical and empirical deficits could be addressed via a focus on the integration of theories to understand and address student-athlete mental health and overall well-being. The current lack of nuance in the range of mental and physical health experiences noted by extant theory for student-athletes during the transition from sport limits researchers and clinicians from designing the most useful studies and clinical transition programming to address this potential variance in outcomes as student-athletes prepare to, and eventually do, leave sport.

Other individual and environmental factors also merit further development within existing conceptual models to allow us to best understand this range of experiences. Specifically, changes in and challenges to athletic identity during the transition process can contribute to the range in mental and physical health status observed in former athletes and the interplay between these. *Athletic identity* has been defined as "the degree to which an individual identifies with the athlete role."⁴² Athletic identity is associated with mental health outcomes including depression and burnout, as well as other health-related behaviors such as physical activity.^{43–45} Ultimately, sports medicine professionals who are educated on the identity-related aspects of transition will be better positioned to promote adaptive outcomes during transition by encouraging and reinforcing student-athletes in cultivating broader self-perceptions and self-worth not rooted solely in athletic performance.

As noted earlier, additional factors relevant to the transition process are social support, autonomy in the discontinuation or transition decision-making process, and pretransition planning. Social support from others (eg, teammates, athletic staff, family, friends) has been shown to be important to mental health across the transition period.^{31,46–48} Though not always feasible because of the environmental constraints of sport participation (eg, being cut from the team, exhausting eligibility, career-ending injury), having some autonomy in the decision-making process relative to sport transition was adaptive for mental health outcomes in some former athlete populations²⁶ and is relevant for continued work in this area. Finally, as noted in the literature,³⁷ with the support of programming and resources provided by their institution, student-athletes would benefit from engaging in specific planning efforts before they transition from sport.²⁶ All of these factors should be considered in athlete transition theory, research, and practice going forward.

Implications for Future Research

Guided by continued conceptual and theoretical development, a variety of study designs and data-analytic procedures would be beneficial to further our understanding of student-athlete health and well-being during transition from sport. First, longitudinal study designs ranging from large quantitative cohort studies to multi-time-point case studies are well suited to gathering the data necessary to examine

Table. Recommendations for Sports Medicine Professionals

Recommendation	Description
Investigate potential health risks and outcomes for student-athletes before and after the transition out of sport.	To inform sports medicine teams about the most salient physical and mental health concerns that student-athletes may face as a consequence of training and competing at an elite level, researchers are encouraged to use a multifaceted approach that includes prospective, cross-sectional, and retrospective designs involving diverse samples of former student-athletes with the aim of assessing a range of health domains and identify opportunities for support. Investigations of this broad topic will create a robust body of literature useful to forward-thinking sports medicine practitioners who are positioned to develop programming and policies to promote proactive and protective care strategies that mitigate common health risks.
Direct resources and programming toward relevant social actors in student-athletes' lives who can support their successful transition.	Teammates, coaches, sports medicine and sport psychology staff, family members, significant others, and friends in the student-athletes' network can play major parts in a successful transition. ⁴⁸ Supporters who are educated about factors affecting the transition (eg, pretransition planning, autonomy in the discontinuation decision, athletic identity) can better understand the challenges the student-athlete is facing and provide desirable social support and relevant resources.
Facilitate dialogue about the transition process.	Deliberate conversation between student-athletes in transition and former student-athletes who either are currently navigating or have successfully navigated the process can create an important community of support. Student-athletes may rely on these communities as avenues for asking and answering questions related to their unique situations.
Extend current protocols to support student-athletes who have completed their eligibility to compete.	Sports medicine teams have comprehensive and effective protocols for screening and providing necessary care to competing student-athletes. Extending these policies to cover former athletes gives them the opportunity to receive expert advice about their lifelong health (vs performance-related health) from trusted medical professionals (eg, team athletic trainers, physicians, clinical sport psychologists). Specifically, we recommend a policy and practice of screening student-athletes upon their exit from sport, coupled with follow-up meetings with relevant members of the sports medicine team who may provide a transition plan developed according to the student-athlete's needs.

the breadth of student-athlete experiences across the sport transition and advance the understanding of student-athletes' long-term mental and physical health. Moreover, mixed-method and qualitative designs can help with describing the nuances of student-athletes' lived experiences across the breadth of the transition experience.

Despite the important knowledge generated to date, the current research and practice related to athlete transition have been limited by an underdeveloped understanding of individual and environmental factors that affect a range of outcomes relevant to holistic well-being. Theoretical integration is necessary to synthesize and test hypotheses best suited to enhancing the knowledge base surrounding this important life stage. Work on athlete transition is also largely segmented into a series of predictors (eg, social factors, identity, personal and environmental factors). Knowledge development in this area would proceed at a faster rate with a more holistic set of factors integrated within the same study designs and, ultimately, would enhance applied programming efforts. Finally, longitudinally oriented research methods and associated data-analytic techniques are needed to answer the complex and theoretically informed research questions that will provide

the knowledge necessary to change population-level health in former student-athletes. Ultimately, to answer the important questions and address the challenges, multidisciplinary research efforts are often needed. The athlete transition space is no exception, and, going forward, the creation of multidisciplinary research teams will be essential to develop projects that are both meaningful to the target population and attractive to extramural funding agencies that can fuel the resources needed to accomplish these research efforts.

RECOMMENDATIONS FOR SPORTS MEDICINE PROFESSIONALS

Based on our brief review of the literature outlined in this paper, we offer the following recommendations (Table and Figure) for professionals providing care to student-athletes (eg, athletic trainers, team physicians, sport psychologists) in developing future research, policies, and programs to support student-athletes' holistic health and well-being as they transition out of sport. Although these recommendations are offered in the context of our focus primarily on collegiate student-athletes, they are

Promoting Student-Athlete Well-Being during the Transition from Collegiate Sport: Recommendations for Sports Medicine Professionals

Former student-athletes with prior sports-related injury/concussion may face health concerns like:



Osteoarthritis



Functional Limitation



Depressive Symptoms



Athletic trainers and other sports medicine professionals can promote student-athlete well-being through this critical transition by considering the following research, programming, and policy recommendations.

01

Investigate Potential Mental & Physical Health Risks

Such research will inform sports medicine teams about the most salient physical and mental health concerns that athletes may face as consequence of training and competing at an elite level.



Direct Resources and Programming toward Social Actors

Sports medicine and sport psychology staff, coaches, and family/friends who are educated about factors impacting the transition can better understand the challenges athletes face and more prepared to provide desirable social support and relevant resources.

02



Facilitate Dialogue about the Transition Process

Student-athletes in transition can benefit from a community of support that includes avenues for discussing their unique experiences with former student-athletes who have successfully navigated this transition.

03



Extend Protocols to Support Former-Athletes

Sports medicine teams have comprehensive and effective protocols for screening and providing necessary care to competing athletes. These practices should be extended to include screening athletes upon their exit from sport, coupled with follow-up meetings according to the student-athletes' needs.

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Figure. Promoting student-athlete well-being during the transition from collegiate sport: recommendations for sports medicine professionals.

likely transferrable to other athlete transition contexts such as the transition out of competitive high school, Olympic and international, and professional sports.

CONCLUSIONS

Leaving a competitive sport career is a complex transition that can reflect a wide continuum of experiences for student-athletes¹⁹ and should be conceptualized as such in sports medicine research and practice. For most student-athletes, this transition also occurs during the developmentally impactful period of emerging adulthood.⁴⁹ Research relative to athlete transition has important implications for sports medicine practitioners who strive to enact a holistic approach to health care. Sports medicine professionals are a critical part of the organizational structure that supports student-athletes; however, a more robust understanding of the role of athletic trainers and other sports medicine professionals in supporting a positive transition out of competitive sport is warranted. Ultimately, former athletes and those currently in transition can benefit from targeted, evidence-based sports medicine resources to manage and promote lifespan health. We hope the research reviewed herein and our proposed recommendations spark continued efforts to better understand and support student-athletes' well-being as they evolve through their next stage in life.

I have never liked the word *retirement*. It doesn't feel like a modern word to me. I've been thinking of this as a transition . . . Maybe the best word to describe what I'm up to is evolution. I'm here to tell you that I'm evolving away from tennis, toward other things that are important to me.

—Serena Williams⁵⁰

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