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Health-related transitional programs can provide strategies for student-athletes to help them navigate the challenges they may face as they transition away from competitive athletics. However, few evidence-based transitional programs with a health-related physical activity (PA) focus exist, and even less research addresses the feasibility of implementation within specific institutional contexts. The purpose of this study was to evaluate the feasibility of implementing transitional programming with a health-related PA focus at one NCAA Division II institution. Student-athlete alumni ($n = 85$) from the past five years were surveyed to gather information about their current PA and health-related quality of life. Additionally, survey questions related to programming feasibility were asked of the same former student-athletes as well as current athletic department personnel ($n = 28$). Data analysis revealed that over 90% of participants from both groups agreed that more should be done to support student-athletes' transition out of sport and their health beyond athletics. Key resources that participants found most important to include in programming were career guidance, PA/exercise guidance, and mental health resources. While participants perceived that the university was adequately providing career guidance resources, they felt health-related resources such as PA/exercise guidance were missing. These results, coupled with findings that 60% of this former-student athlete sample were classified as falling below recommended PA guidelines, support the need for developing health-related transitional programming at this university. Responses from athletic personnel indicated that opportunities exist to feasibly integrate holistic transition programming within existing pathways through collaboration with other key stakeholders on campus.

STUDENT- ATHLETE TRANSITION PROGRAM WITH A HEALTH-RELATED
PHYSICAL ACTIVITY FOCUS: A FEASIBILITY STUDY FOR ONE NCAA
DIVISION II INSTITUTION

by

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CHAPTER I: PROJECT OVERVIEW

Research has shown that student-athletes face challenges with transitioning from exercise for sport to exercise for health and may not maintain high levels of physical activity participation after graduation (Plateau et al., 2017; Reifsteck et. al., 2013; Simon & Docherty, 2017; Sorenson et al., 2015). The National Collegiate Athletic Association (NCAA) estimates that only two percent of the 480,000 student-athletes who participate in collegiate sports each year will go on to play their sport at the professional level (NCAA, 2021), resulting in the majority of student-athletes transitioning out of competitive sports upon graduation. The emergence of research around an athlete's retirement from sport and the challenges they may face has led to the push for the implementation of transitional programs that aid the athlete in this process (Lavallee et al., 1997). Even though research supports proactive transitional practices for student-athletes (Lally, 2007), which may include aspects such as introducing the student-athlete to lifetime physical activities, few evidence-based transitional programs focused on post-competitive physical activity exist (Petitpas et al., 1992, Stambulova et al., 2009; Reifsteck et al., 2018; Wylleman et al., 2004), and limited research has focused on implementing programs within the Division II context. Programs that specifically focus on promoting lifetime physical activity and health prior to the student-athlete's retirement from sport can help the student-athlete to cope with the transition and stay committed to a physically active, healthy lifestyle. Demonstrating the feasibility and acceptability of a health-related physical activity transitional program at one Division II university will be instrumental in developing a programmatic framework that can be feasibly implemented in the future to support student-athletes within this unique context as they transition out of sport.

Background Literature

While athletes are usually seen as the epitome of health, growing research suggests that former student-athletes may not maintain a physically active lifestyle or have increased health-related quality of life compared to their non-athlete counterparts (Cross et al., 2021; Friery & Bishop, 2007; Simon & Docherty, 2014; Cowee & Simon, 2019; Sorenson, et al., 2015). Simon & Docherty (2014) found that former collegiate athletes reported lower health-related quality of life when compared to their non-athlete peers. Further, Simon & Docherty (2017) compared differences in physical activity and fitness in former Division I athletes and recreationally active non-athletes between the ages of 40 and 65, highlighting the challenges former student-athletes face in maintaining physical activity after retirement. In this study, former athletes reported an average of 1.85 hours of aerobic exercise a week compared to 4.25 hours reported by non-athletes. Participants were also assessed using standard fitness tests, which included cardiorespiratory fitness, strength in extremities, muscular endurance, flexibility, and body composition. Overall, former athletes performed worse on the fitness tests, suggesting former student-athletes are not as physically active as society might be inclined to assume. A 5-year follow-up study with these participants strengthened these findings by indicating that the recreationally active non-collegiate athlete individuals within the cohort appeared to have increased health-related quality of life and engaged in more physical activity in comparison to the former collegiate athlete cohort (Simon, et al., 2021).

One possible explanation for why former competitive athletes do not have a higher quality of life after retirement is the demands that competitive sports put on the athlete's body can lead to an unhealthy physical activity lifestyle (Tracey & Elcombe, 2004). Athletes may accept injury, pain and suffering, and strenuous training methods as normal behaviors, which

may not translate to meaningful, health-promoting physical activity outside of competitive sport in the future (Tracey & Elcombe, 2004). For example, two thirds of NCAA Division I former student-athletes (67%) report that they sustained a significant injury during their collegiate athletic career (Simon & Docherty, 2014). In turn, physical and psychological barriers related to prior sport injury that athletes face upon retirement such as pain and disablement may also contribute to former student-athletes' decreased physical activity and lowered health-related quality of life (Russel et al., 2018; Tracey & Elcombe, 2004). Injury-plagued athletes can also have trouble accepting that their body is not physically, what it once was (Tracey & Elcombe, 2004). Physical barriers, such as pain and early arthritis, as well as psychological barriers, such as fear of re-injury, may decrease the ability of the athlete to continue to perform physical activity at the high level they are accustomed to (Simon & Docherty, 2014). Athletes can continue to have symptoms related to injury, such as stiffness, pain, swelling, and decreased range of motion, even after recovery, which can lead to impairments and limit their ability to participate in physical activities after retirement (Russell et al., 2018). These symptoms can lead to disability as the former athlete progresses through life and make it hard to maintain physical activity as they age (Russell et al., 2018). Additionally, Reifsteck et al. (2022) identified potential barriers such as new responsibilities and priorities, difficulty-finding value within physical activity, and lack of intrinsic motivation that competitive former student-athletes may face as they work to navigate, value, and redefine post-competitive physical activity. Examining potential barriers and addressing the complexity of a student-athlete's transition out of sport can help professionals develop interventions to address the specific needs of this population.

Transitional Programs for Student-Athletes

Transitions can be defined as planned or unplanned events that cause a change, which can affect aspects of an individual's life such as relationships, roles, and day-to-day routines (Bjornsen & Dinkel, 2017). Transitions require coping mechanisms that help the individual accept the changes taking place and learn to adjust to the loss and gains in their lives that the transition brings (Anderson et al., 2012; Pearson & Petitpas, 1990; Schlossberg, 1981). There are many factors relevant to the student-athlete experience that interfere with an effective transition into physical activity after graduation. Upon retirement from sport, athletes may struggle to define themselves and experience anxiety, the loss of self, and lack of structure, which can lead to physiological, psychological, and social changes (Menke et al., 2019; Park et al., 2013; Taylor & Ogilvie, 1994; Wheaton, 1990). This can lead to a poor transition and the former student-athlete struggling to integrate physical activity behaviors into their new routine (Plateau et al., 2017). Evidence-based student-athlete transitional programs should be implemented to help with the transitional barriers this population faces after their athletic career has ended (Smith et al., 2018).

Specifically, it should be the responsibility of athletic departments to help student-athletes develop coping strategies to support their transition out of sport, and these coping methods should be introduced prior to graduation (Hansen et al., 2019). How well an athlete is able to transition out of sport can be affected by resources available and planning that took place to allow the athlete to cope with post-competition life (Cecić Erpič et al., 2004). Empowering an athlete to prepare and have more control over their transition leads to a more positive transition out of sport (Alfermann, 2000; Alfermann et al., 2004; Cecić Erpič et al., 2004). Transitional

programs should help athletes feel as though they are in control of their lives and find enjoyment in activities outside of sport (Stoltenburg et al., 2011, Trento, 2020).

The need for transitional programs that help with the challenges student-athletes face upon graduation has been established (Bjornsen & Dinkel, 2017; Hansen et al., 2019; Plateau et al., 2017; Stambulova et al., 2007). Most programs that aid in the transition out of college and competitive sports primarily focus on the career aspects of the transition. Programming with a health-related focus that addresses health-related changes and maintaining physical activity upon graduation are less common. Programs that specifically focus on promoting lifetime physical activity, motivation, broadening identity, and identification of facilitators of physical activity prior to the student-athlete's retirement can help student-athletes cope with the transition and stay committed to a healthy lifestyle upon graduation (Lally, 2007; Smith et al. 2020; Stellefson et. al, 2020). Emerging programs like Moving On! and Pilates Connect provide a framework for addressing the barriers student-athletes face during their transition out of sport and how to build a foundation for lifetime physical activity (Reifsteck et al., 2018; Smith et al. 2020).

Moving On! Program

The Moving On! program developed by Reifsteck and colleagues aims to help student-athletes make healthy transitions out of sport, with an emphasis on promoting lifetime physical activity and healthy eating (Brooks et. al, 2019; Reifsteck et. al, 2022; Reifsteck et. al, 2018; Shriver et. al, 2019; Smith et. al, 2018). Student-athletes are given the opportunity to identify perceived barriers, come up with strategies to aid in transitioning out of sport, and try out new forms of physical activity that can be maintained over a lifetime (Reifsteck & Brooks, 2018). The program is rooted in self-determination theory which postulates that intrinsic motivation is increased when the individual feels a sense of competence, autonomy, and relatedness (Edmunds

et al., 2006; Ryan et al., 2009), and includes strategies for the student-athlete to set personal goals and action plans for physical activity as well as participating in various types of lifetime physical activity to gain self-efficacy in activities outside of their sport (Reifsteck & Brooks, 2018). In preliminary research with Division I and Division III student-athletes, the Moving On! program received positive feedback from participants, including that the program helped them become more prepared for the obstacles they will face in trying to maintain physical activity upon graduation (Brooks et al., 2019; Reifsteck & Brooks, 2018).

Pilates Connect Program

The Pilates Connect program was also designed using a self-determination theory framework to introduce lifetime physical activity to student-athletes prior to graduation (Smith et al., 2020). Smith et al. (2020) implemented the program at a Division III institution with student-athletes who were in their final year of collegiate athletics participation. Student-athletes who participated in the six-week program met once per week for sessions that included Pilates training, reflection, discussion, and evaluation (Smith et al. 2020). Smith et al. (2020) found that the Pilates Connect program was feasible, with strong adherence and positive feedback. Participants' feedback suggested that the program helped support their competence, autonomy, and relatedness in lifetime physical activity. Student-athletes also commented that it allowed them to have a sense of control over their options for physical activity post-graduation as well as confidence in their ability to transition to lifetime physical activity. Though programs like Moving On! and Pilates Connect have demonstrated success, exploring the feasibility of implementing such programs in other institutional contexts, particularly at the Division II level, is lacking.

DII Student-Athletes

While transitional programs with a health-related physical activity focus could be beneficial across all levels of collegiate athletics, it is important to consider the unique aspects of Division II athletics and the gap in the research specific to this population. The NCAA, which governs intercollegiate athletics, classifies schools into divisions using a variety of factors including level of competition and resources available within the athletic department at the University. Division I athletics boast the highest number of scholarships, biggest budget, and largest student bodies (NCAA, 2013). Along with this typically comes a greater amount of resources for their student-athletes. On the opposite end of the spectrum, Division III institutions have no athletic scholarships, less focus on generating revenue from athletics, and far fewer resources (NCAA, 2013). In the middle is Division II athletics which adheres to many of the same standards that Division I is held to in order to allow for opportunities for all athletes, competitive fairness, and gender equity. Division II institutions offer some athletic scholarships, but most are partial, with many student-athletes receiving funding from other resources such as academic scholarships, grants, and financial aid (NCAA, 2013). The NCAA requires that Division II institutions sponsor at least five sports for men and five for women. Athletic department budgets are financed by the institution's budget at the Division II level and are smaller than Division I. This financial implication decreases the resources available to student-athletes (NCAA, 2013), which is likely to impact provision of health promoting and transitional resources as well. A study by Beasley et al. (2021) looked at the health literacy of student-athletes across all divisions and found that they had lower health literacy compared to their non-athlete counterparts. Interestingly, Division II student-athletes were over-represented in the sample, with approximately half (50.24%) of the student-athlete participants competing at a

Division II university. The fact that Division II athletic departments do not bring in as much revenue as Division I institutions may be one reason for the decreased health literacy observed in this population because student-athletes at the Division II level may consequently have less access to health-promoting resources such as dietitians (Beasley et al., 2021).

Importance of Conducting Feasibility Studies

Health-related interventions should be studied through feasibility, looking at a conceptual model of the intervention and establishing efficacy before program development and implementation (Dobkins, 2009; Gitlin, 2013; Orsmond & Cohn, 2015; Tickle-Degnen, 2013). It is important that health-related interventions are evidence-based and meet the needs of the population to evoke positive behavior change. Feasibility studies can help to determine if a proposed intervention should be recommended for implementation, minimizing the trial-and-error phase and accelerating future program implementation (Bowen et al., 2009; Hagen et al., 2011; Tickle-Degnen, 2013). By collecting data from a specific population, a program can be shaped to deliver the greatest impact (Bowen et al., 2009; Dobkins, 2009; Gitlin, 2013; Hagen et al., 2011; Orsmond & Cohn, 2015; Tickle-Degnen, 2013). In the case of a student-athlete-focused transitional program, there is support for intervention within the literature, but few evidence-based programs have been implemented, especially at the Division II level. Exploring the feasibility of programs in this context will lead to more concrete piloting and increased positive outcomes with regards to effective transitions out of sport and into a healthy physically active lifestyle upon graduation.

Purpose

While the primary investigator's long-term goal is to collaborate with departments across campus to implement holistic programing, the initial focus and purpose of this study was to

explore the feasibility of implementing a *health-related physical activity transition program* at one NCAA DII university. A feasibility study can provide critical information to determine if the proposed initiative is viable within a particular setting (Bowen et al., 2009; Daly, 2007) and support future program implementation. The following questions, based on recommendations from Bowen et al. (2009), guided this feasibility study:

- Acceptability: Do the stakeholders' (former student-athletes and athletic personnel) have interest in a student-athlete transitional program?
- Demand: Do the stakeholders feel there is a need for the program? Is there an expected use?
- Implementation: How could the program be developed? What needs to be created and developed?
- Practicality: Are the resources available to practically deliver the program? What resources are needed?
- Integration: Where does the program fit? Is there an existing program that the transitional program could integrate with?

Methods

Upon completion of preliminary work, a cross-sectional survey of former Division II student-athletes and athletic personnel at a liberal arts university in North Carolina was conducted. These surveys were used to describe current physical activity and health-related quality of life in recent student-athlete alumni (i.e., within the last 5 years) and to assess the feasibility of delivering a health-related physical activity transitional program.

Preliminary Work

Preliminary interviews took place in person in August of 2022 with a representative from each participant group (i.e., one former student-athlete from the university and one current strength and conditioning coach at the university) to help inform survey design. These interviews allowed the primary investigator (PI) to gain insight on the thoughts and views of student-athlete transitional programming from individuals who identified as part of the target groups.

Interviews were semi-structured and informal in nature, but were key in tailoring survey questions to the targeted population. Sample questions from the preliminary interview include *What health-related physical activity resources do you feel student-athletes need when making the transition out of sport* and *If a program were to be offered, what do you feel would be the best format*. The full preliminary interview guide is provided in Appendix A. Survey questions related to implementation (resources that should be offered), integration (resources that exist) and practicality (delivery format) were then further developed and modified based on insight from these preliminary interviews.

Cognitive interviews (Collins, 2015) were then conducted via Zoom with two individuals (i.e., a former Division II athlete and a former coach) known to the PI who were representative of the target groups but not affiliated with the university being examined in this study. Cognitive interviewing allows the researcher to see the cognitive process underlying survey completion and can uncover any potential problems with validity, phrasing of questions, or the measurements themselves prior to questions being administered to the sample group (Collins, 2015). The participants were introduced to the process and worked through an example of a think aloud-cognitive interview where they were asked to describe everything they thought about as they worked through and responded to a sample question (Appendix B). The PI took notes and reviewed the recording and transcript to identify wording and clarity problems within the survey. An example of a change made to the survey based on the information gained during the cognitive interview dealt with survey presentation on a mobile device; feedback led to modification of a question by breaking it into two questions to promote ease and clarity for the user.

Participants and Setting

The university's goal is to be a nationally recognized liberal arts institution of choice — known for excellence in building leaders for tomorrow, developing patterns of lifelong learning, positioning graduates for success in their professional, personal, and spiritual lives and providing an unparalleled quality of caring within the university community. The university competes at the NCAA Division II level with 23 athletic teams. The athletic department has established core values to serve as foundational principles guiding the student-athlete experience, which include a commitment to student-athlete wellness through the development of the whole person, commitment to continuous improvement, focus on character and integrity and emphasis on an inclusive environment. There is a focus on bettering the student-athlete by creating the best possible learning environment focused on preparing them for success in life after graduation, as well as challenging and inspiring student-athletes to achieve their full potential while striving for excellence in all aspects of their lives.

Upon Institutional Review Board approval and completion of preliminary work, two groups of key stakeholders from this institution were recruited for this study. Approximately 490 former student-athletes who participated in varsity sports at the institution within the last five years made up the recruitment pool for Group 1: Former Student-athletes. Recruitment for this group included an email (Appendix C) sent via the office of advancement and through athletic coaches, as well as a one-time recruitment event at homecoming where flyers (Appendix D) were distributed. The survey link included consent information that participants reviewed before continuing on to the survey. Group 2 was composed of 80 athletic department personnel including coaches, administrators and athletic trainers currently employed at the university. Group 2 participants were contacted via their university email to complete an electronic survey.

At the end of the survey, participants could choose to be entered into a drawing for a gift card or university gear to incentivize survey completion.

Group 1: Former Student-Athlete Survey Participants

A total of 85 (17.35% of the potential pool) former student-athletes ($n = 45$ female; $n = 40$ male) who participated in sports at the university between 2017 and 2022 completed the entire online survey and were included in the data analysis. Ages ranged from 22-29 years with an average age of approximately 24 years old ($M=24.52$, $SD=1.81$). The majority of respondents identified their ethnicity as White (61.2%) or Black/African American (24.7%). A total of 14 different sports were represented. Appendix H includes full demographics for this group.

Group 2: Athletic Personnel Survey Participants

Twenty-eight athletic personnel fully completed the online survey (35% of the potential pool). Men and women were equally represented in the sample, with the majority of participants (82.1%) identifying their race/ethnicity as white. A variety of roles in athletics were represented, with coaches comprising the largest group ($n = 15$, 53.6%). Appendix I shows complete demographics for this group.

Measures

Group 1: Former Student-Athlete Survey (Appendix E)

Sport and personal demographic information were collected along with reports of current physical activity levels, health-related quality of life, and perceptions about transitional programming for student-athletes with a health-related focus.

Physical Activity. The National College Health Assessment (NCHA III) is a 66-item questionnaire covering multiple health topics, including physical activity among college students within the United States. Validity for this instrument has been established based on comparisons

with national databases such as the National College Health Risk Behavior Survey (ACHA, 2013). Three questions from the NCHA III related to physical activity were selected for use in this study to ask participants about the number of minutes over the past 7-day period that they performed moderate intensity cardiovascular or aerobic exercise, vigorous intensity cardiovascular or aerobic activity, and how many days they did exercise to strengthen or tone their muscles. Based on their responses, participants were categorized according to whether they meet (1 = No, 2 = Yes) the US recommended guidelines for physical activity for adults (i.e., at least 2 days of muscle strengthening activity AND 150 or more minutes per week of moderate aerobic activity, where 1 minute of vigorous activity equals 2 minutes of moderate activity). In addition to assessing weekly physical activity levels, the Stage of Exercise Questionnaire developed by Marcus et al. (1992) was used to assess exercise behaviors in five stages (precontemplation, contemplation, preparation, action, maintenance) based on individuals' intention to, and regularity of participation in, exercise. This measurement has been widely used in the literature to determine the stage of exercise relative to current physical activity levels (Dannecker, et al., 2003; Marcus & Simkin, 1993).

Health-related quality of life. Health-related quality of life encompassing physical, mental, and social health was assessed through the Adult Global Health version 1.2 of the Patient-Reported Outcomes Measurement Information System (PROMIS, 2017). The 10-item measure was validated for research purposes and produces a physical and mental health score (PROMIS, 2017). Nine of the ten questions asks participants to provide responses on a five-item Likert scale. The tenth question asks participants to report their average pain in the last seven days on a scale from 1-10. The pain scale score is then converted to a new recoded response based on a table provided in the PROMIS Global Scoring Manual (PROMIS, 2017). Raw scores

for global physical and mental health are calculated by summing the four questions related to each of the two domains. The two remaining questions are reported separately. The raw physical score and raw mental score were then converted to a T-score using the standard provided in the scoring manual. To be compared with the general population, the T-scores are rescaled to have an average score of 50 and a standard deviation of 10. Higher scores indicate greater perceived health-related quality of life (PROMIS, 2017).

Feasibility. Modified and developed questions for this study were tailored to meet the specifics of the population and university's context. Feasibility questions incorporated modified questions from a study by DeFreese et al. (2021), which examined the conceptual framework for transitional experiences of former collegiate women's soccer players. Questions in the DeFreese study asked athletes to describe who or what (if anything) made the transition from playing collegiate soccer easier, who or what (if anything) made the transition from playing collegiate soccer difficult, as well as a closed response question asking the athlete to identify what types of resources would have made their transition from playing collegiate soccer easier. Modified questions for this study were designed to assess the resources, facilitators, and barriers student-athletes experience as they transition out of collegiate athletics. Additional institution specific questions were developed to assess key elements of feasibility identified by Bowen et al. (2009), including acceptability, demand; implementation, practicality, and integration (see elaboration below).

Acceptability The acceptability of a student-athlete transition program with a health-related physical activity focus was determined by the interest of the stakeholders in the program idea. An example item included, *To what extent do you agree or disagree that a student-athlete*

(SA) transitional program with a health-related focus is important in preparing student-athletes for life beyond sport.

Demand The demand for a transition program with a health-related physical activity focus was reflected by the degree to which a future program would be used by student-athletes based on potential involvement and relevance of the program. Example items included, *To what extent do you agree or disagree that [university] athletics should support their SAs: Personal Development, Social Development, Educational Development, Vocational Development, Transition out of Sport, Health Beyond Athletics* and *How much has each of the following helped you maintain physical activity since the completion of your collegiate athletic career: Knowledge of Physical Activity Benefits, Time Management Skills, and Involvement in Activities/Clubs Outside of Sport.*

Implementation These questions explored the importance of individual components required for the transitional program based on components typically included in the literature (e.g., DeFreese et al., 2021 along with university-specific components). For example, *Please rate to what extent you agree that [the university] should offer the following resources to help SAs transition out of sport: Career Guidance, PA/Exercise Guidance, Mentorship/Internship Programs, Mental Health Resources, Financial Guidance, Social Support, Nutrition Guidance, Coaches/Athletic Personnel Support, Medical Resources, Spiritual Guidance, Time Management Resources, Sports Psychologist, Other.*

Practicality The practicality of the program idea dealt with concern for the availability of resources required to implement the program including available assets and ideal delivery format for the program. Example questions addressing practicality included, *How should a SA transition*

program with a health-related focus be delivered? and Who should a SA transition program with a health-related physical activity focus be delivered by?

Integration We investigated how the integration of a SA transition program with a health-related physical activity focus fits in with or contributes to the culture of the university. Survey questions identified any existing programs and addressed the potential benefit for incorporating the program within these existing avenues; for example: *What resources already exist that could allow for integration of this type of program?*

Group 2 Athletic Personnel Survey (Appendix F)

General demographic information such as gender and race along with more specific questions such as role within the athletics department were gathered. The feasibility questions asked of group 1 were also asked of group 2. Group 2 additionally completed open-ended questions to gain feedback regarding resources needed, resources available, and challenges of program implementation.

Data Analysis

Survey data were downloaded from Qualtrics and entered into SPSS version 26 software for data cleaning and analysis. Descriptive analysis (frequencies, mean, and standard deviation) was completed separately for the former student-athlete and athletic personnel groups. Open-ended responses were reviewed and grouped into common categories.

Results

The results for the former student-athletes' current physical activity and health-related quality of life are presented first to provide context for the potential need of this type of program at the university, followed by results for each of the guiding areas of feasibility.

Group 1: Former Student-Athlete Physical Activity and Health Related Quality of Life

The majority of participants reported that they currently engage in less physical activity ($n = 72, 84.71\%$) compared to when they were in college, and that it has been difficult ($n = 47, 52.29\%$) or very difficult ($n = 24, 28.24\%$) to maintain physical activity since the completion of their collegiate athletic career. Almost two-thirds (64.7%) of participants reported currently engaging in regular exercise based on their stage of exercise change (i.e., action or maintenance) (See Table 1). Based on responses to the NCHA III physical activity questions, participants engaged in an average of 140.41 minutes of moderate physical activity and 73.26 minutes of vigorous physical activity per week. Over 40% of the sample ($n = 35, 41.18\%$) reported engaging in no muscle strengthening activities. See Tables 2 & 3.

Table 1. Self-Reported Physical Activity Behaviors and Stage of Exercise Change

	<i>n</i>	%
Change in PA		
I currently engage in more physical activity	2	2.35
My physical activity has stayed about the same	11	12.94
I currently engage in less physical activity	72	84.71
Maintaining PA		
Easy	2	2.35
Neutral	12	14.12
Difficult	47	55.29
Very Difficult	24	28.24
Regular Exercise Engagement		
I don't engage in regular exercise now, but I intend to start in the next six months	12	14.12
I don't engage in regular exercise now, but I intend to start in the next month	16	18.82
I have been engaging in regular exercise for less than six months	19	22.35
I have been engaging in regular exercise for more than six months	36	42.35
Missing	2	2.35

Table 2. Summary Statistics for NCHA III Weekly Aerobic Physical Activity

	<i>M</i>	<i>SD</i>	<i>n</i>	<i>SE_M</i>	Min	Max	<i>Mdn</i>	Mode
Vigorous	73.26	80.91	85	8.78	0.00	300.00	50.00	0.00
Moderate	140.41	129.06	85	14.00	0.00	800.00	100.00	60.00

Table 3. Frequency for NCHA III Weekly Muscle Strengthening Activity

	<i>n</i>	%
0 days	35	41.18
1 day	7	8.24
2 days	21	24.71
3 days	10	11.76
4 days	6	7.06
5 days	6	7.06

A descriptive comparison of the means suggests participants scored close to the average global mental health and physical health scores ($M = 50$) for the general US population. Participants reported a global mental health T-score of 48.3 ($SD = 3.7$) that is slightly lower than the US population (mean difference -1.7 points) and a global physical health T-score of 50.8 ($SD = 4.6$) that is slightly above the US population (mean difference $+ 0.8$ points). Less than 6% of participants ($n = 5$) rated their overall health as excellent, but most participants (88.24%) rated their overall health as either very good ($n = 34$, 40%) or good ($n = 41$, 48.24%). A summary of these results is included in Appendix G.

Feasibility of Implementing a Transition Program with a Health-Related Focus at the University

Table 4 provides key results from each feasibility area (acceptability, demand, implementation, practicality, and integration). Additionally, each area of feasibility is expanded on below, with full results included in Appendix H.

Table 4. Summary Statistics for Sample of Findings within Each Feasibility Domain

	Former Student-Athletes				Athletic Personnel			
	<i>M</i>	<i>SD</i>	<i>n</i>	Mode	<i>M</i>	<i>SD</i>	<i>n</i>	Mode
Acceptability								
A SA transitional program with a health-related focus is important in preparing SAs for life beyond sport	4.73	0.52	85	5.00	4.75	0.52	28	5.00
Demand								
The university should support SAs								
Personal Development	4.89	0.35	85	5.00	4.71	0.46	28	5.00
Physical Development	4.85	0.42	85	5.00	4.71	0.46	28	5.00
Psychological Development	4.91	0.33	85	5.00	4.71	0.46	28	5.00
Implementation								
The university should offer the following resources to help the SA transition out of sport								
PA/Exercise Guidance	4.85	0.42	85	5.00	4.68	0.61	28	5.00
Career Guidance	4.89	0.35	85	5.00	4.89	0.31	28	5.00
Mental Health Resources	4.91	0.33	85	5.00	4.93	0.26	28	5.00
Practicality								
A SA transition program with a health-related focus should be delivered								
As an Elective	4.45	0.85	85	5.00	4.43	0.69	28	5.00
Face-to-face	4.23	0.74	85	5.00	4.11	0.74	28	4.00
By health/exercise/sport faculty	4.38	0.77	85	5.00	4.36	0.73	28	4.00
Integration								
A SA transition program with a health-related focus can be integrated into existing programming at the university	4.38	0.72	85	5.00	4.14	0.80	28	5.00

1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree or Disagree, 4 = Agree, 5 = Strongly Agree

Acceptability

Approximately 90% of former student-athlete and athletic personnel participants agree or strongly agree that health-related transition programming is important for preparing student-athletes for life beyond sport and that programming should have a health-related physical activity focus, encompassing ways to help the student-athlete cope with the transition out of sport and maintain a physically active lifestyle upon graduation.

Demand

Results indicated a perceived demand for transition programming, with close to 90% of former student-athletes and 100% of athletic personnel participants strongly endorsing that athletics should support the student-athletes personal development, psychological development, physical development, transition out of sport, and health beyond athletics. Former student-athlete participants felt that access to resources/facilities ($n = 42, 49.41\%$), financial resources ($n = 44, 51.76\%$), knowledge of PA benefits ($n = 49, 57.65\%$), and support from others ($n = 58, 68.24\%$) were facilitators to maintaining physical activity upon graduation.

Implementation

The majority of participants from both groups agreed that all twelve resources presented within the survey should be offered to aid the student-athletes transition out of sport. When asked to select the top three most important resources among a list of 12 options, participants from the student-athlete group most often chose career guidance ($n= 57, 67.06\%$), mental health resources ($n= 45, 52.94\%$), and physical activity/exercise guidance ($n= 43, 50.59\%$). The athletic personnel also reported the same top three most important resources, but in comparison to the former student-athlete group reported mental health resources ($n= 19, 67.86\%$) as their most important resource, followed by career guidance ($n= 16, 57.14\%$), and physical activity/exercise guidance ($n= 12, 42.86\%$).

Practicality

Approximately 80% of former student-athlete participants and more than half of athletic personnel participants do *not* agree that support is currently being provided to student-athletes regarding transition out of sport and health beyond athletics. Former student-athlete and athletic personnel respondents perceived that the university is currently offering some key transitional

resources such as social support, career guidance, and medical resources, but is currently lacking resources related to physical activity/exercise guidance and a sports psychologist. See Table 5.

Table 5. Summary Statistics for Resources the University Currently Offers

	Former Student-Athletes				Athletic Personnel			
	<i>M</i>	<i>SD</i>	<i>n</i>	Mode	<i>M</i>	<i>SD</i>	<i>n</i>	Mode
Social Support	1.60	0.79	85	1.00	1.14	0.52	28	1.00
Coaches/Athletic Personnel Support	1.74	0.76	85	1.00	1.14	0.52	28	1.00
Mentorship/Internship	1.58	0.82	85	1.00	1.18	0.55	28	1.00
Career Guidance	1.35	0.67	85	1.00	1.21	0.63	28	1.00
Mental Health Resources	1.60	0.62	85	1.00	1.46	0.64	28	1.00
Spiritual Guidance	1.38	0.71	85	1.00	1.54	0.79	28	1.00
Medical Resources	1.96	0.81	85	2.00	1.54	0.69	28	1.00
Time Management Resources	1.99	0.59	85	2.00	1.64	0.62	28	2.00
Nutritional Guidance	1.89	0.54	85	2.00	1.75	0.59	28	2.00
Financial Guidance	2.02	0.65	85	2.00	1.79	0.74	28	2.00
PA/Exercise Guidance	2.06	0.50	85	2.00	1.82	0.67	28	2.00
Sports Psychologist	2.19	0.61	85	2.00	2.18	0.61	28	2.00

1 = Yes 2 = No 3 = Unsure

Participants provided input on the most appropriate delivery method for a transitional program as well as who should deliver it. The majority of participants from both groups found an elective course in a face-to-face format to be the most ideal delivery format, with Health, Exercise, and Sport Faculty as well as Athletic Trainers viewed as the most appropriate individuals to deliver health-related programming.

Integration

Participants generally agreed that the university at large and the athletic department specifically would be supportive of a student-athlete transitional program with a health-related focus. Furthermore, over 90% of former student-athletes and 75% of athletic personnel

respondents felt programming would be a good use of resources and could integrate into existing programming at the university.

Open-ended responses from the athletic personnel participants suggested that Health, Exercise, and Sport faculty ($n = 6$), capstone courses ($n = 6$), and personal health courses ($n = 4$) are existing resources that health-related programming could be integrated with, but also indicated that additional resources were needed to effectively deliver health-related programming, including personnel ($n= 11$), time ($n= 7$), and funding ($n= 13$).

Discussion

The existing literature supports the need for student-athlete transitional programming with a health-related focus. The purpose of this study was to explore the feasibility of implementing a health-related physical activity transition program at one NCAA DII university. Survey responses from both the former student-athletes and athletic personnel in this study suggest this type of programming is feasible at this university. Since no current formalized transition programming with a health-related focus exists at the university, it was important to determine feasibility of future programming to inform the development of evidence-based health-related interventions that meet the needs of this specific population (Bowen et al., 2009; Hagen et al., 2011; Tickle-Degnen, 2013). This feasibility study highlighted interests and needs for this population to inform a future framework to be designed around those needs.

The view that a student-athlete transitional program is important for preparing student-athletes for life beyond sport had an overwhelming positive response in both groups, with 96.47% of former student-athletes and 92.86% of athletic personnel in agreement with the idea. Furthermore, the majority of participants responded that they felt student-athletes would be interested in and utilize a student-athlete transition program with a health-related focus.

These positive results for acceptance and demand show not only a need, but that both groups feel programming is important in preparing student-athletes for life after graduation.

Both groups of participants also believed that the university should support their athletes holistically. In line with previous research by DeFreese et al. (2021), both survey groups in the present study agreed that components such as career guidance, physical activity/exercise guidance, mental health resources, financial guidance, social support, and nutritional guidance should all be included in transitional programming. They also additionally endorsed population-specific components of mentorship/internship, spiritual guidance, time management resources and access to a sports psychologist. Interdisciplinary collaboration with other departments on campus such as student success, career services, student wellness services, and alumni relations could lead to comprehensive holistic transitional program development. Involvement of individuals across campus will ensure that programming is designed to reflect the three most important resources of career guidance, mental health resources, and physical activity/exercise guidance reported within the survey, as well as other key components identified in the survey that support student-athletes' physical development, psychological development, vocational development, transition out of sport and health beyond athletics.

When looking at the dimensions of feasibility associated with practicality, implementation, and integration, both groups were able to identify key resources, personnel, existing courses, and a positive culture within the athletic department and the university, all of which provide a sturdy foundation to build on when developing future programming. As revealed in open-ended responses within the athletic personnel survey, current course offerings such as Life and Career Planning and Personal Health could be modified to incorporate key health-related components such as introduction to lifetime physical activity, promotion of health

beyond athletics, mental health guidance, nutritional guidance and identity exploration tailored to student-athletes. Though less revenue generated within Division II athletic departments can create a financial hurdle to offering health-related resources in this population (Beasley et al., 2021), having these established courses where health-related transitional components can integrate into can help overcome the challenges of lack of personnel and funding that were identified within this sample and commonly experienced in the broader DII context.

Finally, while there is an expectation that former student-athletes will engage in less physical activity than during their collegiate athletic career, we would hope that they are able to maintain adequate amounts of health-promoting physical activity upon graduation. The CDC (2022) recommends that adults engage in muscle strengthening exercises that work all major muscle groups on at least two days and a minimum equivalent of 150 minutes of moderate intensity exercise per week. Findings from our participant group indicate a potential gap in meeting physical activity recommendations with a sizable number of participants ($n = 51$, 60%) falling below these recommended guidelines. These results coupled with the average perceived health-related quality of life are in line with current literature that suggests former-student athletes may not be any more physically active or have increased health-related quality of life compared to their non-athlete counterparts (Cross et al., 2021; Friery & Bishop, 2007; Simon & Docherty, 2014; Cowee & Simon, 2019; Sorenson, et al., 2015). Interestingly, while other researchers have found injury to be a contributing factor to decreased health-related quality of life (Cross et al., 2021; Simon & Docherty, 2014), injury issues did not appear to be as salient within the current study, with only 22.35% of participants reporting they sustained a severe injury during their collegiate athletic career. However, more targeted research in the future could

identify student-athletes at the institution who may have unique transitional challenges due to previous injury or chronic pain.

Based on findings from this study there is a need for increased health-related resources within this institution. While there are important resources that participants feel the university is doing an adequate job at offering such as career guidance, most participants felt the university is lacking offerings for physical activity/exercise guidance, despite rating this among the top three most important resources. These findings reinforce observations in the current literature that most existing transitional resources focus on the career aspects of the transition, with less emphasis on the health-related aspects (Petitpas et al., 1992, Stambulova et al., 2009; Reifsteck et al., 2018; Wylleman et al., 2004). These findings indicate that steps should be taken to develop transitional programming to help student-athletes as they navigate health-related changes upon graduation and can prompt conversations with key stakeholders about the importance of offering expanded programming to support athletes during this critical transition period.

Limitations, Future Directions, and Conclusions

Previous research supports the implementation of proactive transitional programs for student-athletes (Lavalley et al., 1997), yet limited research has focused specifically on the needs of the Division II athlete. Findings from this feasibility study provided greater depth into the needs of this population and will be instrumental to informing the framework for a health-promoting transition program developed for student-athletes at this Division II University. While the sample size in this study was small, results were meant to be directly applicable to the Division II University involved in the study. The cohesive positive findings that emerged are promising and may provide transferable insights for student-athlete populations at similar NCAA Division II institutions. Notably, though the number of athletic personnel participants included in

the study was relatively small, the sample represented one-third of the total current athletic personnel at the university, suggesting that the athletic population within this university is interested, committed, and ready to buy-in to health-related transition programming for student-athletes. While this current study did not focus on the impacts of COVID-19, future research could explore the potential effect of pandemic-related experiences on the transitional challenges that recent and future student-athlete alumni face. Future research should also include a greater emphasis on implementing and evaluating specific health-related transitional programs within samples of NCAA Division II student-athletes to provide targeted resources tailored to this context. Resources specifically related to mental health and physical activity should be prioritized, implemented, and evaluated to determine effectiveness for improving the health-related transitional experiences of student-athletes.

CHAPTER II: DISSEMINATION

The primary goal of this project was to determine the feasibility of transitional programming with a health-related focus for student-athletes. An anonymous online survey was completed by former student-athletes who participated in varsity sports at the university within the last five years and current university athletic personnel. The immediate avenue for disseminating this research will be through sharing a summary of the findings with all key stakeholders. A presentation (Appendix I) will be delivered to athletic department stakeholders during a departmental monthly meeting. This presentation will include an overview of key findings and recommendations for next steps. An email with an infographic (Appendix J) and link to the recording of the presentation will also be sent via the office of advancement and athletic coaches to former student-athletes. The goal of the presentation and the infographic is to communicate the feasibility results and to demonstrate the need to move forward with next steps for developing and implementing student-athlete transitional programming at the university. A debrief session will then be scheduled with interested parties to further clarify information and address any additional questions the stakeholders may have.

Presentation Script

Slide 1: Introduction

Hello, for those who may not know me, my name is Amanda Hilton. I am a Visiting Assistant Professor here at the university in the school of Health, Exercise and Sport Science (HES) and a doctoral candidate at UNC Greensboro. I have spent a good portion of my career working with student-athletes as an athletic trainer and as an educator. In these roles, I have witnessed the challenges student-athletes face as they transition out of competitive sports and am passionate about providing evidence-based solutions to support them. That is why for my

doctoral research I chose to look at the feasibility of implementing health-related transitional programming at our institution.

Slide 2: Introduction

Looking at the background information on this topic, let's first dive into the context of this population. While athletes are usually seen as the epitome of health, growing research suggests that former student-athletes may not maintain a physically active lifestyle or have increased health-related quality of life compared to their non-athlete counterparts. Research has shown that student-athletes face unique challenges as they transition out of college and collegiate athletics, which may have negative implications for their future physical activity, health, and well-being (Plateau et al., 2017; Reifsteck et. al., 2013; Simon & Docherty, 2017; Sorenson et al., 2015). Now that we have identified the problem, what is the solution? The emergence of research around a student-athlete's retirement from sport and the challenges they may face has led to the push for the implementation of transitional programs that aid the athlete in this process. Growing research regarding health-related transitional programming indicates that programs that specifically focus on promoting lifetime physical activity and health prior to graduation can allow the student-athlete to better cope with the transition and stay committed to a physically active, healthy lifestyle (Lally, 2007; Smith et al. 2020). It seems easy, right? We know that there is research that supports the solution, so why not just implement it here! Even though research has identified a need for health-related programming, few evidence-based physical activity focused transitional programs exist, and even less research addresses the feasibility of implementation within a specific context like our university. There are several factors that may challenge an institution's ability to effectively implement relevant programming, including questions

regarding buy-in, personnel, resources, and financial support along with whether this type of programming is needed or feasible within our population.

Slide 3: Purpose and Research Questions

Therefore, the purpose of my study was to explore the feasibility of implementing health-related student-athlete transitional programming at our NCAA DII university. Questions were developed to assess key elements of feasibility identified by Bowen and colleagues (2009) and were tailored to meet the specifics of the population and university's context. *Acceptability* of programming was determined by the interest of the stakeholders in the program idea. *Demand* for programming was reflected by the degree to which a future program would be used by student-athletes based on interest, potential involvement, and relevance of the program.

Implementation explored the importance of individual components required for the transitional program. *Practicality* of the program idea dealt with concern for the availability of resources required to implement the program including available assets and ideal delivery format.

Integration investigated how a program with a health-related physical activity focus fits in with or contributes to the culture of the university.

Slide 4: Methodology

There were two groups of participants. Group 1 included former student-athletes who graduated from the university within the last 5 years. Group 2 included current athletic personnel at the university. The response rate for completed surveys ranged from 17% to 34%, which was viewed favorably given the context of the population and size of the university. An anonymous survey was delivered via email to both groups. Main questions on both surveys focused on those five key areas of feasibility. Questions related to the current physical activity and health-related

quality of life were also a part of the survey delivered to the former student-athlete group to provide additional context on the need for this type of programming.

Slide 5: Results: PA

We will discuss a few key findings from the study. First, while it would be expected that former student-athletes engage in less physical activity than during their collegiate athletic career, we would hope they are able to maintain adequate amounts of health-promoting physical activity upon graduation. The CDC (2022) recommends that adults engage in at least 150 minutes of moderate physical activity or 75 minutes of vigorous physical activity (or an adequate combination of both) and at least 2 days a week of muscle-strengthening activities. Findings from our participant group indicate a potential gap in meeting those recommendations with 60% of participants falling below physical activity recommendations, and 41.18% of participants engaging in no muscle strengthening activity.

Slide 6: Results: Top 3 Most Important Resources

In terms of resources to address potential challenges, the former student-athletes and the athletic personnel were both presented a list of resources and were asked to what extent they agree or disagree that the resource should be offered to aid the student-athletes transition out of sport. You can see the list of potential resources in the middle section of the table presented on your screen. Participants agreed that all resources presented should be offered, and I think if we are dreaming big ideally this would be the case, but for practical reasons we want to know which might be most important to prioritize. We then asked them to narrow down that list and choose the top three resources they feel are the most important in aiding the student-athletes transition out of sport. Both groups chose Career Guidance, Mental Health Resources, and Physical Activity/Exercise Guidance as the top three most important resources to be offered within

programming (Table 6). The next question on the survey then asked participants which resources they perceived were currently being offered by the university. Of the 12 resources, both groups of respondents perceived that the university does *not* currently offer Physical Activity/Exercise Guidance, Financial Guidance, Nutritional Guidance, or a Sport Psychologist.

Table 6. Top Three Most Important Resources

Former Student-Athletes (<i>n</i> = 85)	Resources	Athletic Personnel (<i>n</i> = 28)
57 (67.06%)	Career Guidance	16 (57.14%)
45 (52.94%)	Mental Health Resources	19 (67.86%)
43 (50.59%)	PA/Exercise Guidance	12 (42.86%)
38 (44.71%)	Time Management Resources	8 (28.57%)
21 (24.71%)	Financial Guidance	4 (14.29%)
15 (17.65%)	Mentorship/Internship	5 (17.86%)
14 (16.47%)	Nutritional Guidance	7 (25%)
8 (9.14%)	Sports Psychologist	2 (7.14%)
3 (3.53%)	Coaches/Athletic Personnel	5 (17.86%)
2 (2.35%)	Medical Resources	2 (7.14%)
2 (2.35%)	Spiritual Guidance	2 (7.14%)
1 (1.18%)	Social Support	0 (0%)

Slide 7: Results: Support for Programming

Next, I'll present the results regarding support for programming. The idea of a student-athlete transitional program being important for preparing student-athletes for life beyond sport had an overwhelming positive response in both groups, with over 90% of participants in agreement with

the idea. Furthermore, the majority of participants responded that they felt student-athletes would be interested in participating in a student-athlete transition program with a health-related focus. While both groups of participants agreed that support for the student-athletes transition out of sport and health beyond athletics should be provided, participants perceived that these things are lacking, and not currently being offered by the university. All questions related to acceptability, demand, and implementation had responses of strongly agree or agree within both groups providing support for program feasibility by highlighting a perceived need for the program and belief that these aspects are important in preparing student-athletes for life after graduation.

Slide 8: Results: Delivery

Finally, results relevant to potential delivery of programming show that participants found an elective course in a face-to-face format to be the most ideal delivery method. Health, Exercise, and Sport Faculty as well as Athletic Trainers were viewed as the most appropriate individuals to deliver health-related programming; this was preferable to coaches or athletic administrators. Over 90% of former student-athlete respondents and 75% of Athletic Personnel respondents felt that programming would be a good use of institutional resources and could integrate into existing programming at the university. Athletic Personnel responses to open-ended questions suggested that Health, Exercise, and Sport faculty, capstone courses, and personal health courses are existing resources that health-related programming could be integrated with, but also indicated that additional resources including personnel, time, and funding are needed to effectively deliver health-related programming for transitioning student-athletes.

Slide 9: Conclusion and Action

In sum, both groups of participants believed that the university should support their athletes holistically. As revealed in the survey, there are current course offerings such as Life and

Career Planning and Personal Health that would allow key health-related components to be incorporated. Collaboration for comprehensive programming will be essential as we move forward. The use of these courses can provide an interdisciplinary approach, which will not only provide experts related to each component, but also help alleviate the challenge of lack of time and personnel. A four-step approach will be used to begin to move forward with program development and implementation. Step 1: First, we will review the current syllabi for Life and Career Planning and Personal Health courses to determine what health-related and comprehensive transitional components are already being offered. Examples of components identified by survey responses that we will look for are: physical activity/exercise guidance, career guidance, mental health resources, time management strategies, psychological development, health beyond athletics, identity exploration, loss of competition guidance, and personal development. We will then identify additional personnel needed to tailor programming for student-athletes, which may include Athletic Trainers, HES faculty and student success and career service staff. Step 2: We will schedule meetings with instructors and any additional personnel identified in step one to discuss a collaborative approach, and gain buy-in to implement missing key transitional components in each course. Step 3: Instructors and personnel will work together to develop a framework that includes modules for each course that incorporate health-related and comprehensive transitional components. Examples of modules that could be created to be incorporated may be a module developed by Athletic Trainers related to the role injury plays in health-related quality of life and future physical activity adherence, or the student success office creating material that incorporates time management strategies that might help student-athletes navigate the significant change in their routine after college. Step 4: Once the framework is created with the modules specifically designed to target student-athletes,

course sections would be developed and offered for students to be enrolled. It would then be valuable to evaluate the course to determine effectiveness and make adjustments based on feedback from the students and instructors.

Slide 10: Questions and Thank you

Thank you all for your time today. I am happy to answer any of your questions now and please feel free to reach out to me via the contact information listed on the screen.

CHAPTER III: ACTION PLAN

After immediate dissemination of the dissertation and a framework with collaborative modules is developed over the next year based on information gleaned from this study, new transitional programming with a health-related focus will be piloted at the institution. Once launched, the PI will review and evaluate the implemented modules to make additional refinements and explore indicators of effectiveness. Mid and end of course evaluations will be distributed to students to provide formative and summative feedback. End of semester meetings will be set with course instructors and personnel involved in course development and delivery to discuss course evaluation results and gain feedback from their perspective as facilitators. Feedback and recommendations for program adjustments will be made to enhance course offerings. Additional module content/structure, personnel, and logistics will continually be evaluated as additional resources and avenues for delivery are revealed.

Wider dissemination of this dissertation research via publication and/or presentations to local, state, and national organizations will also be pursued. For example, the Association for Applied Sport Psychology (AASP) abstracts for its annual conference and encourages submissions for research that is theory-based and can be linked to the applied implications of the research findings. Based on presentation topics from previous conference meetings, members of this organization appear to value student-athlete development, so this could be an ideal place to present work related to the need for transitional programming to aid NCAA Division II student-athletes. The abstract submission will be submitted within the abstract category of collegiate sport, which focuses on services or information regarding collegiate athletes, coaches and/or support staff.

The Appalachian College Association (ACA), which the participating university is a member of, will also be hosting its annual summit. This summit focuses on bringing individuals from across the ACA to collaborate on best practices to prepare students for success. The goal of this summit is to share strategies that can be implemented within the classroom and/or institution. The 2022 summit theme was “A Community of Support,” with an emphasis in key areas such as student success, classroom teaching and learning, partnerships, mentoring, and programming. This year’s summit is likely to bring a similar focus on student support, which provides an ideal opportunity to present this research in relation to supporting student-athletes. This organization also has a center for teaching and learning, which hosts ACA faculty, and staff led webinars and workshops. Once a framework is developed and program implementation is established at the university, a proposal for a webinar/workshop would be submitted to the ACA to share the evidence-based and innovative approach that was used to implement programming.

Finally, there are several fruitful areas to explore in continued research on this topic. While the focus of this study was to determine feasibility, the survey data collected will be a great asset for future research and long-term studies. For example, once the future programming is in place, we could design a future study that compares the data collected from this survey with student-athlete alumni who complete formalized transitional programming. Future program evaluation studies can also provide evidence of the effectiveness of established programming within this context and inform additional program interventions for this unique population.

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APPENDIX A: PRELIMINARY INTERVIEW GUIDE

I want to thank you for taking the time to meet with me today. I would like to talk to you about your perceptions and experiences around the health-related aspects of a student-athlete's transition out of sport. Specifically, as one of the overall components of this research we are assessing the feasibility of program implementation in order to guide future intervention implementation.

The interview should take less than an hour. I will be recording the session because I don't want to miss any of your comments. Although I will be taking some notes during the session, I can't possibly write fast enough to get it all down. If you will please speak up so that we don't miss any of your comments.

All responses will be kept confidential. This means that your interview responses will only be shared with members of the dissertation committee and any information we include in the report will not identify you as the respondent. Remember, you don't have to talk about anything you don't want to and you may end the interview at any time.

Do you have any questions about what I have just explained to you?

Are you willing to participate in this interview? (Verbal Confirmation)

I am now going to ask you some questions that I would like you to answer to the best of your ability.

- Tell me about yourself and your experience with student-athletes transitioning out of sport?
- Do you have experience with any student-athlete transition programs? (*Note to interviewer: You may need to probe to gather information - Can you tell me about your experience*) If you do not have experience, do you have any thoughts about student-athlete transition programs? (*Note to interviewer: You may need to probe to gather information - Can you tell me about your thoughts*)
- It can be challenging for some collegiate athletes to engage in lifetime physical activity, and maintain healthy levels of physical activity after graduation. What do you think about this?
- What health-related physical activity resources do you feel student-athletes need when making the transition out of sport?
- Do you feel that transitional programming that provides these types of resources will be supported at the university? (*Note to interviewer: You may need to probe to gather information - Why/why not do you feel it will be supported*)
- What resources does the university need in order to offer health-related physical activity transition programming?
- If a program were to be offered, what do you feel would be the best format? How should it be delivered? For example for educational credit, online, face-to-face, as part of an existing course, by coaches, athletic trainers Health, Exercise and Sport Faculty.
- Is there anything more you would like to add?

After I have completed a preliminary report of my findings, I'll be happy to send you a copy to review at that time, if you are interested.

Thank you for your time.

APPENDIX B: COGNITIVE INTERVIEW GUIDE

I am going to ask you to think aloud as you work through the survey. Let me explain what I mean by “think aloud.” It means that I would like you to tell me everything you think about as you work through each survey question. You will do this one question at a time.

When I say tell me everything, I really mean every thought you have from the moment you read the question to the end when you have decided on your response. Please do not worry about planning how to say things or clarifying your thoughts. What I really want is to hear your thoughts constantly as you try to respond to each question—uninterrupted and unedited. Sometimes you may need time to think quietly through something—if so, this is okay but please tell me what you thought through as soon as possible after you are finished.

I realize it can feel awkward to think aloud but try to imagine you are alone in the room. If you become silent for too long, I will say, “keep talking” to remind you to think aloud. Please note, this research is highly exploratory. My intention is not to evaluate your thinking or explanations while you speak. The purpose of the study is to learn about how you understand the questions, how you decide what answer you’re going to give, and other thoughts going through your mind as you answer each question.

Let us now practice thinking aloud with a practice question presented on your paper.

Question: How many rooms are there in your home? I would like you to tell us what you’re thinking, and how you arrive at your answer.

So, you might say, “The front door of my apartment opens up into the living room, so that is one room. To the left is the kitchen, room #2. There is a dining room that is attached to the kitchen. There is no door, so I’m not sure whether to consider it a separate room or not. I consider it a separate area, so I guess I will, so room #3. To the right of the dining room there is a hall leading to the bedroom, which is room #4 and room #5 is the bathroom. So altogether there are 5 rooms in my apartment.”

Adapted from Leighton 2017

APPENDIX C: PARTICIPANT RECRUITMENT EMAIL

Hello,

My name is Amanda Hilton, and I have been a certified athletic trainer and educator for 16 years, working for the last eight years at the University within the School of Health, Exercise and Sport Science. I am currently a doctoral student in the Ed. D. in kinesiology program at the University of North Carolina at Greensboro.

You are being invited to participate in a research study about the feasibility of implementing a Division II Student-Athlete Transition Program with a Health-Related Physical Activity Focus at the University.

This survey will take approximately *15 minutes to complete*. Participation in the study is voluntary and responses will be collected anonymously. After completion of the survey, participants will be directed to a separate form and can enter in their email address if they wish to enter a random drawing for a chance to *win a gift card (valued at \$25) or University merchandise*.

If you have any questions about the study, please contact **Amanda Hilton, Principal Investigator**, at ahhilton@uncg.edu

To access the survey, click here

Thank you for your time and consideration.

Amanda Hilton, MS, LAT, ATC, CES

Doctoral Student

Ed. D. in Kinesiology

UNC Greensboro

ahhilton@uncg.edu

APPENDIX D: PARTICIPANT HOMECOMING FLYER

Are you a former [REDACTED] Student-Athlete?

Did you graduate between 2017 and 2022?

If yes, I would like to invite you to take part in a research study about student-athlete transitional programming with a health-related focus!

What does it involve?

- An Online survey
- It takes approximately 15 minutes
- Option to enter into a prize drawing for a gift card or other LR gear!

Will this negatively affect me?

- No, there are no known or foreseeable risks involved with this study.



For more information and to take part, scan here



Need help or have a question? Contact Amanda Hilton at [REDACTED]

APPENDIX E: GROUP 1: FORMER STUDENT-ATHLETE SURVEY

Consent

Project Title: Division II Student-Athlete Transition Program with a Health-Related Physical Activity Focus: A Feasibility Study
Principal Investigator: Amanda Hilton
Faculty Advisor: Dr. Erin Reifsteck

What is this all about?

I am asking you to participate in this research study to help evaluate the feasibility of implementing a student-athlete transition program with a health-related physical activity focus at the University. This research project will involve you completing an online survey which includes questions about demographics, physical activity and health, and perceptions about student-athlete transition programming. (approximately 15 minutes). Your participation in this research project is voluntary.

Will this negatively affect me?

No, other than the time you spend on this project there are no known or foreseeable risks involved with this study.

What do I get out of this research project?

Participating in this project might help us identify components and resources that could lead to future implementation of a student-athlete transition program with a health-related physical activity focus.

Will I get paid for participating?

There is no compensation for participating in this research study. However, you may choose to enter your email for a drawing for a gift card or other university gear after completing the survey.

What about my confidentiality?

We will do everything possible to make sure that your information is kept confidential. All information obtained in this study is strictly confidential unless disclosure is required by law. Any information gathered from this study will be kept confidential. Survey answers will be collected and stored on a secure survey platform called Qualtrics. Data will be shared through a secure file-sharing program called Box that is only accessible to the research team. For the drawing entry, your email will be collected separately from your survey responses. Absolute confidentiality of data provided through the Internet cannot be guaranteed due to the limited

protections of Internet access. Please be sure to close your browser when finished so no one will be able to see what you have been doing.

What if I do not want to be in this research study?

You do not have to be part of this project. This project is voluntary and it is up to you to decide to participate in this research project. If you agree to participate at any time in this project you may stop participating without penalty.

What if I have questions?

You can ask Amanda Hilton, Principal Investigator, who may be reached at (828) 328-7416, email: ahhilton@uncg.edu, and Dr. Erin Reifsteck, Faculty Advisor, ejreifst@uncg.edu anything about the study. If you have concerns about how you have been treated in this study call the Office of Research Integrity at 1-855-251-2351.

Voluntary Consent by Participant:

By checking Yes to the item below you are agreeing that you read, or it has been read to you, and you fully understand the contents of this document and are openly willing to consent to take part in this study. All of your questions concerning this study have been answered. By continuing this survey, you are agreeing that you are 18 years of age or older and are agreeing to participate in this study described to you by Amanda Hilton.

Do you agree to participate in this research study?

YES to continue with survey

NO to exit Survey

I am exploring the feasibility of implementing a student-athlete transition program with a focus on health-related physical activity at the university. Health-related transition programming can provide strategies for student-athletes to navigate the physiological, psychological, and social challenges that many face as they transition away from competitive athletics. Programs that specifically focus on promotion of lifetime physical activity, address exercise motivation, broaden identity, and identify barriers and facilitators of physical activity; prior to the student-athlete's retirement can help the student-athlete cope with the transition and stay committed to a healthy lifestyle upon graduation.

I want to thank you in advance for completing this survey.

Please hit the next button to begin.

Please complete the following demographic information. Please note that all personal information will be kept confidential.

Age (in years):

I identify my gender as:

- Female
- Male
- Non-binary
- Other
- Prefer not to answer

I identify my ethnicity as (check all that apply):

- Asian
- Black/African American
- White
- Hispanic/Latinx
- Native American
- Pacific Islander/Native Hawaiian
- Prefer not to answer
- Other

Are you currently employed?

- Yes Full-time
- Yes Part-time
- No

Do you currently have any roles related to athletics?

- Full-time
- Part-time
- Non-paid/volunteer
- Other
- No Role

What is your title for your job/role in athletics?

How many years did you play collegiate athletics at the university:

Varsity Collegiate Sport(s) Played at the university (check all that apply):

5+
4
3
2
1

Baseball
Track and Field
Basketball
Softball
Cross Country
Triathlon
Football
Volleyball
Golf
Lacrosse
Soccer
Spirit Team
Swimming
Tennis

In what year did you participate in your last collegiate competition at the university?

2022
2021
2020
2019
2018
2017
Prior to 2017

In what season did you participate in your last collegiate competition at the university?

Fall
Winter
Spring

Did you sustain a severe injury (kept you from athletic participation ≥ 21 days) during your collegiate athletic career?

Yes
No

Are you still involved in the sport you played in college?

Yes
No

Was surgery required for any of your injuries?

Yes
No

What is your involvement in the sport you played in college?

Leisure activity/recreation
Club league
Professional
Coaching/Occupation
Other

The next section of this survey will ask questions about your current physical activity and quality of life.

Please answer the questions below as accurately as possible.

How has your physical activity level changed since participating in collegiate athletics?

- I currently engage in less physical activity
- My physical activity has stayed about the same
- I currently engage in more physical activity

How easy or difficult has it been for you to maintain your desired amount of physical activity since the completion of your collegiate athletic career?

- Very Difficult
- Difficult
- Neutral
- Easy
- Very Easy

How much has each of the following **challenged** your ability to maintain physical activity since the completion of your collegiate athletic career? (Please rate each)

	Not Challenging	Somewhat Challenging	Very Challenging
Lack of Provided Resources (facilities, programs, etc.)			
Financial Constraints			
Time Constraints			
Lack of motivation to maintain physical activity			
Inability to find enjoyment in physical activity			
Lack of Social Support			
Lack of Competition			
Injury/Pain			
Decreased Athletic Ability			
Loss of Athletic Identity			
Other:			

How much has each of the following **helped** you maintain physical activity since the completion of your collegiate athletic career?

	Very Much	Somewhat	Not at all	NA/didn't have access
Access to Resources (facilities, programs, etc.)				
Financial Resources				
Knowledge Of Physical Activity Benefits				
Time Management Skills				
Support From Coaches/Athletic Staff				
Support From Others (family, friends, etc.)				
Involvement In Activities/Clubs Outside Of Athletics.				
Other				

Regular exercise is any moderate to vigorous intensity activity that is performed 3-5 times a week for at least 30 minutes. Examples of exercise that would be included in this definition are jogging, swimming, brisk walking, bicycling, dancing, and aerobic workouts. Based on this definition please indicate which statement below best describes your current exercise level.

I don't engage in regular exercise now, and I don't intend to start in the next six months

I don't engage in regular exercise now, but I intend to start in the next six months

I don't engage in regular exercise now, but I intend to start in the next month

I have been engaging in regular exercise for less than six months

I have been engaging in regular exercise for more than six months

For the next two questions, the levels of physical activity intensity can be characterized in terms of breathing difficulty. A person doing moderate physical activity can typically talk but not sing while doing the activity. A person doing vigorous physical activity typically cannot say more than a few words without pausing for a breath while doing the activity.

In the last 7 days, how many (total) minutes did you spend doing moderate physical activity?

Examples: brisk walking, dancing, or household chores.

Minutes

In the last 7 days, how many (total) minutes did you spend doing vigorous physical activity?

Examples: running, swimming laps, or hiking.

Minutes

In the last 7 days, on how many days did you do exercises to strengthen or tone your muscles?

Examples: push-ups, sit-ups, or weightlifting/training.

0 days

1 day

2 days

3 days

4 days

5 days

6 days

7 days

Please respond to each question or statement by marking one box per row.

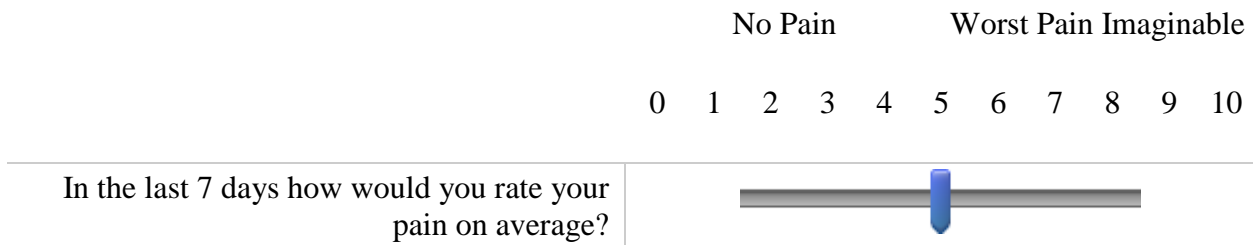
	Excellent	Very Good	Good	Fair	Poor
In general, would you say your health is:					
In general, would you say your quality of life is:					
In general, how would you rate your physical health?					
In general, how would you rate your mental health, including your mood and your ability to think?					
In general, how would you rate your satisfaction with your social activities and relationships?					
In general, please rate how well you carry out your usual social activities and roles. (This includes activities at home, at work and in your community, and responsibilities as a parent, child, spouse, employee, friend, etc.)					

	Completely	Mostly	Moderately	A little	Not at all
To what extent are you able to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, or moving a chair?					

	Never	Rarely	Sometimes	Often	Always
In the past 7 days how often have you been bothered by emotional problems such as feeling anxious, depressed or irritable?					

	None	Mild	Moderate	Severe	Very Severe
In the past 7 days, how would you rate your fatigue on average?					

On a scale from 0-10:



This next section will ask you about the transitional resources that can help the student-athlete transition out of sport. You will first be asked about the resources that are offered at the university, followed by your opinion on what resources should be offered. You will then be asked about the support that the university gives its student-athletes, followed by your opinion on what support is needed.

Please answer each question to the best of your ability.

The university **offers** the following resources to help student-athletes transition out of sport.

	Yes	No	Unsure
Career Guidance			
Physical Activity/Exercise Guidance			
Mentorship/Internship Programs			
Mental Health Resources			
Financial Guidance			
Social Support (Clubs, Greek Life, Student-life)			
Nutritional Guidance			
Coaches/Athletic Personnel Support			
Medical Resources			
Spiritual Guidance			
Time Management Resources			
Sports Psychologist			
Other			

Please rate to what extent you agree that the university **should** offer the following resources to help student-athletes transition out of sport.

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Career Guidance					
Physical Activity/Exercise Guidance					
Mentorship/Internship Programs					
Mental Health Resources					
Financial Guidance					
Social Support (Clubs, Greek Life, Student-life)					
Nutritional Guidance					
Coaches/Athletic Personnel Support					
Medical Resources					
Spiritual Guidance					
Time Management Resources					
Sports Psychologist					
Other					

From the above resources, what are the **top three** that you feel are the most important for the university to offer?

Please drag your top three resources to this box.

_____ Career Guidance
_____ Physical Activity/Exercise Guidance
_____ Mentorship/Internship Programs
_____ Mental Health Resources
_____ Financial Guidance
_____ Social Support (Clubs, Greek Life, Student-life)

- _____ Nutritional Guidance
- _____ Coaches/Athletic Personnel Support
- _____ Medical Resources
- _____ Spiritual Guidance
- _____ Time Management Resources
- _____ Sports Psychologist
- _____ Other

To what extent do you **agree or disagree** that University Athletics **supports** their student-athletes in the following areas:

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Personal Development					
Physical Development					
Psychological Development					
Social Development					
Educational Development					
Vocational Development					
Transition Out Of Sport					
Health Beyond Athletics					
Other					

To what extent do you **agree or disagree** that University Athletics **should** support their student-athletes in the following areas:

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Personal Development					
Physical Development					
Psychological Development					
Social Development					
Educational Development					
Vocational Development					
Transition Out Of Sport					
Health Beyond Athletics					
Other					

In this section, your input is vital and your response to the following questions will help guide us as we move forward in determining the feasibility of a student-athlete transition program with a health-related physical activity focus at the university.

As a reminder health-related transition programming can provide strategies for student-athletes to navigate the physiological, psychological, and social challenges that many face as they transition away from competitive athletics. Programs that specifically focus on promotion of lifetime physical activity, address exercise motivation, broaden identity, and identify barriers and facilitators of physical activity; prior to the student-athlete’s retirement can help the student-athlete cope with the transition and stay committed to a healthy lifestyle upon graduation.

Please respond to each question or statement as accurately as possible. There are no right or wrong answers.

Student athletes (SA) **would** participate in a transition program that:

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Has a health-related physical activity focus					
Helps the SA cope with transitioning out of sport					
Addresses the health-related physical activity challenges that the SA will face upon graduation					
Helps the SA maintain a physically active lifestyle upon graduation					
Introduces nutritional guidance to the SA					
Introduces lifetime physical activity to the SA					
Encourages identity exploration					
Prepares for life beyond sport					
Other					

To what extent do you agree or disagree that a student-athlete transitional program with a health-related focus:

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Is important in preparing student-athletes for life beyond sport.					
Would be supported by the University					
Would be supported by athletic administration					
Will integrate into the University's culture					
Can be integrated into existing programming at the university					
Would be a good use of resources within the athletic department					
Other					

Last, we are interested in your views on how a student-athlete transition program with a health related focus should be delivered. Please read the statement below and answer each question that follows to the best of your ability.

How should a student-athlete (SA) transition program with a health-related physical activity focus be delivered:

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
For educational credit					
As an elective course					
In an online format					
In a face to face format					
As part of a capstone course					
As a part of an existing course					
As part of an athletic team requirement					
Other					

Who should a student-athlete (SA) transition program with a health-related physical activity focus be delivered by:

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Coaches					
Athletic Trainers					
Athletic Administration					
Health, Exercise and Sport Faculty					
External Facilitator					
Other					

Would you like to enter your email for a drawing for a gift card or other University gear? Your survey response will still remain anonymous.

- Yes
- No

APPENDIX F: GROUP 2: ATHLETIC PERSONNEL SURVEY

Consent

Project Title: Division II Student-Athlete Transition Program with a Health-Related Physical Activity Focus: A Feasibility Study
Principal Investigator: Amanda Hilton
Faculty Advisor: Dr. Erin Reifsteck

What is this all about?

I am asking you to participate in this research study to help evaluate the feasibility of implementing a student-athlete transition program with a health-related physical activity focus at the University. This research project will involve you completing an online survey which includes questions about demographics, physical activity and health, and perceptions about student-athlete transition programming. (approximately 15 minutes). Your participation in this research project is voluntary.

Will this negatively affect me?

No, other than the time you spend on this project there are no known or foreseeable risks involved with this study.

What do I get out of this research project?

Participating in this project might help us identify components and resources that could lead to future implementation of a student-athlete transition program with a health-related physical activity focus.

Will I get paid for participating?

There is no compensation for participating in this research study. However, you may choose to enter your email for a drawing for a gift card or other university gear after completing the survey.

What about my confidentiality?

We will do everything possible to make sure that your information is kept confidential. All information obtained in this study is strictly confidential unless disclosure is required by law. Any information gathered from this study will be kept confidential. Survey answers will be collected and stored on a secure survey platform called Qualtrics. Data will be shared through a secure file-sharing program called Box that is only accessible to the research team. For the drawing entry, your email will be collected separately from your survey responses. Absolute confidentiality of data provided through the Internet cannot be guaranteed due to the limited

protections of Internet access. Please be sure to close your browser when finished so no one will be able to see what you have been doing.

What if I do not want to be in this research study?

You do not have to be part of this project. This project is voluntary and it is up to you to decide to participate in this research project. If you agree to participate at any time in this project, you may stop participating without penalty.

What if I have questions?

You can ask Amanda Hilton, Principal Investigator, who may be reached at (828) 328-7416, email: ahhilton@uncg.edu, and Dr. Erin Reifsteck, Faculty Advisor, ejreifst@uncg.edu anything about the study. If you have concerns about how you have been treated in this study call the Office of Research Integrity at 1-855-251-2351.

Voluntary Consent by Participant:

By checking Yes to the item below you are agreeing that you read, or it has been read to you, and you fully understand the contents of this document and are openly willing to consent to take part in this study. All of your questions concerning this study have been answered. By continuing this survey, you are agreeing that you are 18 years of age or older and are agreeing to participate in this study described to you by Amanda Hilton.

Do you agree to participate in this research study?

YES to continue with survey

NO to exit Survey

I am exploring the feasibility of implementing a student-athlete transition program with a focus on health-related physical activity at the university. Health-related transition programming can provide strategies for student-athletes to navigate the physiological, psychological, and social challenges that many face as they transition away from competitive athletics. Programs that specifically focus on promotion of lifetime physical activity, address exercise motivation, broaden identity, and identify barriers and facilitators of physical activity; prior to the student-athlete's retirement can help the student-athlete cope with the transition and stay committed to a healthy lifestyle upon graduation.

I want to thank you in advance for completing this survey.

Please hit the next button to begin.

Please complete the following demographic information. Please note that all personal information will be kept confidential.

I identify my gender as:

- Female
- Male
- Non-binary
- Other
- Prefer not to answer

Please select your age group:

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75+

I identify my ethnicity as (check all that apply):

- Asian
- Black/African American
- White
- Hispanic/Latinx
- Native American
- Pacific Islander/Native Hawaiian
- Prefer not to answer
- Other

What best describes your role in relation to Athletics?

- Coach
- Athletic Trainer
- Strength and Conditioning
- Administration
- Other

This next section will ask you about the transitional resources that can help the student-athlete transition out of sport. You will first be asked about the resources that are offered at the university, followed by your opinion on what resources should be offered. You will then be asked about the support that the university gives its student-athletes, followed by your opinion on what support is needed.

Please answer each question to the best of your ability.

The university **offers** the following resources to help student-athletes transition out of sport.

	Yes	No	Unsure
Career Guidance			
Physical Activity/Exercise Guidance			
Mentorship/Internship Programs			
Mental Health Resources			
Financial Guidance			
Social Support (Clubs, Greek Life, Student-life)			
Nutritional Guidance			
Coaches/Athletic Personnel Support			
Medical Resources			
Spiritual Guidance			
Time Management Resources			
Sports Psychologist			
Other			

Please rate to what extent you agree that the university **should** offer the following resources to help student-athletes transition out of sport.

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Career Guidance					
Physical Activity/Exercise Guidance					
Mentorship/Internship Programs					
Mental Health Resources					
Financial Guidance					
Social Support (Clubs, Greek Life, Student-life)					
Nutritional Guidance					
Coaches/Athletic Personnel Support					
Medical Resources					
Spiritual Guidance					
Time Management Resources					
Sports Psychologist					
Other					

From the above resources, what are the **top three** that you feel are the most important for the university to offer?

Please drag your top three resources to this box.

_____ Career Guidance
_____ Physical Activity/Exercise Guidance
_____ Mentorship/Internship Programs

- _____ Mental Health Resources
- _____ Financial Guidance
- _____ Social Support (Clubs, Greek Life, Student-life)
- _____ Nutritional Guidance
- _____ Coaches/Athletic Personnel Support
- _____ Medical Resources
- _____ Spiritual Guidance
- _____ Time Management Resources
- _____ Sports Psychologist
- _____ Other

To what extent do you **agree or disagree** that University Athletics **supports** their student-athletes in the following areas:

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Personal Development					
Physical Development					
Psychological Development					
Social Development					
Educational Development					
Vocational Development					
Transition Out Of Sport					
Health Beyond Athletics					
Other					

To what extent do you **agree or disagree** that University Athletics **should** support their student-athletes in the following areas:

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Personal Development					
Physical Development					
Psychological Development					
Social Development					
Educational Development					
Vocational Development					
Transition Out Of Sport					
Health Beyond Athletics					
Other					

In this section, your input is vital and your response to the following questions will help guide us as we move forward in determining the feasibility of a student-athlete transition program with a health-related physical activity focus at the university.

As a reminder health-related transition programming can provide strategies for student-athletes to navigate the physiological, psychological, and social challenges that many face as they transition away from competitive athletics. Programs that specifically focus on promotion of lifetime physical activity, address exercise motivation, broaden identity, and identify barriers and facilitators of physical activity; prior to the student-athlete’s retirement can help the student-athlete cope with the transition and stay committed to a healthy lifestyle upon graduation.

Please respond to each question or statement as accurately as possible. There are no right or wrong answers.

Student athletes (SA) **would** participate in a transition program that:

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Has a health-related physical activity focus					
Helps the SA cope with transitioning out of sport					
Addresses the health-related physical activity challenges that the SA will face upon graduation					
Helps the SA maintain a physically active lifestyle upon graduation					
Introduces nutritional guidance to the SA					
Introduces lifetime physical activity to the SA					
Encourages identity exploration					
Prepares for life beyond sport					
Other					

To what extent do you agree or disagree that a student-athlete transitional program with a health-related focus:

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Is important in preparing student-athletes for life beyond sport.					
Would be supported by the University					
Would be supported by athletic administration					
Will integrate into the University's culture					
Can be integrated into existing programming at the university					
Would be a good use of resources within the athletic department					
Other					

Last, we are interested in your views on how a student-athlete transition program with a health related focus should be delivered.

Please read the statement below and answer each question that follows to the best of your ability.

How should a student-athlete (SA) transition program with a health-related physical activity focus be delivered:

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
For educational credit					
As an elective course					
In an online format					
In a face to face format					
As part of a capstone course					
As a part of an existing course					
As part of an athletic team requirement					
Other					

Who should a student-athlete (SA) transition program with a health-related physical activity focus be delivered by:

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Coaches					
Athletic Trainers					
Athletic Administration					
Health, Exercise and Sport Faculty					
External Facilitator					
Other					

What resources would be needed to effectively deliver a student-athlete transition program with a health-related physical activity focus?

What resources already exist that could allow for integration of this type of program?

What challenges would need to be addressed in order to move forward with offering transitional programming at the university?

Would you like to enter your email for a drawing for a gift card or other University gear? Your survey response will still remain anonymous.

Yes

No

APPENDIX G: HEALTH-RELATED QUALITY OF LIFE RESULTS

Global Physical and Mental Health Scores

	Raw Summed Score	Mean T-Score for US Population	Mean T-Score for Study Participants
Global Physical Health	16	50 (<i>SD</i> = 10)	50.8 (<i>SD</i> = 4.6)
Global Mental Health	14	50 (<i>SD</i> = 10)	48.3 (<i>SD</i> = 3.7)

Frequency Table for Overall Health

	<i>n</i>	%
In general, would you say your health is		
Excellent	5	5.88
Very Good	34	40.00
Good	41	48.24
Fair	5	5.88
Poor	0	0.00

Summary Statistics Table for Overall Health

	<i>M</i>	<i>SD</i>	<i>n</i>	Min	Max	<i>SE_M</i>	<i>Mdn</i>	Mode
In general, would you say your health is	3.46	0.70	85	2.00	5.00	0.08	3.00	3.00
1 = Poor	2 = Fair	3 = Good	4 = Very Good	5 = Excellent				

APPENDIX H: EXPANDED PARTICIPANT RESULTS

Demographics

Frequency Table for Athletic Personnel Gender, Ethnicity, Age, & Role in Athletics

	<i>n</i>	<i>%</i>
Gender		
Male	14	50.00
Female	14	50.00
Race/Ethnicity		
Prefer not to answer	1	3.57
2 or more races/ethnicities	1	3.57
Hispanic/Latinx	1	3.57
Black/African American	2	7.14
White	23	82.14
Age		
65-74	1	3.57
18-24	1	3.57
35-44	5	17.86
45-54	8	28.57
25-34	11	39.29
Missing	2	7.14
Role in Athletics		
Strength and Conditioning	3	10.71
Administration	4	14.29
Athletic Trainer	4	14.29
Coach	15	53.57
Other	2	7.14

Frequency Table for Former SA Gender and Ethnicity

	<i>n</i>	<i>%</i>
Gender		
Male	40	47.06
Female	45	52.94
Ethnicity		
Native American	1	1.18
Hispanic/Latinx	1	1.18
Other	1	1.18
Spanish	1	1.18
Prefer not to Answer	2	2.35
Asian	2	2.35
2 or More Races/Ethnicities	4	4.72
Black/African American	21	24.71
White	52	61.18
Last Year of Sport Participation		
2017	8	9.41
2018	11	12.94
2019	16	18.82
2020	9	10.59
2021	24	28.24
2022	17	20.00

Frequency Table for Former Student-Athlete Sports

	<i>n</i>	<i>%</i>
Women's Sports		
Tennis	1	1.18
Spirit Team	1	1.18
Golf	1	1.18
Soccer	2	2.35
Triathlon	2	2.35
Track and Field, Cross Country	3	3.53
Swimming	4	4.71
Basketball	5	5.88
Track and Field	5	5.88
Softball	5	5.88
Volleyball	7	8.24
Lacrosse	9	10.59
Men's Sports		
Tennis	1	1.18
Golf	1	1.18
Track and Field, Cross Country	1	1.18
Track and Field	1	1.18
Track and Field, Football	1	1.18
Lacrosse	2	2.35
Swimming	2	2.35
Soccer	4	4.71
Basketball	5	5.88
Football	10	11.75
Baseball	12	14.11

Acceptability

Summary Statistics Table Programming SAs would Participate In

	Group 1				Group 2			
	<i>M</i>	<i>SD</i>	<i>n</i>	Mode	<i>M</i>	<i>SD</i>	<i>n</i>	Mode
Encourages identity exploration	4.32	0.82	85	5.00	4.15	0.86	27	5.00
Has a health-related PA focus	4.41	0.64	85	5.00	4.50	0.64	28	5.00
Introduces lifetime PA	4.48	0.61	85	5.00	4.50	0.64	28	5.00
Introduces nutritional guidance	4.51	0.59	85	5.00	4.61	0.50	28	5.00
Addresses the health-related PA challenges the SA will face upon graduation	4.64	0.59	85	5.00	4.61	0.50	28	5.00
Helps the SA maintain a physically active lifestyle upon graduation	4.64	0.51	85	5.00	4.64	0.49	28	5.00
Is important in preparing SAs for life beyond sport	4.73	0.52	85	5.00	4.75	0.52	28	5.00
Helps the SA cope with transitioning out of sport	4.79	0.51	85	5.00	4.64	0.56	28	5.00
Prepares for life beyond sport	4.79	0.54	85	5.00	4.68	0.48	28	5.00

1 = Strongly Disagree 2 = Disagree 3 = NAND 4 = Agree 5 = Strongly Agree

Demand

Summary Statistics Table for University Athletics Should Support

	Group 1				Group 2			
	<i>M</i>	<i>SD</i>	<i>n</i>	Mode	<i>M</i>	<i>SD</i>	<i>n</i>	Mode
Personal Development	4.89	0.35	85	5.00	4.71	0.46	27	5.00
Physical Development	4.85	0.42	85	5.00	4.71	0.46	28	5.00
Psychological Development	4.91	0.33	85	5.00	4.71	0.46	28	5.00
Social Development	4.49	0.72	85	5.00	4.54	0.64	28	5.00
Educational Development	4.81	0.55	85	5.00	4.75	0.44	28	5.00
Vocational Development	4.71	0.53	85	5.00	4.61	0.50	28	5.00
Transition Out of Sport	4.85	0.45	85	5.00	4.68	0.48	28	5.00
Health Beyond Athletics	4.85	0.45	85	5.00	4.64	0.49	28	5.00

1 = Strongly Disagree 2 = Disagree 3 = NAND 4 = Agree 5 = Strongly Agree

Summary Statistics Table for Factors Helping Maintain PA

	Group 1			
	<i>M</i>	<i>SD</i>	<i>n</i>	Mode
Support From Coaches/Athletic Staff	4.89	0.35	85	5.00
Time Management Skills	4.85	0.42	85	5.00
Access to Resources	4.91	0.33	85	5.00
Financial Resources	4.49	0.72	85	5.00
Activities/Clubs	4.81	0.55	85	5.00
Support From Others	4.71	0.53	85	5.00
Knowledge of PA Benefits	4.85	0.45	85	5.00

0 = NA/Didn't Have Access 1 = Not at all 2 = Somewhat 3 = Very Much

Implementation

Summary Statistics Table for Resources the University Should Offer

	Group 1				Group 2			
	<i>M</i>	<i>SD</i>	<i>n</i>	Mode	<i>M</i>	<i>SD</i>	<i>n</i>	Mode
Social Support	4.36	0.87	85	5.00	4.30	0.82	27	5.00
Spiritual Guidance	4.44	0.87	85	5.00	4.43	0.88	28	5.00
Medical Resources	4.55	0.75	85	5.00	4.67	0.78	27	5.00
Coaches/Athletic Personnel Support	4.65	0.63	85	5.00	4.68	0.61	28	5.00
PA/Exercise Guidance	4.68	0.56	85	5.00	4.68	0.61	28	5.00
Sports Psychologist	4.73	0.57	84	5.00	4.64	0.62	28	5.00
Financial Guidance	4.74	0.49	84	5.00	4.75	0.52	28	5.00
Mentorship/Internship	4.74	0.52	85	5.00	4.89	0.31	28	5.00
Nutritional Guidance	4.75	0.49	85	5.00	4.75	0.59	28	5.00
Time Management Resources	4.76	0.51	83	5.00	4.81	0.48	27	5.00
Career Guidance	4.86	0.41	85	5.00	4.89	0.31	28	5.00
Mental Health Resources	4.89	0.31	85	5.00	4.93	0.26	28	5.00

1 = Strongly Disagree 2 = Disagree 3 = NAND 4 = Agree 5 = Strongly Agree

Top Three Most Important Resources Identified by Both Participant Groups

Group 1 (<i>n</i> = 85)	Resources	Group 2 (<i>n</i> = 28)
57 (67.06%)	Career Guidance	16 (57.14%)
45 (52.94%)	Mental Health Resources	19 (67.86%)
43 (50.59%)	PA/Exercise Guidance	12 (42.86%)
38 (44.71%)	Time Management Resources	8 (28.57%)
21 (24.71%)	Financial Guidance	4 (14.29%)
15 (17.65%)	Mentorship/Internship	5 (17.86%)
14 (16.47%)	Nutritional Guidance	7 (25%)
8 (9.14%)	Sports Psychologist	2 (7.14%)
3 (3.53%)	Coaches/Athletic Personnel	5 (17.86%)
2 (2.35%)	Medical Resources	2 (7.14%)
2 (2.35%)	Spiritual Guidance	2 (7.14%)
1 (1.18%)	Social Support	0 (0%)

Practicality

Summary Statistics Table for Support Currently Provided by University Athletics

	Group 1				Group 2			
	<i>M</i>	<i>SD</i>	<i>n</i>	Mode	<i>M</i>	<i>SD</i>	<i>n</i>	Mode
Transition Out of Sport	2.12	0.93	85	2.00	2.50	1.07	28	2.00
Health Beyond Athletics	2.18	1.07	85	2.00	2.71	1.18	28	2.00
Psychological Development	3.08	1.09	85	4.00	3.71	0.98	28	4.00
Social Development	3.26	1.07	85	4.00	3.79	0.88	28	4.00
Vocational Development	3.51	0.95	85	4.00	3.75	0.80	28	4.00
Personal Development	3.95	0.84	85	4.00	4.25	0.65	28	4.00
Educational Development	4.27	0.54	85	4.00	4.61	0.50	28	5.00
Physical Development	4.40	0.69	85	5.00	4.74	0.45	27	5.00

1 = Strongly Disagree 2 = Disagree 3 = NAND 4 = Agree 5 = Strongly Agree

Summary Statistics Table for Resources the University Currently Offers

	Group 1				Group 2			
	<i>M</i>	<i>SD</i>	<i>n</i>	Mode	<i>M</i>	<i>SD</i>	<i>n</i>	Mode
Social Support	1.60	0.79	85	1.00	1.14	0.52	28	1.00
Coaches/Athletic Personnel Support	1.74	0.76	85	1.00	1.14	0.52	28	1.00
Mentorship/Internship	1.58	0.82	85	1.00	1.18	0.55	28	1.00
Career Guidance	1.35	0.67	85	1.00	1.21	0.63	28	1.00
Mental Health Resources	1.60	0.62	85	1.00	1.46	0.64	28	1.00
Spiritual Guidance	1.38	0.71	85	1.00	1.54	0.79	28	1.00
Medical Resources	1.96	0.81	85	2.00	1.54	0.69	28	1.00
Time Management Resources	1.99	0.59	85	2.00	1.64	0.62	28	2.00
Nutritional Guidance	1.89	0.54	85	2.00	1.75	0.59	28	2.00
Financial Guidance	2.02	0.65	85	2.00	1.79	0.74	28	2.00
PA/Exercise Guidance	2.06	0.50	85	2.00	1.82	0.67	28	2.00
Sports Psychologist	2.19	0.61	85	2.00	2.18	0.61	28	2.00

1 = Yes 2 = No 3 = Unsure

Summary Statistics Table for Program Delivery Format

	Group 1				Group 2			
	<i>M</i>	<i>SD</i>	<i>n</i>	Mode	<i>M</i>	<i>SD</i>	<i>n</i>	Mode
Athletic Team Requirement	3.32	1.21	85	2.00	2.96	0.96	28	2.00
Online	3.70	1.26	84	5.00	3.29	1.15	28	3.00
Part of an Existing Course	3.81	0.97	85	4.00	3.64	1.03	28	4.00
Capstone	3.84	1.09	85	4.00	3.96	0.88	28	3.00
Face-to-face	4.26	0.74	85	5.00	4.11	0.74	28	4.00
For Educational Credit	4.31	0.91	85	5.00	4.46	0.58	28	5.00
As an Elective	4.45	0.85	85	5.00	4.43	0.69	28	5.00

1 = Strongly Disagree 2 = Disagree 3 = NAND 4 = Agree 5 = Strongly Agree

Summary Statistics Table for Program Delivery By

	Group 1				Group 2			
	<i>M</i>	<i>SD</i>	<i>n</i>	Mode	<i>M</i>	<i>SD</i>	<i>n</i>	Mode
Athletic Administration	2.24	1.17	85	2.00	2.25	1.14	28	1.00
Coaches	2.99	1.09	84	5.00	2.79	0.96	28	2.00
Athletic Trainers	3.62	1.02	85	4.00	3.64	0.68	28	4.00
External Facilitator	3.76	0.84	85	3.00	3.61	0.88	28	4.00
HES Faculty	4.38	0.77	85	5.00	4.36	0.73	28	4.00
1 = Strongly Disagree	2 = Disagree	3 = NAND	4 = Agree	5 = Strongly Agree				

Integration

Summary Statistics Table for Program Integration

	Group 1				Group 2			
	<i>M</i>	<i>SD</i>	<i>n</i>	Mode	<i>M</i>	<i>SD</i>	<i>n</i>	Mode
Would be a good use of resources within athletics	4.19	0.94	85	5.00	4.25	0.84	28	5.00
Will integrate into the university's culture	4.30	0.67	84	4.00	4.21	0.83	28	5.00
Would be supported by athletic administration	4.31	0.73	84	5.00	4.32	0.86	28	5.00
Can be integrated into existing programming	4.38	0.72	85	5.00	4.14	0.80	28	5.00
Would be supported by the university	4.40	0.71	84	5.00	4.29	0.85	28	5.00
1 = Strongly Disagree	2 = Disagree	3 = NAND	4 = Agree	5 = Strongly Agree				

Student-Athlete Transition Program with a Health-Related Physical Activity Focus: A Feasibility Study For a NCAA Division II Institution

AMANDA HILTON, MS, ATC, LAT, CES

Introduction

What?

Student-athletes face unique challenges as they transition out of college, which may have implications for their future physical activity, health, and well-being.

So What?

Programs that specifically focus on promoting lifetime physical activity and health prior to the student-athlete's retirement can allow the student-athlete to cope with the transition and stay committed to a physically active, healthy lifestyle.

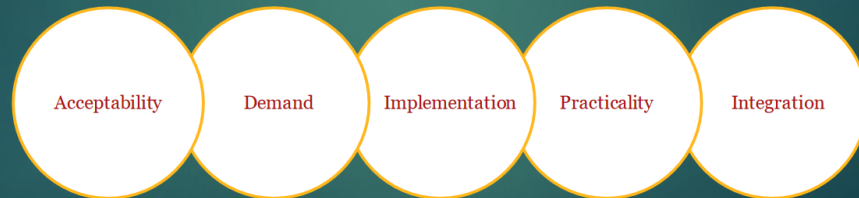
Now What?

Even though research has identified the need for proactive transitional practices, few evidence-based transitional programs with a health-related physical activity focus exist, and even less research addresses the feasibility of implementation within specific institutional contexts.

Purpose & Research Questions

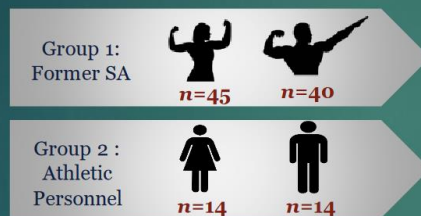
The purpose of this study was to explore the feasibility of implementing health-related student-athlete transitional programming at a NCAA DII university.

Guiding Question Areas (Bowen et al., 2009)



Methodology

Participants







Data Collection

- Electronic Survey via Qualtrics

Measures

- NCHA III
- Stage of Exercise Questionnaire
- PROMIS Adult Global Health v1.2
- Additional Questions (DeFreese et al., 2021)
- Feasibility (Bowen et al., 2009)

Results: PA

-  84.71% currently engage in less PA
-  Over 80% find it difficult to maintain PA
-  60% are not meeting recommended PA guidelines
-  41.18% reported engaging in no muscle strengthening activity

ACSM and CDC Recommendations



150 minutes
of moderate-intensity aerobic activity every week

2X per week
Muscle-strengthening activities on 2 or more days a week that work all major muscle groups



Results: Top 3 Most Important Resources

Group 1 (n= 85)	Resource	Group 2 (n= 28)
57 (67.06%)	Career Guidance	16 (57.14%)
45 (52.94%)	Mental Health Resources	19 (67.86%)
43 (50.59%)	✘ PA/Exercise Guidance	12 (42.86%)
38 (44.71%)	Time Management Resources	8 (28.57%)
21 (24.71%)	✘ Financial Guidance	4 (14.29%)
15 (17.65%)	Mentorship/Internship	5 (17.86%)
14 (16.47%)	✘ Nutritional Guidance	7 (25%)
8 (9.14%)	✘ Sports Psychologist	2 (7.14%)
3 (3.53%)	Coaches/Athletic Personnel	5 (17.86%)
2 (2.35%)	Medical Resources	2 (7.14%)
2 (2.35%)	Spiritual Guidance	2 (7.14%)
1 (1.18%)	Social Support	0 (0%)

Results: Support for Programming

Over 90% Agreed that a Transition Program:

- ★ With a health-related focus is important
- ★ Should have a health-related PA focus
- ★ Should help the SA transition out of sport
- ★ Should prepare the SA for life beyond athletics
- ★ Would be utilized

Over 80% Agreed that:

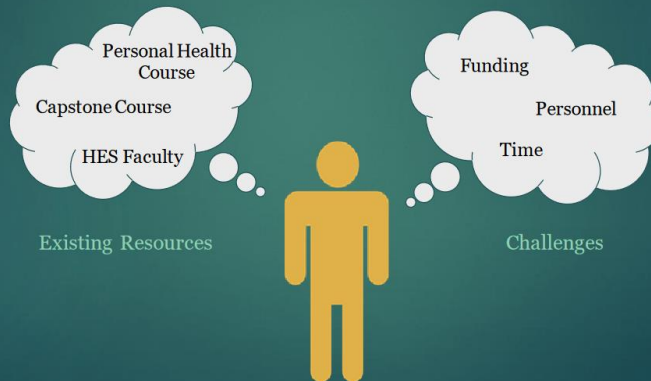
- ★ Athletics should support the SAs' personal, psychological, and physical development
- ★ Athletics should support health beyond athletics
- ★ The athletic department and university at large would be supportive of a transition program with a health-related focus

Results: Delivery

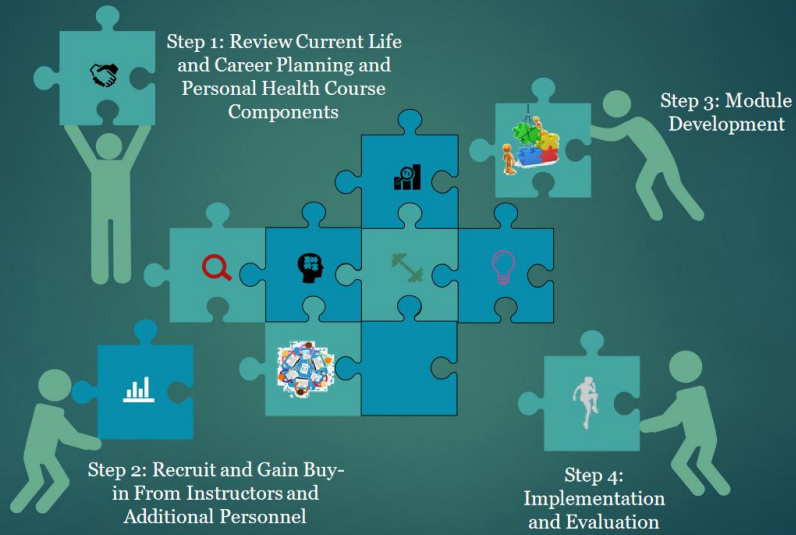
How: Elective course in a face-to-face format

Who: HES Faculty and Athletic Trainers

Good use of resources and would integrate into existing programming




Conclusion and Action




Thank you!
Questions?

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APPENDIX J: DISSIMINATION INFOGRAPHIC



Supporting student-athletes' transition out of sport: Is it feasible?



When collegiate athletics end...

Student-athletes face unique challenges as they transition out of college and collegiate athletics, which may have implications for their future physical activity, health, and well-being.

How do we help?

Growing research suggests that programs that specifically focus on promoting lifetime physical activity and health prior to the student-athlete's retirement can help them stay committed to a physically active, healthy lifestyle upon graduation.


This research investigated the feasibility of implementing health-related student-athlete transitional programming at our DII university.

Methods

Online Survey

85 Former Student-Athletes
28 Athletic Personnel

KEY FINDINGS



Support for Transition Out of Sport and Health Beyond Athletics

Important Resources

Both groups most frequently responded that career guidance, mental health resources, and physical activity/exercise guidance were the most important resources to be included in programming.

Needed Resource

Participants felt the university is lacking offerings for physical activity/exercise guidance, despite participants rating this among the top three most important resources.

Top 3 Most Important Resources For LR to Offer

Resource	Former Student Athletes (%)	Athletic Personnel (%)
Career Guidance	67.06%	57.14%
Physical Activity/Exercise Guidance	50.59%	42.86%
Mental Health Resources	52.94%	67.86%

■ Former Student Athletes ■ Athletic Personnel

Perceived Program Feasibility

90% of former student-athlete and athletic personnel participants agreed that health-related transitional programming is important and that there is a demand for programming

Opportunities to support programming through existing resources!

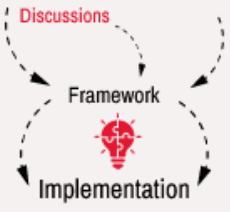
Capstone	Educational Credit	Elective		
ATC	TimelyCare	Coaches	Cornerstone	Faculty
Personal Health	Career Services	Community		

Sturdy Foundation to Build On

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Program Development

Feasibility Results Previous Research



Want to learn more? Full study linked here