Journal of Intercollegiate Sport, 2021, 14.2, 1-18
https://doi.org/10.17161/jis.v14i2.14523

Examining a Conceptual Framework for Transition Experiences of Former Collegiate Women's Soccer Athletes

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Athlete transition from American collegiate sport participation, to non-sport careers or professional sport, has been a contemporary topic in sport science research but it is still not well understood, especially in female athlete populations. Informed by athlete transition and identity theory, the current study's purpose was to describe the transition experiences of former women's collegiate soccer athletes, including both positive and negative contributing factors. Using a deductive conceptual content analysis, results showcase both positive (i.e., social support, career goals, recreational sport play) and negative (i.e., lack of a team/support, lack of soccer/competition, lack of direction) contributors to the post-collegiate sport transition for female soccer athletes. The importance of athletic identity and potential transition resources were identified. Specifically, participants endorsed career guidance, physical activity/exercise, mentorship programming, and mental health resources as potentially helpful to future athletes. Study findings expand upon relevant transition theory and former female athlete research. Our study results may inform future research and program development efforts aimed at former female collegiate athletes from soccer and other sports.

Keywords: College sport, Intercollegiate athletics, Retirement, Transition, Women's sport

The National Collegiate Athletic Association (NCAA) annually sponsors organized competitive sport for more than 490,000 athletes (Irick, 2017). College sport participation involves exposure to both short- and long-term benefits (Armstrong & Oomen-Early, 2009; Berg et al., 2015; Weight et al., 2018) and risks to mental, physical, and social health and functioning (e.g., Brooks et al., 2014; Houston et al., 2016; Huang et al., 2007) resulting in differential experiential outcomes for former collegiate athletes ranging from adaptive to maladaptive. Yet, there exists a specific knowledge gap on how the experiences of athlete transition from collegiate sport participation may contribute to differences in post-career outcomes. Athlete tran-

sition is the termination of the athletic career in a transitional process that begins during the athletes' career and continues until sport career termination (Wylleman et al., 2004). Notably, individual athlete transition experiences have potential to explain differential outcomes between former collegiate athletes experiencing adaptive versus maladaptive post-sport health and well-being outcomes. To address this important concern, the current study utilizes athlete transition and identity theory to examine former women's collegiate soccer athletes' perceptions of their own sport transition experiences.

Relevant Literature

Athlete Transition Theory

Building on conceptualizations of transition common to the workplace, Taylor and Ogilvie (1994) developed a conceptual framework for athlete retirement/transition involving five stages. These stages include: 1) causes of retirement among athletes, 2) factors related to adaptation to retirement, 3) available resources for retirement adaptation, 4) quality of adaptation to athletic retirement, and 5) intervention for athletic retirement difficulties. According to this model, causes of transition include age, deselection, injury, and free choice. Pertinent to the current study, factors identified to influence transition adaptation include developmental experiences, aspects of identity (self and social), control perceptions, and other contributors. Whereas, available transition resources include coping skills, social support, and pre-retirement planning. Finally, both healthy (i.e., adaptive) or crisis (i.e., maladaptive) career transition outcomes are delineated as potential individual athlete differences in transition quality (Taylor & Ogilvie, 1994). Individual athlete transition quality is further described to result from the interaction of transition factors and available resources. Finally, potential cognitive, emotional, behavioral, and social areas for intervention are suggested to mitigate maladaptive transition experiences. Though no studies have tested athlete transition theory directly, it has informed specific athlete transition research efforts as well as broader work with a specific focus on former athlete health and well-being. Finally, athlete transition has also been described within other relevant (to transition) theories of sport injury (Wiese-Bjornstal, 2009) and former collegiate physical activity/exercise intervention (Reifsteck & Davis Brooks, 2018). These aforementioned theories also consider the importance of athletic identity to major transitions for highly competitive athletes.

Athlete Identity Theory

Identity theory (Mead, 1934; Stryker, 1968) describes how parts of the self are composed of meanings that a person attaches to life roles and merits specific discussion relative to its potential impact on transition quality for athletes (Stryker & Burke, 2000). Specifically, athlete identity has been defined as the extent to which an individual identifies with the athlete role (Brewer et al., 1993). Higher levels of identity are beneficial for athletic motivation and performance. Conversely, athlete endorsement of high levels of athletic identity may also be detrimental to athlete psychological health outcomes (e.g., stress, burnout; Coakley, 1992) as well as transition from

sport (Taylor & Ogilvie, 1994). Specifically, a foreclosed/unidimensional athletic identity may be maladaptive for overall psychological development as non-sport identities (i.e., academics, social relationships, career) may receive less attention/focus than sport participation (e.g., Coakley, 1992). As athletes seek to transition from sport to non-sport careers or life roles, a heightened athletic identity may make this transition more emotionally (e.g., negative affect associated with no longer participating in the athlete role), cognitively (i.e., hard to shift to a non-sport identity and associated life vision), and behaviorally (e.g., less pre-transition planning and post-sport motivation) difficult. Thus, athlete transition and identity theories informed the development of survey items as well as the interpretation of study results.

Former Collegiate Athletes

Studies informed by these models have examined athlete transition either indirectly via focus on former collegiate athlete health-related quality of life or directly via a focus on athlete transition itself. Studies investigating former collegiate athlete health-related quality of life have shown mixed results. For example, one study (Simon & Docherty, 2014) found former collegiate athletes (n = 232) reported worse scores on physical function, sleep, and pain interference, and better scores on depression and fatigue than non-athletes (n = 225). In contrast, another study (Kerr et al., 2014) found former college athletes (n = 797) to exhibit mental and physical health comparable to US population norms on most study outcomes.

For female athletes, younger athletes reported higher mental health than US population norms, whereas, older female athletes reported worse physical functioning than US age norms (Kerr et al., 2014). Finally, a recent meta-analysis (Snedden et al., 2019) compared current college athletes (n = 842) to general undergraduate students (n = 1322) with varying levels of physical activity participation. Results showed collegiate sport participation to be protective for participant mental (but not physical) functioning after controlling for athlete sex. Both male and female athletes reported higher mental and physical functioning scores than gender-specific US population norms with female athletes reporting significantly worse mental functioning than male athletes (Snedden et al., 2019).

Athlete Transition

Athletic identity and social support have also been specifically identified as important for athletes during career transition (Fuller, 2014), with higher levels of athletic identity associated with anxiety and depression during transition from sport (Giannone et al., 2017). Focusing on the transition experience itself, Erpič and colleagues (2004) examined the career termination process of 85 former elite Slovene athletes, finding the voluntary nature of career termination, individual perceptions of athletic achievement, athletic identity, education, and both athletic (e.g., coping resources, missing athlete lifestyle) and non-athletic transition factors (i.e., social relationships) to impact transition experiences. Relative to social support, Harry and Weight (in press) drew on interview data from primarily male former collegiate athletes (n = 124) to explore the role of a coach in athlete transition. Athletes having a smooth transition out of intercollegiate athletics described transferring their competitive drive/focus to

other areas, having strong social support, and having a plan for their transition. For those with difficult transitions, reported examples included not being ready to finish, and losing their purpose/identity, structure, and social support. Finally, career-ending injury has also been identified as a transition factor. Arvinen-Barrow and colleagues (2019), in a qualitative study of professional cricket athletes transitioning out of sport due to a non-musculoskeletal, career-ending injury (n = 8), demonstrated that healthy career transition was possible. Further, early career transition planning and internal and external stress reduction were found to aid athletes in adaptively transitioning from sport, despite injury.

Transition and Women's Sports

Most research on athlete transition has focused on both genders, and we are not aware of any studies that specifically focused on former female athletes. The experiences of female collegiate athletes are unique, suggesting their transition experiences and needs may be as well. Accordingly, aspects of career, family, and physical and mental health germane to the female athlete experience may be distinguishable from other athlete populations. For example, Rubin and Lough (2015) found there was a lack of resources for women's collegiate sports, such as not providing basic playing equipment like leather basketballs for the basketball team or access to medical supplies. These may be indicative of other deficits experienced during transition. Notably, few studies have focused specifically on the mental and/or physical health of current or former elite female athletes and none have focused on American collegiate athletes.

Three studies have looked at elite women's soccer athletes specifically, all with a focus on international, professional athlete populations. One study (Prinz et al., 2016) of German female soccer athletes (n = 157) found approximately one third of those sampled to report a prevalence of depression symptoms during their careers. Yet, only 1 out of 10 athletes sampled sought psychological support while playing. Following their careers, 1 in 4 needed psychological support with 9 out of 10 of those who needed support receiving it (Prinz et al., 2016). A second study (Prien et al., 2017) of former German female soccer athletes (n = 157) found the vast majority (70%) of respondents described their current health as good or very good; yet, over half of participants reported knee problems while exercising and one third reported physical pain during daily activities. Finally, in a recent study (Grygorowicz et al., 2019) of former female Polish Football Association athletes (n = 93), factors associated with career termination were examined with the most common reported reasons for career termination in this population being injury (30%), an inability to reconcile sport with studies (28%), becoming a wife and/or mother (11%), and losing motivation/interest in soccer (9%). Research into this population suggests a myriad of reasons precipitate career transition and that there are important post-career mental and physical outcomes for elite female soccer athletes, informing our current work.

Knowledge Gaps

Despite gains in the understanding of former athlete health, several gaps exist relative to athlete transition experiences. First, though health-related quality of life following

transition represents an important empirical focus, a relative dearth of research exists on the transition itself from collegiate sport. Second, very limited research on former collegiate athlete transition has focused on the lived experiences and perceptions of women's sports athletes. Collegiate women's soccer represents an ideal population to examine the sport transition of female college athletes. This is a popular and longstanding women's collegiate sport (the first NCAA championship held in 1982; Dick et al., 2007) involving competitive pressure, contact exposure, and lifespan health-related concerns (e.g., concussion) studied extensively in comparable men's collegiate sports (Guskiewicz et al., 2000; 2007). A targeted focus on perceptions of athlete transition from the perspective of former women's collegiate soccer athletes will help to elucidate potentially unique transition needs of this population. Such knowledge gaps merit continued examination informed by athlete transition (Taylor & Ogilvie, 1994) and identity theories (Stryker & Burke, 2000).

Study Purpose

Addressing these important knowledge gaps, the purpose of the current study was to describe the transition experiences of former women's collegiate soccer athletes. Specific research questions were informed by Taylor and Ogilvie's (1994) conceptual framework for athlete retirement and identity theory (Stryker & Burke, 2000). Five research questions correspond to the five stages outlined in the model. Specifically:

RQ1: What are the causes of athlete retirement? (Stage 1)

RQ2: What factors relate to maladaptive retirement experiences? (adaptation of Stage 2)

RQ3: What resources contribute to adaptive retirement experiences? (Stage 3)

RQ4: What was the general quality of adaptation to athletic retirement based on transition factors? (Stage 4)

RQ5: What interventions could mitigate maladaptive transition experiences? (Stage 5) Guided by athlete transition and identity theories, we hypothesized that participants would endorse a balance between positive adaptive and negative maladaptive transition experiences, and that athletic identity would be relevant to the transition experiences of athletes. This work has important implications for continued female athlete transition research and informs the development of transition programming designed to enhance the health and well-being of female collegiate athletes transitioning to non-sport life.

Method

Participants

We recruited a convenience sample of former women's soccer athletes (M = 42.9 years, *Median* = 46.0, *Range* = 22-62, SD = 12.1) from a large, Southeastern public university in the United States with an elite women's soccer program that competes in a "Power Five" NCAA conference. These data were collected in tandem with a broader survey of their mental, physical, social, and occupational functioning following their collegiate soccer experience. We received 124 total responses (36% response ratio), including 101 responses to the open-ended questions relevant to the

current study. The majority of participants ($n = 96$, 95%) identified as Caucasian with the remaining participants identifying as Black/African-American ($n = 4$, 4%), or Asian ($n = 1$, 1%). Ninety-nine percent of the participants completed a *baccalaureate* ($n = 60$, 59%) or postgraduate ($n = 40$, 40%) degree. Seventeen percent of participants played professional soccer after college. Participant demographics are relatively consistent with the demographics of women's collegiate soccer (NCAA, 2020).

Procedure

Following Institutional Review Board approval, this study was conducted using survey methodology with a sample compiled from an alumni database provided by university alumni services and the team's liaison to former players. Once the contact information was attained and organized, the survey was distributed to each participant via email with consent information embedded within the survey itself. The Qualtrics platform was utilized where the survey remained active for 84 days. Participants received three reminders to participate during this survey window for a maximum of four contacts altogether. For all study items, participants were informed that there were no correct or incorrect answers and were given the option to skip any survey questions they did not feel comfortable answering.

Design and Measures

A general survey of health and functioning was developed for the target population of collegiate women's soccer athletes including qualitative and quantitative items adapted from a previously established instrument intended for a similar population of elite athletes (Kerr et al., 2018). Validity measures included intensive content evaluation of the instrument with a panel of athletes, sport scientists, and sports medicine clinicians, a pilot study with $n = 9$ members of the population, and several rounds of revisions based on gathered feedback. As part of this broader survey of health and functioning, participants responded to demographic questions and open-ended questions about the transition from collegiate soccer. Participants were asked to think about all individuals, organizations, and/or resources that may have impacted (or will continue to impact) their transition from playing competitive soccer. Specific prompts relevant to the current study included:

1. "Describe your transition plan including whether or not you have thought about this before."
2. "Did you struggle with issues of identity/athletic identity as you transitioned from playing collegiate soccer? If yes, please describe your issues of identity/athletic identity?
3. "Who, or what (if anything), made your transition from playing collegiate soccer easier?"
4. "Who, or what (if anything), made your transition from playing collegiate soccer difficult?" and
5. A closed response question, "What types of resources would have made your transition for playing collegiate soccer easier?"

Response options for this closed response question included medical care, mentorship program, transition training, mental health, physical activity/exercise, diet/nutrition, social support from teammates, social support from coaches, social support from family/significant others, career guidance, financial guidance, and other.

Data Analysis

We computed descriptive statistics for demographic variables, identity concerns in transitioning, whether athletic identity issues/changes occurred during transition, and desired transition resources. Next, we employed deductive conceptual content analysis (Elo & Kyngäs, 2007; Krippendorff, 1989) to analyze the open-ended response questions provided by former women's soccer athletes about their perceptions of transition from collegiate soccer. For each question, initial, overarching categories were specified based on prior knowledge of existing former athlete health and well-being (e.g., Snedden et al., 2019), athletic identity (e.g., Coakley, 1992), and sport transition literatures (e.g., Taylor & Ogilvie, 1994.). We further developed categories based on a priori literature and implications for practice. For example, physical activity/exercise/nutrition categories were combined based on previous theory, research, and potential practical applications (e.g., Guskiewicz et al., 2000; 2007; Houston et al., 2016). At the conclusion of the initial coding, a second coder reviewed each of the codes as presented in Tables 3-6. Inter-coder agreement of all analyzed data was 93%, yielding a Krippendorff's $\alpha = 0.866$, with $n = 399$ agreements, $n = 30$ disagreements, and 429 codes analyzed (see Tables 4 and 5). Percent agreement within the four questions ranged from 89% to 96%.

Results and Discussion

Causes of Athlete Retirement

The most common cause of athlete retirement was an exhaustion of eligibility (62%). The second most prevalent reason for transition cited by one in 10 athletes was medical retirement due to injury (10%). Other commonly cited factors included graduation (9%), personal reasons (5%), concerns about long-term physical (4%) or mental health (3%), and academic reasons (3%). A complete listing of transition reasons is provided in Table 1. The overwhelming majority of study respondents (63%) reported they had a plan for life after collegiate soccer prior to leaving college or have a plan for transition but are still playing professional soccer currently (10%).

Table 1
Frequency (%) of transition status, and causes of athlete retirement in (N = 101) former female collegiate soccer players

	n	%
Transition Status		
Not currently playing and I had a plan for life after soccer	63	63%
Not currently playing and I did not have a plan for life after soccer	25	25%
Currently playing and I have a plan for life after soccer	10	10%
Currently playing and I do not have a plan for life after soccer	2	2%
Missing	1	1%
Causes of Athlete Retirement/Transition*		
Exhausted eligibility	62	61%
Medical retirement due to injury	10	10%
Graduated before exhausting eligibility	9	9%
Personal reasons	5	5%
Concerned about LT physical health	4	4%
Concerned about LT mental health	3	3%
Academic Reasons	3	3%
Did not want to play sport anymore	2	2%
Chronic pain	2	2%
Was cut from the team	2	2%
Financial reasons	1	1%
Concerned about LT brain health	1	1%

*Some participants selected more than one reason for transition

LT = long term

Factors Related to Maladaptive Retirement Experiences

The most commonly endorsed factors making the transition from collegiate soccer more difficult for participants included a lack of support/team (32%), a lack of competition or missing the soccer environment (27%), having no plan or a lack of clear direction (24%), and changes to the athlete body and/or lack of support for continued nutrition and training (11%). All other specifically identified transition difficulties were endorsed by between 5% and 9% of respondents (See Table 2).

Table 2

Factors related to maladaptive retirement experiences in (n = 66) female former collegiate soccer players

	n	%
Lack of support/team	21	32%
Lack of competition/soccer opportunities	18	27%
No plan/lack of direction	16	24%
Changes to body or athleticism/lack of training or nutrition support	7	11%
Self	6	9%
Identity change	6	9%
Injury/pain	5	8%
Career/financial	3	5%
Other vague, neutral, or positive factors	16	24%

Just under half of the participants (47%) reported struggles with issues of identity following their collegiate soccer career. Of those respondents, the most commonly cited identity concerns involved soccer being their life and making it hard to find a new identity (40%), a lack of social connection (29%), and a lack of competition outlets/professional soccer opportunities (19%) (See Table 3).

Table 3

Retrospective perspectives on post-collegiate transition identity concerns in (n = 42) female former collegiate soccer players

	n	%
Identity Struggles Post Collegiate Career?		
Yes	47	47%
No	41	41%
Missing	13	13%
Identity Concerns		
Soccer was life - hard to find a new identity	17	40%
Lack of social connection	12	29%
Lack of competition outlet/professional soccer opportunities	8	19%
No longer a leader/no longer had social status	5	12%
Injury/physical change was hard	4	10%
Lack of schedule/structure	3	7%
Felt like a failure	3	7%
Other (e.g. general identity comments, impact of specific factors)	8	19%

Resources Contributing to Adaptive Retirement Experiences

The most mentioned factors which made the perceived transition from collegiate soccer easier for respondents included support from teammates/friends (30%), having a new career (18%), support from family (17%), and participation in recreational soccer or other sports (17%). All other specifically identified transition facilitators were endorsed by between 1% and 10% of respondents as listed in Table 4.

Table 4

Resources contributing to adaptive retirement experiences for (n = 88) female former collegiate soccer players

	n	%
Support from teammates/friends	26	30%
Career	16	18%
Support from family	15	17%
Rec soccer/other sports	15	17%
National team/pro soccer	9	10%
Marriage/starting a family	8	9%
Graduate/professional school	8	9%
Going into coaching	5	6%
Staying active/exercise/PA/nutrition	5	6%
Coach support	4	5%
Faith	3	3%
Collegiate team soccer involvement	3	3%
Self/did it alone	2	2%
Sport psychologist	1	1%
Other general plans	20	23%

PA = physical activity

Quality of Adaptation to Retirement

Of the 101 respondents, just under half (47%) reported struggling with issues of identity upon retirement contributing to a difficult transition experience, while 41% reported having a smooth transition. The most reported transition plans included entering the workforce (31%), finishing undergraduate work or pursuing a graduate or professional degree (25%), or participating in recreational soccer or other sports/exercise (20%). Eighteen percent of respondents suggested they had no clear transition plan and/or their plan was unsuccessful (See Table 5).

Table 5
Retrospective post-collegiate transition plans of (n = 85) former female collegiate soccer players

	n	%
Workforce	26	31%
Finish UG/Graduate/Professional school	21	25%
Rec soccer/other sports/exercise	17	20%
No plan/unsuccessful plan	15	18%
Coaching	11	13%
Professional soccer	11	13%
General plan	8	9%
Marriage/family	7	8%
Left soccer by choice	5	6%
Other (e.g. general comments/personal details)	9	11%

Desired Transition Resources

Respondents endorsed a variety of response options relative to resources they felt would make the collegiate soccer transition easier. The most endorsed desired transition resources included career guidance (46%), physical activity/exercise (42%), mentorship program (40%), mental health resources (29%), financial guidance (27%), and support from teammates (27%). All other resources were endorsed by between 13% and 26% of respondents (see Table 6).

Table 6
Desired transition resources to facilitate an adaptive transition in (N = 101) former female collegiate soccer players

	n	%
What types of resources would make college transition easier?*		
Career guidance	46	46%
Physical activity/exercise	42	42%
Mentorship program	40	40%
Mental health resources	29	29%
Financial guidance	27	27%
Social support from teammates	27	27%
Transition training	26	26%
Social support from family/significant others	25	25%
Diet/nutrition	24	24%
Social support from coaches	20	20%
Medical resources	13	13%
Other (e.g. faith, links to other soccer alumni)	2	2%

*Individuals could select all choices that apply.

The current study highlights former women's collegiate soccer athletes' experiences of transition with a focus on factors that may make this process easier or more difficult as well as the resources participants think may aid others during this process in the future.

Building on the specific stages of athlete transition outlined by Taylor and Ogilvie (1994), we updated and extended factors within each of the five stages to facilitate a deeper understanding of transition experiences. Additionally, we uncovered a 1-2 year window of adjustment wherein athletes struggled to transition their identities from athlete-first, sometimes described as a foreclosed athletic identity (Coakley, 1992). Understanding the prevalence, time, and struggle involved in identity-transfer can help athletes feel "normal" and understood during what Taylor and Ogilvie outlined as stages 1-4 of the transition process. We recommend eliminating the "stages" vernacular from the theoretical framework as elements of the transition process appear to be nonlinear. As such, study results are presented thematically rather than by research question which was organized by stage.

Results highlight the importance of support, successful identity transition, and physical activity and competition outlets following collegiate soccer. Additionally, participants endorsed support for mentoring and career exploration programming which may aid athletes in an adaptive transition. Results are described in detail relative to extant theory, research, and practice considerations.

Transition and Identity

Consistent with foundational research, nearly half (47%) of respondents struggled with identity change as they transitioned from playing collegiate soccer (Erpič et al., 2004; Reifsteck & Davis Brooks, 2018; Taylor & Ogilvie, 1994). As respondent #35 noted, "I was lost for a few years; I played sport year-round my whole life and when it was over I struggled for a few years and lost social connectivity." Discussing the prevalence of the issue, Respondent #42 mentioned:

> I have discussed this topic with many people, and it is a very real struggle. We identify as the star soccer player/athlete our entire lives and when we lose that identity as we transition into the work world where that is no longer who we are, we are forced to reinvent ourselves in ways. I had to find out what makes me-me, besides soccer. It was really hard, but freeing in ways as well. Since I still work in soccer, it is still a part of me, but in a very different way than before. I am no longer the badass athlete, but the ex-athlete and there are pros and cons to that identity.

Several mentioned years of low confidence, depression, and social isolation (Prinz et al., 2016). Even for those who found fulfilling post-athletic careers and hobbies, the hollow haunt of who they no longer were was still palpable:

> I value my athletic identity more than any of my other identities that I have. Not really being an athlete anymore decreases how much I value myself. I had

> several years of severe depression after my collegiate playing career – most was not directly related to lack of playing, but it seemed that after finishing college, memories of abuse and trauma from early childhood came into consciousness for the first time in my life. Those memories made me think of myself as weak or vulnerable, things that I would never show as an athlete. (Participant #32)

Transition Facilitators

Echoing the ideas addressed relative to identity, transition facilitators were largely social, physical, and identity related. Support from teammates/friends, family, and coaches accounted for 52% of the factors making transition from collegiate soccer easier, and finding an outlet in recreational sport, professional soccer, coaching, physical activity, or involvement in their former team accounted for 41% of the facilitators. These issues could be addressed directly through the theoretically informed physical activity program for senior collegiate athletes designed by Reifsteck and Davis Brooks (2018), further supporting its need.

These findings very closely mirror the data Harry and Weight (in press) uncovered wherein social support was mentioned by 64% of the former collegiate athlete participants, and the transfer of competitive drive to physical activity/coaching was mentioned by 58%. Within the primarily male sample of the Harry and Weight study, however, transferring a focus to non-sport work was mentioned by nearly half of the participants while only 18% of female respondents addressed this, pointing toward a potential gender/sport-driven difference worth exploring in future research.

These social and focus-transferring facilitators are illuminated through athlete voices: "I went right into playing with the US Women's National Team, so my transition was seamless. I had former teammates on the National Team that made the transition easier" (Participant #38); "Going into coaching and becoming obsessed with it made my transition from playing quite smooth. I also had some great friends to support me" (Participant #50). Being able to relate to others who had been through the transition appeared to ease the difficulty. Participant #84 described how valuable it was talking with her "older brother who had been through the same identity post athletics struggle" (Participant #84).

Extending the theoretical framework, we uncovered additional factors that influence transition. For example, consistencies between this and the Harry and Weight (in press) study emphasize the overarching importance of social support and a transfer of competitive drive/focus to other areas including some form of physical activity. While Taylor and Ogilvie (1994) addressed aspects of identity and social support as factors posited to influence transition adaptation, the physical aspects of transition unrelated to injury and the overarching importance of channeling competitive drive into avenues of focus also appear to be critical in adaptive transition for female college athletes (Reifsteck & Davis Brooks, 2018; Snedden et al., 2019).

Transition Detractors

Elements of maladaptive transition were noted by 66 participants and reflect the inverse of the transition facilitators. Lack of social support, lack of competition, identity changes and elements of physicality in changes to body/pain were mentioned as

transition detractors. A relatively prevalent factor noted by 24% of the respondents inhibiting a positive transition was the lack of direction/plan. This was emphasized by Harry and Weight (in press) as an element that served to smooth transitions – athletes who had a plan or had begun the transition of shifting focus and/or social circles prior to the conclusion of their competitive career noted much smoother transitions. In the current study, athletes who transitioned with "no plan or support" (Participant #3), described being "forgotten about and not relevant anymore" (Participant #22) felt an increased degree of loss and confusion throughout the transition. As participant #32 mentioned, it was difficult to move forward "not knowing what to do or what my skill sets were; not having any work experience to set myself up as a good hire, and not having a network outside of soccer." The lack of plan and stress of transition to many was unexpected. Participant #64 mentioned the most difficult part was "Not being prepared for it. No one talks about how difficult it will be to lose who you are basically. I would have loved to have been prepared for it."

Practical Implications

Consistent with the conceptual foundation, Taylor and Ogilvie (1994) recommended available transition resources of pre-retirement planning, coping skills, and social support. The current research supports the need for these resources with an emphasis on pre-retirement planning. When there is a plan that includes transferring the athlete's competitive drive/focus to other areas coupled with social support and physical/nutrition outlets, many of the maladaptive behaviors/outcomes appear to be ameliorated (Erpič et al., 2004; Harry & Weight, in press). As a result of its link to mental health outcomes (Giannone et al., 2017), individual athlete athletic identity levels could be beneficial to consider in enacting such work. For example, different programming options tailored to those with high, moderate, and low levels of athletic identity could help to create athlete action plans that best facilitate optimal transition from collegiate sport. Such work represents a potentially fruitful applied research and practice effort.

Triangulating results from each of the aforementioned areas, foundational literature, and athlete insights, there are clear areas of contribution to theory and practice from the current study. Through examination of a sample of women's soccer athletes in one of the top programs in the world, the generalizability of the experiences may be limited, however there exists heterogeneity in the current sample suggesting its potential to begin to inform the knowledge base on the transition experiences of female athletes. Potential cognitive, emotional, behavioral, and social areas for intervention are suggested to mitigate maladaptive transition experiences specifically including pre-transition planning that addresses redirecting the competitive focus (e.g., through an alternative pastime or career), physical activity/nutrition, social support, and mental/medical health resources. For example, setting up a transition program for female collegiate athletes which starts during their first collegiate semester and extends beyond their athletic careers has potential to be beneficial for long-term mental, physical, and social functioning. Focusing such programming on transition topics unearthed by the current study (and future work in other female athlete populations) has potential to be beneficial and may be of interest to potential funding

agencies including the NCAA and sport-focused non-profits. Moreover, based on participant endorsement, the inclusion of peer mentors in such work has great potential to facilitate adaptive transition experiences in this unique population. Consistent with broader sport science consensus, the development and careful evaluation of such transition interventions answers calls for holistic health and well-being care for athletes during this important developmental window (Chang et al., 2020).

Extension of Literature

These findings extend the foundational literature in several important ways. First, this is the first study to explore the transition period of former female student-athletes, and as such, is an important contribution to the severely under-researched area of female athlete lifespan health and well-being. Largely, the findings support previous studies involving former male or mixed-gender athletes with a few deviations (e.g., Harry & Weight, in press; Reifsteck & Davis Brooks, 2018; Snedden et al., 2019). Additionally, this study extends the aforementioned conceptual rationale for athlete transition (Taylor & Ogilvie, 1994). Specifically, the authors recommend adding a window of identity-adjustment during steps 1-4 of the transition process that can be addressed through social connections (e.g., mentoring, networking) and a transfer of competitive drive/focus to other areas including some form of physical activity (e.g., Harry & Weight, in press; Reifsteck & Davis Brooks, 2018). Moreover, it may be prudent to move away from the stage/step nomenclature altogether. Furthermore, we encourage the addition of a pre-retirement planning phase that involves discussions about the physical, social, and mental aspects of transition, coping skills, and social support.

Limitations

The current study has several limitations worth discussing which inform the design of future work. First, all participants were sampled from one women's soccer program, limiting generalizability to other programs, conferences, and NCAA divisions. Additionally, most of the sample identified as white. Though this is relatively consistent with the demographics of women's collegiate soccer (NCAA, 2020), data on the transition experiences of a more diverse sample of former collegiate athletes would be valuable and more representative of the overall demographics of collegiate sport. Key study concepts of transition and athletic identity were not formally defined for study participants, limiting the current study findings to participants' own perceptions of how they understood these concepts. Future work may benefit from an a priori definition of these terms for study participants. Finally, the retrospective nature of the current study design could lend itself to recall and/or social desirability/response biases. Yet, we feel these impacts may be somewhat tempered by the relatively young mean age (i.e., relatively close to their collegiate transition) of the sample.

Conclusions

The current study adds to the knowledge base on former female collegiate athlete transition by identifying factors, consistent with extant transition theory/research, that appear germane to promoting an adaptive sport transition in this population.

This represents an important scientist-practitioner finding with implications for transition programming development. This study is intended to inform and spark continued research efforts in this area with the goal to promote an adaptive transition from collegiate sport for female athlete populations.

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Journal of Intercollegiate Sport, 2021, 14.2, 19-41
https://doi.org/10.17161/jis.v14i2.13606

Moving Beyond the Question of Education or Exploitation: The Dynamic Experiences of Black Male Student-Athletes

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Discussions of the Black male student-athlete (BMSA) experience within institutions of higher education tend to be situated in two perspectives. Dominant perspectives argue that BMSAs are being educated while another more critical viewpoint argues that this population is being exploited. This article moves beyond the question of whether BMSAs are being educated *or* exploited to argue that both can happen. Utilizing critical race theory, we analyze literature on BMSAs to highlight dominant perspectives juxtaposed against more critical views of environmental influences on their experiences. The article then presents a composite counterstory that portrays the notion that this population can experience education *and* exploitation, as told through the lens of a Black male athlete support professional. We conclude by offering a discussion about approaches that institutions and athletic departments can take to better serve BMSAs, including adopting Cooper's (2016a) Excellence Beyond Athletics framework.

Keywords: Black, Student-athlete, Education, Exploitation, CRT

The National Collegiate Athletic Association (NCAA), the governing body that oversees most athletic competition at the collegiate level, is an organization generating hundreds of millions in revenue yearly, surpassing the one billion dollar mark (Hawkins, 2010). Particularly for Division I athletics, not only does the NCAA make a significant amount of money, so too do the individual athletic departments that operate under the NCAA. The bulk of the money generated to run the NCAA and athletic departments comes from a handful of revenue-generating sports (e.g., football and men's basketball), represented primarily by Black[1] male student-athletes (BMSA; Lapchick et al., 2021). Therefore, institutions (NCAA, athletic departments, and colleges/universities) benefit substantially from the work of Black male bodies, as football and men's basketball bring in the most money (Hawkins, 2010). The question remains: how are BMSAs benefiting from participation? Although scholars, such as Singer (2008, 2019) and Cooper (2019), have moved toward answering this

question, the current manuscript builds on their work to provide further nuance and provide additional ways forward.

At the heart of this question is whether BMSAs are primarily being educated or exploited. Although most simply define education as degree attainment, we adopt a definition from Singer (2019) whereby education consists of the accumulation of knowledge on topics and how to use this knowledge as tools to solve problems, critical thinking ability to navigate a Eurocentric society, and gaining consciousness of oneself in relation to larger society. When considering exploitation, we adopt the moral argument that exploitation at its basic level is the unfair exchange between multiple parties (Van Rheenen, 2013).

The NCAA boasts that at the Division I level, student-athletes graduate at a rate that is higher than the rate of non-student athletes (NCAA, 2020b). However, this does not account for graduation differences between athletes grouped by race, where there is a persistent gap between Black and white student-athletes. Lapchick et al. (2019) noted that Black football players among bowl-eligible schools at the Division I level had a Graduation Success Rate (GSR) of approximately 74% while their white counterparts had a GSR of 89% (Lapchick et al., 2019). With the GSR tracking graduation rates of student-athletes over a six-year period (NCAA, 2019), this statement holds that 74% of Black football players graduated within the six years the NCAA tracks. Though reasons for this graduation gap are varied, clearly Black football players are not being educated to the same extent as white football players, bolstering the claim that BMSAs are being exploited more than educated. Education is more than graduating (Edwards, 1984; Singer, 2019); however, receiving a degree is socially associated with education and provides the athletes with a form of capital that often leads to upward social mobility.

Scholars have argued that the exploitation of BMSAs occurs since they suffer a loss of autonomy while subsequently being used athletically for the school's benefit (Hawkins, 2010). Donnor (2005) emphasized that BMSAs "may be exploited for their athletic ability within the context of education. Usage of the term exploited is appropriate considering the fact that these young men are recruited and admitted to these institutions primarily because of their physical talent" (p. 48). Donnor (2005) continued by proclaiming,

> While a Black male football student athlete may be interested in receiving a college education and graduation (or playing professional football), other educational stakeholders such as football coaches and institutions of higher education may be more interested in the personal (i.e., cash bonuses for meeting academic incentives) and institutional advancement gained through association with or exploitation of the physical talents of these student-athletes. (p. 48)

This conceptual paper builds upon Donnor's arguments by reviewing the literature on BMSAs to highlight their challenges at historically white institutions (HWIs) with a focus on better understanding the question of whether they are primarily being educated or exploited. Additionally, this paper aims to provide the necessary answers so that institutions of higher education and athletic departments can improve the

experiences of these athletes and show they are valued for more than their athletic abilities. To achieve this goal, we utilize critical race theory (CRT) to conceptualize the current literature on BMSAs, challenge dominant narratives, and provide an avenue for a dynamic both/and perspective in relation to the question of education or exploitation.

Given one central tenet of CRT is the use of counterstories to highlight experiential knowledge and disrupt the master/dominant narrative (Delgado & Stefancic, 2017), we first present the dominant narrative on BMSAs, which suggests that they are primarily being educated. Then we highlight how CRT offers a different perspective on BMSAs as being exploited. We end by offering a composite counterstory based on the literature and experiential knowledge to present a third, dynamic, perspective that highlights that BMSAs can be both educated and exploited and the potential utility of Cooper's (2016a) Excellence Beyond Athletics (EBA) Framework. Utilizing this both/and perspective and the EBA approach, we conclude by offering recommendations to enhance the BMSA experience at HWIs.

Theoretical Framework – Critical Race Theory

We utilize CRT as a theoretical framework and an analytical tool guiding our scholarly arguments based on the literature regarding BMSAs. Employing CRT allows scholars to critically examine hegemonic powers such as collegiate athletic departments and institutions of higher education and how they perpetuate the status quo power structures that work against Black student-athletes. Gaston-Gayles et al. (2018) highlighted the importance of analyzing information from this lens by positing,

> Critical perspectives are necessary to deconstruct academic and athletic capitalism because these systems and structures are rooted in power and privilege and are oppressive to vulnerable populations, in part because generating revenue is prioritized over the educational mission of teaching and learning (p. 14).

These power structures created the inequity within higher education and collegiate athletics, where there has been little change to that status quo. Thus, we utilize CRT to work toward dismantling those inherent ideologies that maintain racial inequities.

Scholars in critical legal studies birthed CRT, which has evolved across various fields, including education (Ladson-Billings, 2013). One of the most prominent figures of CRT, Derrick Bell, emphasized that CRT's "commitment to anti-racism goes well beyond civil rights, integration, affirmative action, and other liberal measures" (Bell, 1995, p. 899). Additionally, CRT provided an avenue to utilize techniques and express certain viewpoints that previous theories and fields of study failed to offer (Bell, 1995). Delgado and Stefancic (2017) outline several tenets when discussing CRT in the legal realm: belief that racism is normal and ordinary, interest convergence/material determinism, the social construction of race, intersectionality/anti-essentialism, and the importance of voice and the counternarrative. These tenets are related to those traditionally used in the field of higher education.

Within higher education, Solórzano and Yosso (2002) champion the usage of CRT and outline the following CRT tenets: the intercentricity of race and racism

with other forms of subordination, the challenge to the dominant ideology, a commitment to social justice, the centrality of experiential knowledge, and the utilization of a transdisciplinary perspective. Though the wording and the utilization of certain tenets may vary across scholars and fields, the objectives of CRT are similar. According to Parker and Lynn (2002), the goals of CRT include the use of storytelling and narratives to re-examine racism in society, the elimination of racial subjugation while acknowledging racism as inherent in society, and the creation of essential connections between race and other areas of domination.

In reviewing pertinent literature surrounding the experience of BMSAs, we utilized Solórzano and Yosso's (2002) first four tenets as outlined below, while also incorporating the tenet of interest convergence (Delgado & Stefancic, 2017). Solórzano and Yosso (2002) named the first tenet the intercentricity of race and racism with other forms of subordination, which has similarities to intersectionality (Crenshaw, 1989). Intersectionality examines the ways in which racism exists alongside other forms of oppression based on gender, class, and other identities, particularly centering the experiences of Black women (Crenshaw, 1989). The second tenet ensures CRT offers a challenge to dominant ideologies, which in education often comes in the form of claims of objectivity, race-neutral practices, meritocracy, equal opportunity, and colorblindness – precisely what CRT challenges and critiques (Solórzano & Yosso, 2002). In addition to challenging these problematic claims, a commitment to social justice with the objectives of "the elimination of racism, sexism, and poverty and the empowering of subordinated minority groups" is evident in CRT (Solórzano & Yosso, 2002, p. 26). One way that CRT scholars empower these marginalized groups is through the emphasis placed on their voice (Delgado & Stefancic, 2017).

The centrality of experiential knowledge offers a rationale for centering marginalized voices. Also referred to as the "voice of color" tenet (Delgado & Stefancic, 2017), experiential knowledge (Solórzano & Yosso, 2002) allows scholars to challenge ahistoricism and examine society with expertise provided by the targeted population (Tate, 1997). Experiential knowledge and voice of color come in the form of counterstories. These counterstories offer "a method of telling the stories of those people whose experiences are not often told," which leads to exposing of and challenging the dominant narratives (Solórzano & Yosso, 2002, p. 32). A form of counterstories comes through composite narratives, which are stories constructed by authors that are based on varying forms of data (e.g., existing literature, interviews, personal experience; Alemán & Alemán, 2010; Espino, 2012; Solórzano & Yosso, 2002).

In addition to these tenets offered by Solórzano and Yosso (2002), we include the notion of interest convergence. The premise behind this tenet critiques dominant powers by noting that the majority (or dominant power) will act in their (self) interests unless an alternative option greatly benefits them (Delgado & Stefancic, 2017). Interest convergence presumes that if the dominant group supports policies in alignment with the interests of marginalized groups, it is done for self-interests that converge with those of the marginalized (Harper, 2009). As we reviewed the

literature on BMSAs, these tenets became a lens to inform our scholarly arguments toward dismantling dominant ideologies that tend to take a deficit approach to BMSAs (i.e., seeing disparities or struggles as inherent to individuals and not a fault of systems/structures). At the heart of this paper is providing a counternarrative to the dominant perspective. Thus, we first offer a summary of the dominant perspective found in the literature.

The Dominant Perspective on the Education of Black Male Student-Athletes

Dominant perspectives place the source of BMSA experiences solely on the BMSAs themselves, resulting in a belief that BMSAs should be appreciative of the opportunities afforded to them (Osborne, 2014). Pervasive stereotypes, such as the Black "dumb jock," which holds that these students lack the drive and intelligence to succeed academically (Edwards, 1984), perpetuate the belief that many of these student-athletes would not be in college without athletics. The dumb jock stereotype portrays these athletes "as academically unqualified illegitimate students whose only interest is athletics, who expect and receive special treatment from professors and others" (Simons et al., 2007, p. 252). While this stereotype can be attributed to all student-athletes, race plays a significant role. Being sites of acculturation, schools perpetuate stereotypical views that label Black people as athletically superior, yet intellectually inferior compared to their white counterparts (Harrison et al., 2004). Statistics also place BMSA achievement not only lower than their white counterparts but also lower than other Black students on college campuses (Harper, 2018).

Since BMSAs represent the Black "dumb jock" stereotype, the dominant perspective proclaims they should be grateful for the opportunity to receive an education, which is seen as a priceless gift to these student-athletes (Horne, 2008; Johnson & Acquaviva, 2012). Thus, when conversations about paying student-athletes arise, particularly revenue-generating athletes, people forget the reason for going to college: to receive an education (Coil, 2019). College athletics is seen as merely an avenue to earn a free education (Coil, 2019).

The university is a place that provides all students more than a classroom educational experience. In the case of student-athletes, they are benefitting from access to the best facilities, coaches, travel, nutrition, as well as social activities provided by the institution (Johnson & Acquaviva, 2012). In a message to these student-athletes, Horne (2008) directed, "Don't stare a gift horse in the mouth. Just keep your mouth shut, study, and play" (para. 23). This troubling take is further perpetuated through prominent scholarship, such as Osborne (2014) calling the exploited student-athlete a "myth," with a primary focus on football and basketball, which are Black-dominated sports at the Division I level (NCAA, 2020c). In response to critics of the exploitative system, Osborne (2014) exclaimed, "These are the rules. If you don't like the rules, don't play!" (p. 151).

Although most of the literature does not take such an explicit dominant and deficit-oriented approach to BMSAs, there are still dominant themes in the litera-

ture, particularly around academics. Below we highlight some of these themes using authors who write about the content (though do not take a dominant perspective) to showcase these themes in the literature.

The Dominance of Athletic Identity over Academic Identity

Within the literature on the development of student-athletes, there is a predominant focus on psychosocial identity as an athlete (Bimper, 2014; Harrison et al., 2011). Furthermore, athletic identity has been found to be more prominent in Black student-athletes in revenue-generating sports as opposed to their white counterparts (Bimper, 2014). Higher levels of athletic identity have predicted lower levels of academic achievement, and academic paths deemed less challenging (Bimper, 2014). While college athletics provides many benefits (e.g., scholarships for education, access to resources, and traveling opportunities), there is an aspect of college athletics that does a disservice to the Black student-athlete. The nature of college athletics creates a saliency of athletic identity that leads to lower academic achievement and separation of the academic identity (Bimper, 2014; Harrison et al., 2017; Singer, 2005, 2019; Steinfeldt et al., 2010). As athletic departments emphasize the athletic identity of the student-athlete, less time is allowed for developing their other identities, such as student or racial identity.

This disservice to BMSAs is rooted in interest convergence (Bell, 1995). The athletic department's interests, particularly at Division I HWIs, surround the BMSA performing well on the playing surface. Athletic departments may claim they are invested in the holistic development of the BMSA; however, their minimal efforts to support the student-athlete beyond keeping them academically eligible to play thereby represent the interests of the institution (Comeaux, 2013; Donnor, 2005). Although BMSAs are offered academic support, the perception has historically been that they were at their specific institution to focus on sport (Singer, 2019). An athletic department may appear to act in the interest of the BMSA by offering support services; however, the reality is that the emphasis on athletic identity accurately paints the picture that the interest of the athletic department has and continues to be on the production of BMSAs on the playing surface.

Environmental Interactions Influencing Academic Achievement

Interactions between the college environment and student characteristics influence the academic achievement of BMSAs (Harrison et al., 2006). These characteristics include high school GPA, the variable that most likely predicted college GPA, of which white student-athletes enter with higher scores than their Black counterparts (Comeaux & Harrison, 2011; Harrison et al., 2006). The reasoning behind this can vary; however, access to resources plays a role in this phenomenon as Black student-athletes enter the college setting coming out of high schools lacking the academic resources compared to those schools where white student-athletes graduated (Harrison et al., 2006).

An essential aspect of the student-athlete's experience comes with their interac-

tion with faculty. Despite the reality that BMSA athletic identity tends to overshadow academic identity, many of these athletes turn to faculty members who serve "the role of 'intellectual coach'" (Harrison et al., 2006, p. 277). Student-athletes see positive benefits with increased faculty interaction; however, white student-athletes benefit most concerning GPA (Comeaux, 2005; Comeaux & Harrison, 2007).

From these studies alone, one can note that there are significant differences in the college environment for BMSAs, which directly impact academic outcomes. The NCAA has taken steps to monitor the student-athletes' success by introducing the GSR and the Academic Progression Rate (APR). The GSR monitors the six-year graduation rate (NCAA, 2019) while the APR examines the retention and eligibility of student-athletes each term (NCAA, 2020a). However, simply monitoring a student-athlete's six-year graduation rate and eligibility standards do not create a complete system of accountability. The lack of institutional accountability has led to numerous problems surrounding the academic success of these athletes.

The incorporation of the GSR and APR models further perpetuate these colorblind and race-neutral policies (Solórzano & Yosso, 2002) , which mitigate the importance of critically examining the racial gaps in the academic achievement of student-athletes (Lapchick et al., 2019). Additionally, the monitoring of academic success is grounded in essentialism (Delgado & Stefancic, 2017), which is the "belief that all people perceived to be in a single group think, act, and believe the same things in the same ways" (Ladson-Billings, 2013, p. 47). Grouping all student-athletes in the APR without examining why disparities may occur perpetuates the narrative that all student-athletes are the same.

Another aspect of the college environment relating to BMSAs is the notion of institutional integrity, which refers to the relationship between an institution's stated commitments to behaviors regarding the intellectual and social development of their students (Daniels, 1987). Bimper and Harrison (2017) found that numerous athletic departments commit to academic excellence; however, practices that would improve the development of BMSAs (e.g., increasing Black academic support staff) are lacking (Singer, 2009). If institutions do not maintain an adequate level of integrity and accountability, the academic achievement and development of BMSAs will continue to suffer.

Academic Clustering

One issue the lack of accountability has created surrounding the education of BMSAs is the occurrence of academic clustering. Sanders and Hildenbrand (2010) noted that academic "clustering occurs when athletes join up with other athletes (often their own teammates) in a narrow selection of academic majors" (p. 214). Academic clustering is defined as 25% or more student-athletes in a specific major (Fountain & Finley, 2011). While academic clustering occurs with most athletes participating in revenue-generating sports, some findings prove Black student-athletes face this reality at a higher rate than their white counterparts (Fountain & Finley, 2009).

As previously noted, BMSAs are so consumed by athletics that they are unable to focus much attention on academic identity. One of the reasons for this occurrence is the encouragement of BMSAs into majors that they may have no desire to be in

because certain majors allow the student-athlete to be available for their athletic requirements. Coaches require student-athletes to be at practice, lift weights, watch film, and recover all before placing importance on academics. Further implicating interest convergence, BMSAs being forced into specific majors illustrates the loss of autonomy on the part of the BMSA (Delgado & Stefancic, 2017) as institutional actors identify and promote "easier" pathways for the student-athletes, but only because their interests (i.e., winning games) are being served. Intersectionality (Ladson-Billings, 2013) also comes into play when race and gender are considered, as tracking into academic clusters is most apparent among Black males (Fountain & Finley, 2009; Sanders & Hildenbrand, 2010).

Given the higher percentage of clustering among Black student-athletes than their white counterparts (Fountain & Finley, 2009), we must examine potential sources of the clustering, which likely begins at recruitment. With empty promises being made to these Black student-athletes during recruitment, they get to campus expecting to explore the institution's diverse offerings of majors only to be limited to choosing between a few majors (if given a choice at all). Instead, BMSAs realize only a limited number of majors fit within their athletic schedule. Popular majors/disciplines that student-athletes find themselves clustered into are general studies, communications, social sciences, sport management, and business management, to name a few (Fountain & Finley, 2009). In their study, Fountain and Finley (2009) found that out of the 11 schools in the sample that 6 of them had over 75% of their Black student-athletes in one of two majors. Being clustered into a major such as general studies sets the BMSA up for a challenging transition after college as academic clustering contributes to income inequalities, and those inequalities are seen to be higher within the Black student-athlete population (Sanders & Hildenbrand, 2010).

In reviewing major themes in the literature, the dominant perspective is apparent. Yet, it is essential to examine literature regarding the academic achievement of BMSAs through various lenses to understand this dynamic between education and exploitation better. As noted by Comeaux and Harrison (2011), "Failure to distinguish between these multiple influences on academic success has frequently led to assumptions about student-athletes that too often present them through a deficit lens" (p. 235). We now turn to highlight themes in the literature from a more critical perspective that points to the exploitation of BMSAs.

The CRT Perspective on the Exploitation of Black Male Athletes

Counter to a deficit perspective, more critical perspectives focus on environmental and structural sources of BMSA challenges. The college environment for the student-athlete is defined as encompassing everything that may attribute or impact their time on campus as it pertains to graduating (Harrison et al., 2006). When discussing the educational experiences of student-athletes, it is essential that researchers factor race into the equation. Cooper and Dougherty (2015) proclaimed that "race continues to serve as a mitigating factor in the quality of student athletes' educational experiences at postsecondary institutions" (p. 91). Racial identity has an indirect impact on GPA through other related factors (Bimper, 2014). The existence of ra-

cialized populations in predominantly white spaces creates a unique environment for racialized people, in this case, BMSAs.

Limiting Opportunity

Singer (2005) highlighted two emerging themes in the experiences of BMSAs: the lack of opportunity and the notion of being treated differently. Considering HWIs, the exploitative nature of the athletic system takes advantage of the athletic ability of BMSAs while subsequently being a detriment to their other identities and development (Bimper, 2014; Hawkins, 2010; Singer, 2005). Bimper and Harrison (2011) noted that "race and sport have become inseparable," and while BMSAs are in this impressionable part of their lives, scholars cannot assume the athletes understand that they are operating in a system that has controlled their sense of identity (p. 284). Controlling BMSAs' development also relates to academic clustering previously discussed. When institutions constrain athletes to specific majors, they are negatively impacting their career development (Navarro, 2015).

Another factor influencing opportunity is the lack of Black individuals in leadership roles, both at the player and administrator levels (Singer, 2005). A perceived power dynamic existed where Black people had to prove themselves and impress white hegemony as they ultimately have the power to afford them opportunities. Unfortunately, this power dynamic does not seem to be changing. Just as Ladson-Billings (2013) emphasized that activists must find ways in which to align the interests of the hegemonic powers to those of oppressed groups to see change, so too must the Black population in collegiate athletics. This is because of the unfortunate reality that "interest convergence is about alignment, not altruism" (Ladson-Billings, 2013, p. 45).

Differential Treatment

The second theme from Singer (2005) regarding the experiences of BMSAs was differential treatment. The level of care shown to BMSAs by student-athlete support staff was dissimilar to their white counterparts (Singer, 2005). Additionally, Singer's participants described how numerous opportunities were given to white players when the same opportunities were virtually non-existent to them. These findings echo sentiments apparent in the literature and serve as a wake-up call for those involved with collegiate athletics. Differential treatment is a reality for BMSAs particularly given the racist nature of society and institutions.

The literature on BMSAs highlights the inherent nature of racism in society. This theme aligned with the CRT tenet emphasizing the ordinariness of race and racism (Delgado & Stefancic, 2017; Ladson-Billings, 2013; Singer, 2005). Additionally, Bimper (2014) acknowledged the uniqueness of the experience of BMSAs in the context of race. Likewise, facing discrimination from multiple identities is a reality for many Black student-athletes (Steinfeldt et al., 2010). Acknowledging that racism and other forms of discrimination are apparent in the realm of college athletics is vital as it opens the door for future research to be conducted regarding the impact race has within various aspects of collegiate athletics.

In contrast to the dominant perspective, the CRT perspective on BMSAs sheds

a different light on the experiences of this population. Student-athletes should not remain silent and allow for the maintenance of the status quo, such as Horne (2008) suggested. Instead, we understand that institutions of higher education, particularly HWIs, have taken advantage of BMSAs for far too long (Beamon, 2008; Cooper, 2019; Harper, 2018; Singer, 2019). To address this concern, as well as extend the work of Singer (2008), we constructed a composite narrative concerning BMSAs.

Composite Narrative

Composite narratives are useful tools utilized by critical race scholars to highlight counterstories of racially minoritized individuals (Alemán & Alemán, 2010; Espino, 2012; Solórzano & Yosso, 2002). Specifically, "authors create composite characters and place them in social, historical, and political situations to discuss racism, sexism, classism, and other forms of subordination" (Solórzano & Yosso, 2002, p. 33). Of note, composite narratives are grounded in data of varying type. The narrative we present is built from a combination of existing literature related to BMSAs and experiential knowledge. Within the narrative, there are references to literature that speaks to a specific claim or action. The counterstory is also created from knowledge gained through lived, professional, and scholarly experiences of the authors. I, Jonathan Howe, identify as a Black man who researches and works closely with BMSAs. My experiences working in collegiate athletics and spending informal time advising and mentoring BMSAs helped construct the narrative. I, Marc Johnston-Guerrero, identify as a multiracial Asian American man who studies campus racial climate and identity development for Students of Color. My practical experiences as an academic advisor in TRIO programs also informed the narrative.

The narrative is drawn from the perspective of an athlete support professional (Jamal) who is also a Black male. Jamal is going into his fifth year in his role at Big State University Athletic Department. Prior to this role, Jamal was a standout student-athlete at Big State as he received academic all-American and conference honors as well as similar honors for his play on the football field. Jamal graduated with his master's degree before a brief stint in the NFL as an undrafted free agent before coming back to Big State. Throughout the narrative, which includes interactions with BMSAs, we illustrate the intricacies of the BMSA experience related to the discourse of being educated or exploited.

A Counterstory from a Both/And Perspective

Jamal woke up Monday morning with an unexpected level of energy toward the week ahead. As one of the only Black male athlete support service professionals at his HWI, Jamal knew the vital role he would play in the weeks ahead. Coming off a win against their biggest rival, the football team was looking ahead to finish off the season strong. Unfortunately, several of the athletes were on the verge of ineligibility and had appointments with Jamal this week for advising. Jamal wished he were not the only one the Black male football players felt connected to in his office (Council et

al., 2015). In particular, he wished there were more faculty who engaged the students and held them to the same expectations of their white counterparts.

Jamal remembers reading a study by Harrison et al. (2006) that found "faculty who provided intellectual challenges and stimulation for their students, encouraged graduate school, and helped in achieving professional goals made a relatively strong contribution to student success" (p. 281). Unfortunately, most faculty take a deficit approach (i.e., focusing solely on students' problems, needs, and deficiencies) to working with the Black football players, despite many BMSAs embodying intelligence and a drive that leads to academic success (Cooper, 2016b). In fact, Jamal knew numerous BMSAs who were academically successful (Cooper, 2016b).When students discuss coursework out of class with faculty, they tend to have more negative academic achievement. This outcome was not necessarily a surprise since Harrison et al. (2006) also argued that "students generally tend to seek assistance with their study skills when they are not doing well academically" (p. 282).

Jamal wondered how he could encourage the faculty members to increase communication and mentorship to these student-athletes, especially Black student-athletes. He remembered Harrison et al. (2006) noting this must be done in response to the needs of the student-athletes (see also Cooper, 2016a). For example, in designing programs to create these relationships with the student-athletes, focus should be placed on understanding how the practices in play can impact the student-athlete's academic achievement (Harrison et al., 2006). In offering solutions to improve upon the Black student-athlete and faculty interactions, Harrison et al. (2006) posited the following:

> Faculty should not necessarily treat student-athletes differently from traditional students. Rather, faculty should be cognizant of their role as mentor and use this role as an opportunity to cultivate in students the best that academics and sport offers: dedication, commitment, perseverance, and teamwork. (p. 282)

In his position as the sole Black male representative in the athletic academic support services office, Jamal understood the landscape regarding racial representation in higher education. He recalls numerous meetings with the Black student-athletes he advises where statements such as "none of my professors look like me" or "he (the professor) doesn't care about Black people" were commonplace. Jamal noticed that these student-athletes were reluctant to approach white faculty members. Continuing to think of solutions regarding faculty interaction, he remembered Comeaux and Harrison (2007) positing, "The college experiences of Black student athletes at predominantly white institutions are often times hindered as a result of feelings of social isolation, racial discrimination, limited support and lack of integration. Thus, Black student athletes may choose to spend as little time as possible with white faculty" (p. 208).

An idea then came to Jamal to try to increase the informal interaction between faculty and student-athletes. Comeaux and Harrison (2007) highlighted numerous ways to accomplish this goal, such as inviting faculty to attend practices and games, developing faculty mentoring programs, and inviting faculty to athletic banquets.

Jamal made a note to mention this idea to the head football coach the next time they met.

Later in the day, a BMSA by the name of Malcolm stopped by Jamal's office to talk about something that has been on his mind lately. Malcolm exclaimed, "Why does it seem like everyone in the athletic department is benefitting from the work of the football team?" Clarifying his comments, Malcolm noted in his class discussion around the business of college sport he learned that the football and men's basketball teams essentially funded all of the other sports in the department (Gaston-Gayles et al., 2018; Harper, 2018; Hawkins, 2010; Van Rheenen, 2013). Jamal responded in a way that did little to quell the anger Malcolm exhibited, noting, "Well, that is because it is true. The work that you and your teammates are doing provides opportunities for other student-athletes to compete at the highest level." Malcolm processed this comment for a few moments and then became angered again. "Why are we supporting the women's golf team or rowing team?!" Not knowing how far to take the conversation, Jamal then provided a basic description of Title IX, noting that it affords equal opportunity and funding for women in sport at institutions receiving federal funding (Buzuvis & Newhall, 2012).

In response, Malcolm questioned, "Yeah, that is good and all, but there aren't many Black women in those sports. If we are supporting other sports, why can't we support Black women equally?" Jamal then opened up the conversation with some of his thoughts about Title IX. He emphasized how Title IX has afforded more opportunity for women to compete in sport; however, white women have benefitted the most because the sports used to increase participation are sports that require a high social class position (McGovern, 2018; Pickett et al., 2012). While not explicitly mentioning the word "exploitation," Malcolm left the conversation knowing that BMSAs generate money for the university to support other sports while also perpetuating the exclusion of Black women (Pickett et al., 2012). Jamal apologized to Malcolm for not making him feel better about the situation; however, Malcolm was thankful for the conversation. He responded, "You always keep it real with me. I know that I can come to you to discuss these things."

It is now 1 PM, and Jamal just finished a quick lunch while trying to catch up on emails and is now preparing for an academic advising session with a freshman Black male basketball player (Kevin) in his first semester. During that meeting, Jamal asked the student what career path he intended to pursue. Kevin responded, "First and foremost, it has been my dream to play in the NBA, so I want to pursue that. However, I have always liked engineering, so if the league doesn't work out for me, I want to be an engineer." Jamal has heard this story before (Harrison et al., 2017). Several student-athletes, particularly Black student-athletes, have walked through his door enthusiastic about majoring in one of the top disciplines (and most competitive/selective) of the university. To the censure of Jamal, their coaches utilize the institution's most valuable majors as a recruiting tactic, even though Black student-athletes often enter the collegiate setting with less academic preparation than their white counterparts (Cooper, 2016a), making their pathway to such selective

majors more difficult. For Jamal, this felt like another example of utilizing the promise of academics to exploit BMSAs.

Jamal never doubted the ability of his BMSA advisees; instead, he often questioned the transparency about the necessary steps to reach their goals. Therefore, he felt a responsibility to his advisees to speak truthfully and guide them through the process. In discussion with Kevin, Jamal explained, "It is great that you have your eyes on an engineering degree; however, it cannot be a back-up option. It is going to take the same amount of time and energy as you devote to your athletic feats." Kevin responded with a willingness to exert the same amount of energy to his academics. Jamal then went through a list of items for Kevin to take note of, including the times of class offerings. "Most of the pre-requisite courses for that major are offered in the afternoon, during practice, so you need to discuss this plan with your coach. Once you inform him, I recommend taking the four pre-requisites during the spring and summer semesters," Jamal advised. He continued by highlighting the need to maintain a 3.25 GPA for admission into the major.

Before providing these recommendations, Jamal understood the influence that coaches have on their athletes' time as well as the structuring of incentives for coaches, which leads to unnecessary time BMSAs spend committed to their sport as opposed to developing in other areas (Howe, 2020). Jamal noted, "I know you feel like there is minimal opportunity to make your own choices, and that you often have to defer to your coach; however, the first step to take in this situation is to open up a dialogue about your desire to pursue an engineering degree." Kevin, feeling unsure about the plan, stated, "That sounds like a lot of hard work. I don't know if this is for me anymore." Jamal encouraged Kevin but also discussed a range of majors for Kevin to examine while hitting home the point that future careers are not always dependent on specific majors. He finished the conversation by stating, "There are always easier routes; however, I will encourage you to pick the route that most interests you. I will never push you to declare a specific major because it is easier or allows you to spend more time focusing on basketball. I will advocate for you regardless of the decision you make. If you want to be an engineer, I am on your side."

After wrapping up his meeting with Kevin, Jamal – whose advising timeslots are usually full – noticed that he did not have any additional meetings on his calendar. Still bothered by some of the recurring themes of exploitation impacting the BMSA experience, Jamal remembered an article sent to him from the university's faculty athletic representative that he would now have time to read. The article by Cooper (2016a) introduced a framework to enhance the BMSA experience called Excellence Beyond Athletics (EBA). Narratives surrounding the BMSA should be less about the "deficit-laden attributions" and should instead be more focused on the academic underperformance of the BMSA as a byproduct of systemic issues surrounding the failure to prepare these Black males (Cooper, 2016a).

Jamal was intrigued by the article's explanation of the EBA framework, which employs an anti-deficit approach that focuses on the BMSA's strengths as a method of empowerment. It is comprised of six key components in this holistic development

process for the BMSA: self-identity awareness, positive social engagement, active mentorship, academic achievement, career aspirations, and balanced time management (Cooper, 2016a). Of these six components, Jamal realized that he could play an immediate role in active mentorship, academic achievement, and career aspirations. The active mentorship aspect of EBA involves creating a faculty mentorship program for BMSAs (Cooper, 2016a), similar to Jamal's idea to increase faculty interaction. Subsequently, he knew that this mentorship needed to extend beyond faculty members and include athletic support staff as well (Gaston-Gayles et al., 2015; Harrison & Martin, 2012). Jamal also made it a point to discuss with the athletes that they should form constellation networks of various mentors to serve different needs (Kelly & Dixon, 2014; Martin et al., 2010).

After reading the article and reflecting on his experiences, Jamal realized there needs to be a bridge to strengthen the connection between academics and athletics. There needs to be academic support programs for these student-athletes that are university-wide, faculty using culturally relevant pedagogies, and potential reforms in the first-year student-athlete experience where they will be free from athletic commitments in order to better acclimate to campus (Comeaux & Harrison, 2011; Cooper, 2016a). Additionally, Jamal noticed that he already enacted some of the strategies within the career aspirations component during his advising meetings with Malcolm and Kevin. He made it a point to allow the student-athletes he advises to explore various career paths while also giving them the freedom to choose their majors (Cooper, 2016a).

Within the career aspiration components, Cooper (2016a) discussed the importance of inviting former athletes and alumni who share similar racial and sociocultural backgrounds as BMSAs. Jamal, with an awareness of his former teammates and friends within athletics who have cultivated successful careers outside of sport, and current industry connections, began thinking of ways that he could bring in those who shared similar social identities and experiences as his current BMSAs on campus. In similar regard, Jamal sought to incorporate narratives outside his network from BMSAs who have successfully negotiated both their student and athlete roles. He noted that having an example such as Myron Rolle who was an outstanding football player, graduated early, attend Oxford on a Rhodes Scholarship, and is currently a doctor. Jamal figured that an exemplary story like this would set an example for BMSAs on how to manage multiple, sometimes conflicting roles (Harrison et al., 2010). After reading Cooper's (2016a) article, Jamal felt assured that he could use the EBA framework to both acknowledge the feelings of exploitation his students voiced and reframe their focus on academic success to be inclusive of athletic success.

Discussion

The above counterstory of just one day's work for a Black male professional within an athlete support service office reflects the realities that BMSAs may be receiving a college education, yet the feelings of being exploited cannot be denied. Faculty and staff interested in genuinely supporting the success of BMSAs need to better understand these dynamics. Based on our review of the literature through a

CRT lens, we believe that being critical is necessary for exposing the deficit-laden discourse and practices that lead to feelings of being exploited. But being critical can only get us so far. We also need strategies to move our work forward that attempts to disrupt the structures and policies oppressing Black athletes toward their ultimate liberation. As outlined in the counterstory, Cooper's EBA framework offers such strategies. Here, we highlight the three additional elements not discussed in the counterstory: self-identity awareness, positive social engagement, and balanced time-management.

Self-identity awareness is put in place to counteract the overemphasis that is placed upon the BMSA's athletic identity (Bimper, 2014; Cooper, 2016a; Harrison et al., 2006). Self-identity awareness is often facilitated through race-related discussions, including focusing on racial microaggressions (Cooper, 2016a). Solórzano et al. (2000) defined racial microaggressions as "subtle insults (verbal, nonverbal, and/or visual) directed toward people of color, often automatically or unconsciously" (p. 60) and emphasized the need to create counter-spaces as a response to the racial microaggressions Black students experienced on campus. Solórzano et al. (2000) posited "counter-spaces serve as sites where deficit notions of people of color can be challenged and where a positive collegiate racial climate can be established and maintained" (p. 70). These counter-spaces can be utilized to empower BMSAs and afford them the confidence to challenge exploitative situations through increased awareness of and meaning ascribed to their identities.

The next aspect of EBA is positive social engagement. Cooper (2016a) noted positive social engagement allows student-athletes the ability to find purpose outside of their athletic ability while giving these athletes a chance to create and foster relationships within the community. Key examples of this would be engagement with Black fraternities and religious-affiliated organizations. Gragg and Flowers (2014) found that fraternity involvement positively influenced BMSAs as it connected them with community service opportunities and allowed BMSAs to gain a sense of brotherhood away from their athletic team. Likewise, being engaged with religious organizations has also provided areas for growth outside of BMSAs' athletic role (Gragg & Flowers, 2014).

The final element of the EBA framework is balanced time management, which aligns with a call to action for universities to enforce the 20-hour rule that the NCAA has put in place (Cooper, 2016a). This rule is supposed to limit the student-athlete's practice time to 20 hours per week. However, this is not the reality as some athletes can spend as much as 40 hours a week focused on their sport (Harrison & Martin, 2012; New, 2015). These sentiments are shared by Porter (2019), as he argued that institutions have an obligation to assist this population with time management plans. While some athletes may still opt to spend more time developing their athletic skills, further enforcement of this rule will eliminate institutions from informally requiring athletes to devote extra time to their sport.

The examination of pertinent literature regarding the shaping of the BMSA experience highlighted many issues that could be mitigated with the implementation of strategic programming, such as the EBA approach recommended by Cooper (2016a). While there are proposed plans and recommendations for the improvement of BM-

SAs' academic experiences, Gaston-Gayles et al. (2015) noted that there is not a one size fits all model for supporting BMSAs. However, they did argue that effective practices should be put in place that have been proven to improve the academic success of BMSAs. The following implications are discussed so that higher education institutions and collegiate athletic departments can act to remedy the disservice they have shown BMSAs.

A topic that has not received much attention is the entry points to college for BMSAs. While many BMSAs may come straight from high school, some may transfer from community colleges, often with the aspirations of playing professionally (Harper, 2009). Their aspirations for playing professionally are less significant than the fact that they may come into the four-year institution at varying academic levels, which further emphasizes the need for aspects of EBA to be implemented. For example, there is a need to support Black male transfer student-athletes during the transition, and there may be an opportunity to introduce a first-year transfer program. By implementing these recommendations, the institution will be reaching Black student-athletes and engaging them in purposeful dialogue while serving as a bridge to assist the transfer student-athlete with their adjustment.

Not only is the implementation of EBA recommendations necessary, but equally critical is looking at who is creating this narrative and working with the BMSAs. According to the National Association of Academic and Student-Athlete Development Professionals (N4A), the professional organization for athletic academic support staff, academic support staff within athletics are professionals who are "dedicated to the academic and personal development of student-athletes" that includes the commitment to "educate, prepare, and advocate for student-athletes through transition, retention, graduation, and beyond" (National Association of Collegiate Director of Athletics, 2018). It is essential that there is representation of Black males employed as members of the academic support staff within the athletic department (Council et al., 2015). Referencing CRT, these Black male academic advisors embody the counternarrative in opposition to the deficit-based narrative surrounding Black males and BMSAs (Council et al., 2015; Delgado & Stefancic, 2017; Solórzano & Yosso, 2002).

It is imperative that employees at higher education institutions be educated on serving diverse populations as the needs of these students may vary (Council et al., 2015). While improving the representation of Black male athletic academic advisors does not automatically lead to stronger relationships between the BMSAs and their advisors, "it increases the likelihood of shared experiences and a deeper understanding of the unique challenges faced by Black males," especially at HWIs (Council et al., 2015, p. 85). Additionally, more Black male academic advisors could diminish interest convergence occurring.

With the purposeful relationship building between BMSAs and Black male advisors, there is an increased likelihood of genuine care that will be displayed by the advisor as opposed to acting in their self-interest. However, it is also of importance to note that a limitation of interest convergence is primarily based on the notion that white people always act in their self-interest (Harper, 2009). Just as Harper (2009)

noted, there are likely some white academic advisors who act in the interests of BMSAs. However, as the counterstory outlines, Black male academic advisors have a unique opportunity and should see themselves better represented in these roles, especially because of the inherent differences that Council et al. (2015) highlighted. Amid this reform, there lies a need for athletic academic advisors and higher education institutions to move from trying to maintain player eligibility (Comeaux, 2013), which perpetuates low expectations (Bimper, 2014; Bimper & Harrison, 2011; Harrison et al., 2017). Unfortunately, Black males are underrepresented in athletic academic support services, which creates a need to recruit and retain these individuals who can appropriately work with BMSAs on campus (Council et al., 2015).

We also acknowledge that only having Black support staff is not the reality, particularly at HWIs. Thus, it is recommended that all athletic support personnel, regardless of race, pursue culturally relevant developmental opportunities. One specific example would be attending the annual Black Student-Athlete Summit, which is now expanding its reach by offering regional summits. A wealth of knowledge is shared concerning issues of the Black student-athlete grounded in research, which offers direct translation to practice. Additionally, many of their resources are readily available on their website (https://www.bsasummit.org/).

In addition to the need to increase Black male representation in academic advising positions, there is also a need to increase Black faculty across campus. Faculty guidance and relationships are critical, particularly to the benefit of Black student-athletes (Comeaux, 2005; Comeaux & Harrison, 2007; Harrison et al., 2006). Similar to the reasons for increasing Black male academic advisors, increasing Black faculty members at HWIs is vital as same-race mentorship experiences can increase levels of inspiration and engagement (Davis, 2007). Additionally, Davis (2007) emphasized, “Sparse numbers of Black faculty within the professoriate suggests a need for both commitment towards cultivation, recruitment, and retention of tenure earning Black faculty” (p. 227). Thus, increasing the number of Black faculty on campuses has the potential to improve the experiences of BMSAs at HWIs. However, our call to increase Black representation across campus is not limited to faculty. We extend this push to increase Black representation throughout campus, including senior leadership, non-athletic academic advisors, and staff.

Conclusion

This paper examined the BMSA experience at HWIs from a critical lens. Analyzing the existing literature through a CRT framework allowed for the creation of a counterstory that highlights how the hegemonic powers (collegiate athletic departments and higher education institutions) continue to oppress and exploit Black male bodies. When thinking of interest convergence, one example was the funneling of BMSA into majors that allow increased time spent on sport, which ultimately benefits the athletic department. Additionally, intersectionality emerged as not only were Black bodies being oppressed and exploited through a racial lens, their loss of autonomy illustrated oppression from multiple identities as the athletic departments

viewed the BMSA in a lower class (Smith, 2010).

In addition, this paper sought ways to dismantle the system that perpetuates the exploitation of BMSAs (Hawkins, 2010). One way to dismantle these structures is by generating counternarratives like the one shared here to challenge dominant ideologies surrounding BMSAs. These dominant ideologies highlight the achievement gap between Black student-athletes and white student-athletes but fail to critically examine the reasons why this may occur. More research highlighting the voices of BMSAs discussing their experiences is needed.

Overall, institutions of higher education and athletic departments should seek ways to implement the EBA approach on their respective campuses. However, it is often the structure of intercollegiate athletics that places the BMSA at a disadvantage as the university benefits financially off their athletic talent without investment into their development off the playing surface (Cooper, 2016a). In agreement with Cooper (2016a), "[T]he adoption of these Excellence Beyond Athletics approaches sends the message that Black male student-athletes' identities are valued beyond athletics" (p. 280). Thus, we argue that BMSAs can be both educated and exploited while utilizing the EBA approach to provide further options to center excellence in academics without being exploited. Moving forward, more attention should focus on understanding the unique position BMSAs find themselves in during college.

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Endnotes

1. We note that much scholarly work utilizes the terms African American or Black. Cokley (2007) made the distinction between the two terms when he noted that African American refers to one's ethnicity which is a group of people with shared history, ancestry, and cultural traits; while Black refers to one's race which is society's grouping of people based off shared physical and hereditary characteristics. While these terms are often used interchangeably, based off Cokley's (2007) distinction between the two terms and the presumption of CRT that race is a construct of society (Delgado & Stefancic, 2017) we use the term Black throughout this paper as a way to avoid confusion for the reader.

Journal of Intercollegiate Sport, 2021, 14.2, 42-65
https://doi.org/10.17161/jis.v14i2.14835

Outsiders Within: College Sport as an Avenue to Integrate East Asian International Students

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International students represent a valuable stakeholder for U.S. institutions of higher learning, but universities often struggle to integrate this unique student group into the university community. Drawing upon social identity theory and the acculturation process, this study explored how college sport contributes to international students' university identification using narrative interviews with East Asian international students who attended college football events at a U.S. university. Findings revealed international students mainly interacted with their co-national peers during college football games while associating with the football spectator subgroup through the influence of American students, which contributed to their university identity. Theoretically, our research shows how college sport and acculturation interact to influence the various social identities of international students. Practically, our research offers guidance on how universities can use college sport to initiate organic social interactions between students from different cultures and empower international students to identify as essential members of universities.

Keywords: Social identity, Acculturation, College sport, International students, Narrative interviews

International students are important stakeholders for U.S. institutions of higher education. During the 2019-20 academic year, over one million international students were enrolled at U.S. universities and contributed $38.7 billion to the U.S. economy (NAFSA, 2020). Despite a recent drop in new international enrollment, experts expect the total number of international students in the U.S. to remain stable and U.S. universities will continue to remain popular destinations for studying abroad (Moody, 2020). In addition to their economic impact, international students also create cultural and intellectual capital by enhancing diversity, fostering cultural exchange, and enriching the U.S. workforce (Lapchick, 2010; Smith & Khawaja, 2011). For instance, nearly 25% of leading startup companies had a founder who came to the U.S. for educational purposes (National Foundation for American Policy, 2018). The benefits international students bring to the U.S. has led universities to embrace these students for mutual success.

Despite their significant contributions, international students often find it challenging to integrate to U.S. universities. While international students study abroad to pursue educational advancement, most are also motivated by an interest in participating in larger socio-cultural exchanges, such as exploring different cultures and making new friends (Holtbrügge & Engelhard, 2016). However, even as international students strive to adjust to the culture and lifestyle of their universities and U.S. society, they are likely to feel isolated from mainstream U.S. culture (Zhou et al., 2018). Problems with a foreign language (e.g., American English), lack of understanding of American culture, and immigration-related issues are just a few examples of the many challenges that students' experience when studying in the U.S. (Smith & Khawaja, 2011; Wu et al., 2015). These challenges are particularly troublesome for East Asian students, the largest international student group studying in the U.S., considering the large cultural gap between East Asia and the U.S. (Li et al., 2019). Compared to students from other parts of the world such as Europe and South Asia, East Asian international students often experience communication difficulties and perceived prejudice, making them less likely to seek help for their respective challenges (Frey & Roysircar, 2006; Jones & Kim, 2013). Because of this situation, U.S. universities are seeking strategies to better integrate international students, particularly those from East Asia, onto their campuses.

One way to mitigate challenges confronting international students and U.S. universities is to utilize college sport to foster students' university identity. University identity forms when students associate their university membership with emotional and cognitive meanings (Clopton, 2011). Students who identify with their universities are more likely to maintain psychological wellbeing, build a strong social network, achieve academic success, and donate back to the university (Brunette et al., 2017; Wann et al., 2008). Among international students, university identity positively influences their social relationships within the university community (Quinton, 2020), university satisfaction, and general life wellbeing (Cho & Yu, 2015). As such, a strong university identity among international students is a highly sought-after outcome for university administrators (Steiner et al., 2013).

While recreational sport (Allen et al., 2010) and student clubs (Wu et al., 2015) can also facilitate the integration of international students, college sport offers intriguing integration potency considering its significant role at U.S. universities. Sport spectatorship in general can facilitate individuals' social psychological wellbeing (Inoue et al., 2015), and college sport in particular is regarded as universities' "front porch" – as university athletic programs are often the first thing that comes to mind when thinking about a university (Pratt, 2013). College sport, especially college football, plays an important role in both the culture of U.S. higher education and broader American culture (Toma, 2003). However, research has shown that international students tend to have limited knowledge and experience with college sport (Kang et al., 2014). Despite this unfamiliarity, the distinct cultural aspect of college sport presents an opportunity for institutions of higher education to improve integration of international students.

To explore the potential of college sport to integrate international students to the university community, the current research investigated how attending college football games influenced international students' university identity with a focus on East Asian international students. We explored international students' multiple social identities (i.e., relational group, subgroup, and superordinate group identities) that form around the university and college football using social identity theory (Tajfel & Turner, 1979; Lock & Funk, 2016). In addition, we applied the notion of acculturation, the process of adjusting to a different culture (Berry, 1997; Ward, 2001), to examine how international students perceive and react to college football spectacles as a cultural subject.

Theoretical Background

College Sport and International Students

Within the field of sport and higher education studies, a significant body of literature has examined the social impact of college sport on university students. Existing studies have examined how college sport influences students' social capital (Clopton, 2011), psychological health (Wann et al., 2008), and university identification (Katz & Heere, 2016; Kim et al., 2016). While some studies report that college sport promotes positive social changes (e.g., Katz & Heere, 2016), others report the opposite (e.g., Clopton, 2011). Clopton (2011) specifically argued that identifying with college sport may bond students into small homogeneous social networks prohibiting the development of a larger cohesive university community. Collectively, the social integration function of college sport among international students remains ambiguous.

There are two streams of literature related to college sport and international students. The first research stream focuses on international student-athletes. Overall, this line of research seeks to understand how international student-athletes differ from their domestic peers (e.g., Popp et al., 2009) and their adjustment and integration issues (e.g., Lee & Opio, 2011). Despite its relative importance, this line of research provides limited insights to the experience of international non-athlete students, who receive far less institutional support than their student-athlete peers (Forbes-Mewett & Pape, 2019).

The second stream of research examines international students' participation in sport and leisure, with limited research focusing on spectatorship. Overall, this body of literature suggests positive dynamics between sport participation and students' social adjustment to college life and the U.S. society (Allen et al., 2010; Glass et al., 2014). Among studies examining the spectator perspective, a common finding was international students' lows rates of game attendance despite considerable interest in college sport (Kwon & Trail, 2011; Kang et al., 2014). While insightful, these studies omit how college sport relates to international students' psychological connection with the university. To date, no in-depth study has examined international students' college sport spectator experience and how the experience may influence students'

university identity. In the current research, we explored the different social groups with which international students identify through college sport under the guidance of the Multiple Ingroup Identity Framework.

The Multiple Social Identities of International Students

Social identity is the part of one's self-concept derived from group membership, together with cognitive and emotional significance attached to that membership (Tajfel, 1974). Individuals build and maintain social identities by interacting and associating with various social groups with desirable memberships (Tajfel & Turner 1979). Lock and Funk's (2016) Multiple Ingroup Identity Framework (MIIF) conceptualizes three levels of social groups with which individuals identify, labeled the superordinate group, sub-group, and relational group (see Figure 1). The outside circle in Figure 1 represents the superordinate group, which is the largest and most abstract social group. Identification with the superordinate group contributes to an individual's self-concept, self-esteem, and reduces subjective uncertainty (Brewer, 1991). In our research context, the superordinate group can be considered as the university, as it is the most abstract and inclusive group membership affiliated with a university.

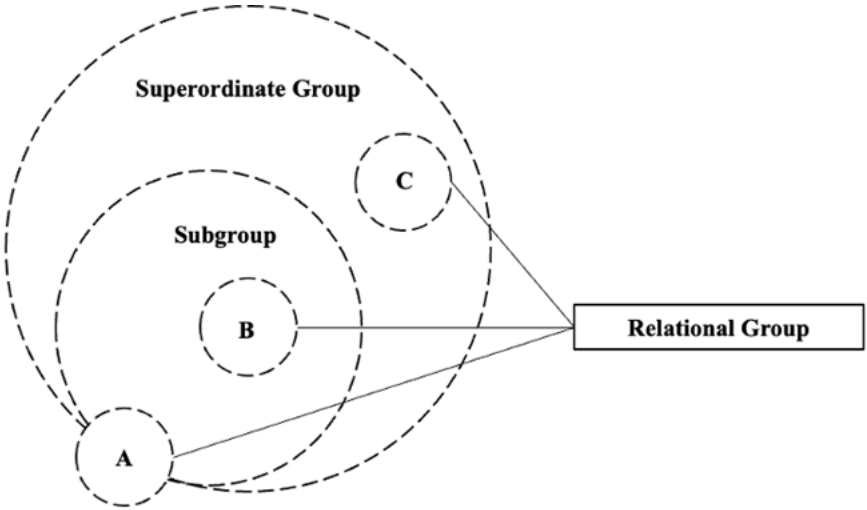

Figure 1. Superordinate Group, Subgroup, And Relational Group

Within the superordinate group, a sub-section of members may further identify with smaller and less inclusive subgroups. Subgroups are established based on group properties, such as group image and reputation (Zhang et al., 2014). A subgroup provides its members with a frame of reference that defines appropriate attitudes and behaviors, and members seek to incorporate these group properties into their self-concepts (Postmes et al., 2005). As a result, individuals are usually attracted to subgroups with desirable properties enhancing one's self-esteem (Dukerich et al., 2002; Hornsey, 2008). For college students, the subgroup may be a major, a class, a club, or the university's sport team. These subgroups provide students distinct memberships within the larger homogeneous university identity.

Relational groups, represented by Circles A, B, and C in Figure 1, are the smallest and least inclusive social groups, where social interactions occur in smaller interpersonal networks. Relational groups arise from personalized bonds and social interdependence among members and may function within or aside from higher grouping levels (Brewer & Gardner, 1996). Specifically, Circle A represents when relational group members are connected by relationships and associations that extend beyond superordinate and subgroup identities, such as when a person identifies with a sport team under external influence from friends and family (Funk & James, 2006). Accordingly, the relational group can serve as a pre-existing external agent socializing an individual into a larger social group. In contrast, Circles B and C describe relational groups emerging from subgroup and superordinate memberships, respectively. For example, college students may form close social connections with each other through following the university's sport team (Wann et al., 2011) and joining sport fan communities (Yoshida et al., 2015). While the three types of relational groups (i.e., Circles A, B, and C) are formed through different mechanisms, they all stress emotional attachment, warmth, and interpersonal attractions among members, rather than group-level characteristics (Zhang et al., 2014). For our research context, the relational group may be a group of international students attending college sport games together as friends or students interacting with each other in a game and developing new relationships.

Past research has examined various social groups international students form through sport such as friends they meet through classes and sport activities (Li & Zizzi, 2018), the university's sport teams (Kim et al., 2016), and students' heritage cultures as well as the American culture (Allen et al., 2010). The complex dynamic among these social identities, however, has not been adequately portrayed as these studies tend to examine one singular social group and overlooked intergroup relations. Students' identification with college sport relates to their university identity (Clopton, 2011) and this relationship has not been explored among international students. Lock and Funk (2016) advocated for more research on the various levels of social groups and their interconnections that might exist within a superordinate group. In the current research, we focus on subgroup and relational groups with which international students identify and to which they belong and how these groups contribute to international students' superordinate university identity. This leads to the first research question.

Research Question 1: How do international students' relational group and subgroup formed through college sport influence their university identification?

Addressing the first research question will provide new insight into the dynamics associated with international students' multiple identities. However, international students' college sport experience also involves cultural nuances. Many aspects of the college sport spectacle, such as tailgating, rituals, half-time entertainment, massive stadiums, and even the sport itself, can vastly differ from sports that exist in international students' countries of origin (McDonald & Karg, 2014). Hence, college sport may present a cultural subject for international students. Given that seeking new cultural experiences is an important motivation for international students who study in the U.S. (Institute of International Education, n.d.), international students

may use college sport as a tool to learn about and adjust to the culture of their university and the U.S. society. This cultural perspective is accounted for by the process of acculturation.

Acculturation, College Sport, and Social Identity

Acculturation happens when continuous first-hand contact between two different cultures results in changes in both cultural groups (Berry, 1997). In this process, one culture tends to maintain its heritage and determine the direction of cultural change, and the other culture adapts to the change (Berry et al., 1989). While past literature in acculturation has mostly focused on permanent migrants (e.g., Lee & Funk, 2011), attention on short-term newcomers such as international tourists (e.g., Rasmi et al., 2014) and international students (e.g., Smith & Khawaja, 2011) is growing.

Newcomers, such as international students, display a multitude of behavioral and cognitive changes when entering a new culture (Ramanathan, 2015; Ward, 2001). Behavioral changes include cultural-learning initiatives and the acquirement of culture-specific skills (Ward et al., 2009). Learning a new language and social skills are especially important for acculturating students from East Asia (Glass et al., 2014; Zhou et al., 2018). Cognitive changes due to acculturation influence cultural identity in terms of how newcomers recognize, categorize, and perceive themselves and others (Ward, 2001). While international students arrive in the U.S. with their heritage cultural identities, the cultural identities may change when students develop and adjust their knowledge and associations with the American culture (Berry et al., 1989). Identification with the heritage vs. host cultural group is at the root of intercultural-intergroup biases (Tajfel, 1974) and fundamental to the acculturation process (Ward, 2001).

Within sports management, scholarship on acculturation has largely mirrored broader sociological and psychological studies. Existing sport management research has underscored the positive relationship between sport participation (e.g., fitness classes, intramurals, sport clubs) and acculturation for the general college student population (e.g., Kim et al., 2016; Lee & Funk, 2011) and international students (e.g., Allen et al., 2010; Glass et al., 2014). However, less is known about how acculturation operates in the sport spectator context and findings from prior research are inconsistent. Some studies report positive relationships between sport spectatorship and acculturation (Ha et al., 2014), whereas others report an insignificant relationship (Harrolle & Trail, 2007; Li et al., 2015). For instance, in their study of Chinese immigrants in Australia, Li et al. (2015) found immigrants who watched Australian sports did not identify more as Australians than those who did not watch. Reflecting on the negative role played by leisure, including sport spectatorship, in the acculturation of Chinese international students, Zhou et al. (2018) called for more in-depth research on the complex interaction between sport and acculturation. Accordingly, our second research question draws on the behavioral and cognitive dichotomy of acculturation to examine how international students react and perceive college sport as a cultural subject.

Research Question 2: How do international students experience cultural learning and cultural identification at college sport games?

Method

Research Context

Our research was conducted at a 4-year public university in a large city located in the northeastern U.S. At the time of the study, the university had approximately three thousand international students, constituting 7.3% of its total enrollment. The majority of international students were from East Asia, with approximately 50% from China and 7% from South Korea. Data were collected when the university was focusing on expanding its international student enrollment but was experiencing difficulties engaging East Asian students, adding to the practical relevance of our study.

While the university hosted a variety of college sport programs, we focused on football given its dominant role in American culture, particularly at the intercollegiate level (Pratt, 2013). The university's football team competed in the NCAA's Division I (D-1) and had a heightened role in university life during our data collection due to the team's recent success. The university was seeking to leverage the increased prominence of its football team to engage international students by sending them game promotion emails, setting up special tailgate tents for them at home games, and offering them "Football 101" tutorial sessions to introduce football game rules. These outreach activities provided a salient context to gather in-depth information on the multiple social groups international students form through college football.

Data Generation

Data were collected through narrative interviews with international students who had attended at least one home university football game during the season in which seven home games were held. According to previous studies on other D-1 football programs, international students, on average, attend fewer than one game per season at their institutions (Kang at al., 2014; Kwon & Trail, 2001). International students, especially East Asians, tend to have limited knowledge and experience with American football (Kang at al., 2014).

We collaborated with the university's Office of International Affairs to send out email invitations about the study. Students who were interested in the study contacted us to set up a time and location for the interview. We selected participants based on their gender, year in college, elapsed length of stay in the U.S., and nationality to ensure a variety of participants who were able to provide rich and diverse information on our research questions. Consummate with narrative interviewing, we focused on the depth of interviews as opposed to quantity to gather detailed and vivid accounts of participants (Anderson & Kirkpatrick, 2016). After ten interviews, we noticed similar themes continued to emerge and extra interviews were not generating enough new information on the two research questions, indicating data saturation was achieved (Fusch & Ness, 2015). Aligning with the research background, all ten participants were from East Asian countries (see Table 1). Pseudonyms were used to ensure confidentiality.

Table 1
Participant Profiles

Pseudonym	Gender	Country of Citizenship	Year in College	Tenure in U.S.
JD	Male	China	Sophomore	9 months
Mi	Female	Japan	Freshman	4 months
Xi	Female	China	Junior	4 months
Jo	Female	China	Graduate	5 months
James	Male	China	Junior	10 months
Jia	Male	China	Graduate	2 years and 5 months
Soo	Female	South Korea	Graduate	3 years and 4 months
Qi	Male	China	Graduate	5 months
Cui	Female	China	Sophomore	5 months
Yo	Male	South Korea	Junior	5 months

The narrative interview technique we used stressed the construction and interpretation of meaning to produce a detailed and authentic portrait of participants' experiences (Riessman, 2008). Such practice is particularly useful when exploring research topics on identity as it can account for contextual, temporal, and structural fluidity in identity formation (Mishler, 2006). When research participants come from a marginalized group, as is the case with our participants – international students – narrative interviews empower participants to help set the research agenda, such as deciding what information to disclose, so that an equal and healthy relationship is established between researchers and participants (Overcash, 2003). We, as researchers, served as active listeners, as opposed to pure interviewers, and focused on detailed and personal narratives provided by participants (Anderson & Kirkpatrick, 2016).

While we encouraged interviewees to control the direction and pace of interviews, we prepared a list of semi-structured interview questions (e.g., open- and closed-ended questions, probing questions) to make sure our research questions were fully addressed. The interview questions tapped into four areas. First, we asked participants to describe their overall experience attending the university's football home games with questions such as "can you describe your most recent experience attending a [University] football game?" Second, there was a series of questions on relational group and subgroup, such as "who did you attend the game with?" and "did you interact with any other people during the game?" Third, the superordinate university identity was addressed with questions such as "how do you feel about [University] after attending football games?" Finally, the acculturation process was addressed with questions such as "did you talk to Americans during the game?" to target cultural learning behaviors, and "did attending football games change your perceptions of the U.S. or American people?" to elicit information on cultural identity.

Based on participants' answers, we used probing questions throughout the interviews to add depth and clarity to the answers given, which is particularly important when language barriers may be a concern (Welch & Piekkari, 2006). We also took precautions to not interrupt participants to allow them to recount emotional or personally sensitive experiences (Riessman, 2008). All interviews were conducted face-to-face in English on the university campus and lasted approximately 40 to 60 minutes each.

Data Analysis

Interview data were transcribed verbatim and imported into Dedoose (2018), a web application for facilitating qualitative data analysis. We followed an inductive coding approach to identify data-driven themes using the three-step procedure recommended by Corbin and Strauss (2008). The first step of analysis was open coding, in which we read interview transcripts sentence by sentence to identify information on students' social groups (i.e., relational group, subgroup, and superordinate group) and acculturation experience (i.e., cultural learning and cultural identification). Relevant sentences were assigned codes to reflect meaning of the data.

The second step was axial coding, in which two of the authors compared the codes, established relationships amongst them, and grouped codes with similar meanings into themes. For example, codes of "making new friends through football", "interaction with other people during games", and "football games are about socializing with friends" were grouped together under the theme "relational group is based on heritage cultural identity". This step yielded five themes. The final step was selective coding. We went through the quotes in each theme, identified representative quotes for the theme, and made connections amongst themes to address our two research questions.

To enhance the rigor of data generation and analysis, we adopted the credibility, transferability, dependability, and confirmability provisions for qualitative research recommended by Shenton (2004). For credibility, we adopted recognized techniques, including the use of narrative and semi-structured interviews, consistent with methods employed by previous research (e.g., Bhatia & Ram, 2009). Moreover, thick descriptions were used to provide meaning and context to data (Tracy, 2010). For transferability, Shenton (2004) recommended providing background to the research context, which in our study involved providing a description of the university, its football program, the international student population, and university's attempts to use football to engage international students.

For dependability, we provided in-depth methodological descriptions of our data generation and analysis to make our study replicable (Flick, 2013). For confirmability, we focused on reducing researcher bias to the phenomenon under study. Authors of this research came from both Eastern and Western cultures, which encouraged us to account for our own beliefs, values, or reflexivity (Flick, 2013). We openly questioned each other's assumptions and the interpretation of data. This on-going process allowed us to reduce our biases and generate an accurate representation of findings (Shenton, 2004).

Findings

To address the first research question, the findings section begins with three themes on the relational group and subgroup formed around college football and their relationships to the superordinate university identity. To address the second research question, two themes regarding international students' behavioral and cognitive acculturation in college football games are presented. Text excerpts have been edited for clarity when appropriate.

Research Question 1

Interviews revealed participants formed relationship groups based on their heritage culture. However, they also identified with a larger subgroup that included the entire football game spectator crowd. Involvement in the subgroup, which mainly consisted of American students, made participants feel integrated to the football spectacle and further led to the superordinate university identity. We organized these findings into three themes.

Relational Group is Based on Heritage Cultural Identity

Football games provided a time, space, and reason for international students to socialize with each other. JD highlighted the social function of football games, saying: "It [football game] is a term for party." In contrast, having no friend to attend games together resulted in a lack of continued attendance. Reflecting on the reasons she had only been to one football game, Soo explained: "If most of my friends are going to football games, I may want to join them. But since none of my friends really go [to the games], I did not go that often as well."

Direct social interactions in football games mostly occurred among international students themselves, and in many cases, among students from the same country (co-nationals). All participants indicated they received information about football events from somewhere "international," such as the university's international student office and informal online groups organized by international students such as a WeChat group for Chinese students. There was a lack of interaction with non-international entities. For instance, although Cui was confused about football game rules, she did not ask any American students sitting around her at games because: "They [American students] were chatting and talking about other things. I found it a little bit difficult [to ask them about the rules]." Xi attributed her lack of interaction with American students to language barriers, saying: "I think it would be hard for them to explain [the rules] to me. It is hard for us to communicate so I just gave up." Yo expressed concerns regarding his limited football knowledge, stating: "I go to football games with other international students. If we hang out with Americans, they may feel bored because we do not know much about football."

Even for the few participants who directly interacted with American students at football games, the interactions did not lead to a closer relationship. Jo, who claimed herself as an outgoing person and always looking to make friends, remarked:

> I chatted with some American students in front of me a little bit. Everyone had a good time, but I did not make friends with them. We did not exchange [phone] numbers. That was good enough, I think. I do not know if I want to make friends with them.

Identification with the Football Spectator Subgroup Is Facilitated by American Students

In addition to forming relationships with their co-national peers, participants also connected with the larger football spectator crowd, which represented the subgroup. This spectator subgroup primarily comprised current students at the univer-

sity, with American students as the majority and international students as the few. When describing the atmosphere at football games, participants consistently mentioned American students as a major observation of the football spectacle. For instance, Qi said:

> They [American students] were crazy. The young people, you know. We sat in the student section, and when there was a touchdown, everyone stood up and cheered … Yea, if people around start [to get] crazy and start to cheer, you just follow them, and then you feel different. … I felt, at that moment, I was one of them [American students]. We all felt very happy from the bottom of our hearts. We [international students] cheered together with them [American students].

Sharing similar sentiment as Qi, many participants described the spectator crowd as "crazy" with a specific reference to American students. These "crazy" American students created an atmosphere that integrated international students into the spectator subgroup. James said: "During the game, you can see many American students wearing something crazy. That made me feel I am closer [to American students]." This quote showed despite limited direct interaction between international and American students, international students developed a stronger sense of belonging to the football spectator subgroup by observing American students and immersing themselves in the holistic game atmosphere.

Identification with the spectator subgroup was also developed when international students followed their American peers to practice the university's football rituals. Participants enjoyed learning university fight songs and chants and believed these rituals generated a sense of solidarity among game spectators. As JD described: "Everyone was cheering and wearing [the university colors], and there was the band, there was the cheerleading and fight songs. It is like all students are united together. I felt at that moment, I was one of them [the football spectator crowd]."

However, subgroup identification with the spectator crowd did not seem to extend beyond the stadium. Most participants did not identify themselves as fans of the university's football team and indicated the sense of belonging disappeared once they went back to their normal routine. Xi commented: "[During the game], I felt I was part of the crowd, and it felt like an honor to watch the game. But when I am back on campus, I feel I am just an ordinary student." It is worth noting that two participants, Qi and Jia, identified as football fans in general and had attended multiple football games. Qi played amateur flag football in China, and Jia developed his football fandom from his undergraduate program at another U.S. university. Yet, neither Qi nor Jia identified was a fan of the university's football team.

Subgroup Identity Leads to University Identity

Overall, participants believed they developed a stronger identification to the university through attending football games. They often mentioned how the pervasive university symbols at football games, such as university color, logo, and fight songs, instilled a sense of pride and belonging they would not experience otherwise. JD commented: "When you are in that atmosphere, you kind of love [University], and

you dedicate yourself to [University]…It triggers your emotion to [sic] the university."

Many participants considered football games as a milestone in their life at the university. Some said it was not until attending football events that they started to develop some level of identification with the university. Jo told us about how her first football game attendance has changed her feelings toward the university:

> I am a graduate student, and the university does not pay much attention to us. And I am an international student, so I do not really feel engaged in this culture. It was the night of the football game when I followed other students and cheered for football players. That was the first time I feel I am in [University], I am one of them [the university's students].

It appeared that enhanced university identity was primarily derived from international students' subgroup identification with the spectator crowd through American students, rather than the relational identification with their co-national peers. This was obvious when Cui, who had never talked to American students at football games, said: "It [going to football games] is good. I felt I was connected with American students, and we celebrated our school spirit together **…** It is like every student is connected with each other." Cui's statement revealed football games gave international students an opportunity to connect with American students, who represented the majority group at the university. Football games were an avenue for international students to step out of their ordinary social circle to explore the social and cultural environment of the university, and thus develop university identity. Xi summarized this perspective:

> I am new here and sometimes I do not really feel I belong [to the university]. That is why I want to go to football games and get to know more about [University] and then I can say "I am a [University] student!" … It [attending football games] gave us a chance to go to an activity that all students belong to a group called [University]. It is really important for you to go out [of the daily on-campus routine] and meet those American people that you will not normally meet.

In contrast, failing to connect with the football spectator subgroup hindered university identification. Yo cheered for the opposing military university team in the game because: "When American students cheered for [University], I did not know what they were doing, so I could not feel that I am connected with them [the university's students] at all. I served the army in Korea for many years, so I cheered for the military team."

Research Question 2

Acculturation emerged as a significant component in participants' college football game experience. From the behavioral perspective, participants attended football games to practice English and develop a better understanding of the American culture. However, from the cognitive perspective, participants maintained their heritage cultural identity and perceived American students as the out-group. We used two

themes to articulate the role of acculturation in international students' multiple-identity dynamic generated through college sport.

Football Games as An Opportunity for Cultural Learning

Participants experienced college football games as an avenue to acquire knowledge and skills specific to the American culture. Football was considered a symbol of America. This perception was salient when Yo explained his reason for attending football games: "I asked my friends to go [to football games] because it is a unique thing in America." Many participants shared this cultural learning motive as they described football as an "American thing" they had never experienced in their home countries.

Although there was limited interaction with American students directly, participants believed they gained a better understanding of the American culture merely by observing American students during football events. Telling us she was planning to attend more football games, Cui said:

> I study in America, and I want to learn more about the tradition and culture here. I think football is one [aspect] of American culture. I want to see what American students do in their free time and what they do when they watch sports.

Some participants believed football games provided opportunities to practice English, with learning English as a part of learning the American culture. Despite never talking with American students during football games, Mi still believed attending football games was an effective way to practice English:

> I want to say football is American culture. You know, staying at home is not improving English. If I go to the stadium, I have to use my English. I have two reasons to go to the stadium: to learn American culture and to learn English.

While most participants enjoyed attending the university's football games, few attended more than two games during the entire season. Many participants attributed their lack of consistent game attendance to educational obligations and other social activities, such as activities organized by the university's international student organizations. However, Qi, who was an avid football fan and had attended many football games at the university, had a different interpretation of the issue and commented: "They [other international students] may think that 'American football is so popular so I should go take a look.' After that, they check it off their lists and never go again."

Qi's comments correctly reflected the real thoughts and experiences of many other participants. Although none admitted they went to football games to "check the list," many believed international students should go to football games to avoid regret. When asked how they would persuade other international students to attend a football game, many participants stated some variation of "at least go take a look so you will not regret it". Jia stated: "It [going to the football game] is like when you are in Beijing, you have to go to the Forbidden City. You just go there once so that you have no regret. If you don't like it, you do not need to go for the second time."

Intergroup Perceptions Based on Cultural Identity

While participants were eager to learn about American culture, they hesitated to connect with the culture and its people on a deeper level. Participants showed heightened consciousness of differences between themselves and American students. When describing his feelings about football games, JD, a Chinese student, said: "My South Korean friend also told me he has never experienced this [football game] before. It was very different from our Asian culture."

Similar to JD, many participants used "they" to describe American students and "we" to describe international students who shared a similar cultural background. Such in- vs. out-group comparison attributed an outsider perspective to international students during football games. Despite taking part in tailgating and football rituals, participants tended to act as outsiders who observed and analyzed the spectacle rather than fully immerse in it. This outsider perspective manifested behaviors such as taking pictures of American students and posting pictures on social media. JD reflected on riding a university shuttle to the game:

> We [a group of international students] took the shuttle together. During the trip, another shuttle passed by, and that shuttle was mostly filled with American students. They shouted very loudly to us and said: "Let's go, [University]!" I think it was very crazy. Most students on our shuttle were Asian, so we were very calm. We just looked at them [American students] and took pictures, and we posted the pictures on Facebook.

JD's story demonstrated a lack of social interaction between international and American students as the two groups took separate shuttle buses. More importantly, a sense of in- vs. out-group was obvious when JD interpreted American students' behavior as something extraordinary that was worth a camera capture. By labeling American students as "crazy" and Asian students as "calm," intergroup bias based on cultural identity emerged.

It also appeared that the longer participants had stayed in the U.S., the less they compared themselves with American students during football games. Neither Jia nor Soo, both of whom had stayed in the U.S. for more than two years, paid particular attention to American students. This was especially true for Jia, who had attended many football games as a football fan. Contrary to other participants, Jia used "they" to refer to international students:

> I think internationally students are generally less engaged than domestic students. They [international students] are not as familiar with the sport as domestic students. If you did not grow up watching American football, it is very normal that you are less engaged than those who grew up watching it.

Jia used a third person perspective to describe his understanding of international students in football games. Yet, this approach was an isolated case among participants. Jia was the only person with abundant football knowledge and a thorough U.S. life experience among the students who contacted us for interviews.

Discussion

In this research, we explored the potential for institutions of higher education to use college sport to promote university identity among international students. We found support that college sport provides opportunities for international students to interact with domestic students but also creates barriers to bridging intergroup biases between the two student groups. Specifically, attending college sport games created meaningful interpersonal relationships and group-level associations for international students. However, college sport also sometimes highlighted differences between international and American students, thereby reinforcing intercultural intergroup biases. This finding supported the "double-edge sword" effect of sport in addressing integration issue in previous research (Clopton, 2011; Katz & Heere, 2016; Zhou et al., 2018).

Figure 2 provides a visual presentation of the five identified themes. As the figure shows, the relational group has an external socialization role that functions aside from the superordinate group and subgroup (Lock & Funk, 2016). Moreover, acculturation influences international students' identities through two different paths. The following section provides a discussion of our key findings to further interpret this figure.

The Multiple-Identity Dynamic of International Students

When international students attended college football games, they identified with both smaller relational groups that provided socialization opportunities and a broader sport spectator subgroup that provided a positive social image of being a football spectator and a student at the university. In Figure 2, the relational group operates in

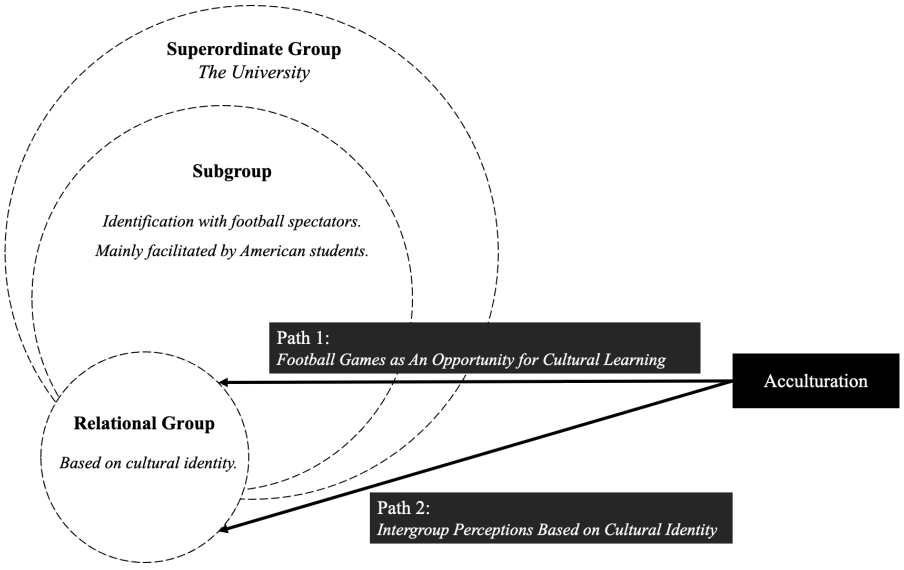

Figure 2. Multiple-ingroup Identities of International Students Through College Football

conjunction, not within, the subgroup and superordinate group. This position aligns with Circle A in Figure 1, which suggests international students' relational groups did not emerge from the university or its sport programs, but from interpersonal relationships that extended beyond the university context (Lock & Funk, 2016). Specifically, international students formed relational groups according to their heritage cultures that provided a sense of personal-level closeness and interdependence (Brewer & Gardner, 1996). Within this exclusive and cohesive ecosystem, international students exchanged game-related information with each other and got involved in college sport as a group. As such, the relational group served as an external socialization agent that socialized international students into college sport and the university community (Funk & James, 2001).

American students, who constituted the majority within the football spectator subgroup, were excluded from international students' relational group. The social divide between international and host-national students resulted from perceived social barriers between the two groups: international students felt inadequate in sport knowledge, language proficiency, and social skills to interact with host-nationals. When a minority group is perceived as inferior in sport ability to the majority group, sport participation can aggravate intragroup biases (Lee & Scott, 2013). Our findings confirmed and extended this view in the context of sport spectatorship.

While international students avoided direct interpersonal interactions with American students, they connected to Americans on the subgroup level. The subgroup membership provided a sense of distinctiveness that enhanced international students' self-concept (Dukerich et al., 2002). As indicated by some participants, watching college football games together with American students elevated them from "ordinary" students to proud members of the university. International students expressed positive perceptions of American students and regarded American students as powerful agents who were able to accept them as a part of the sport spectator subgroup. Hence, although international students preferred to socialize with their co-national peers (i.e., the relational group), they sought to establish associations with American students in football games (i.e., the subgroup) given this subgroup has a relatively higher perceived status (Hornsey, 2008). This finding synthesized previous research on international students' multiple social identities (Allen et al., 2010; Kim et al., 2016; Li & Zizzi, 2018) by discovering the multiple social groups international students identify with through college sport to meet different psychological needs.

The Role of Acculturation in International Students' College Sport Experience

Comparing the behavioral and cognitive aspects of acculturation helped us uncover two contradicting roles that acculturation played in international students' college sport game experience. The effects are illustrated by Path 1 and Path 2 in Figure 2. Pointing to the overlapping area between relational group and subgroup, Path 1 illustrates a positive influence in which acculturation contributes to international students' game attendance behavior. Participants used college football games to learn

skills and knowledge of American culture. This cultural learning motive pushed international students to attend games, and therefore enhanced students' interactions with their international peers (i.e., relational group) and identification with other game spectators (i.e., subgroup). This effect corresponds with the behavioral approach to acculturation focused on cultural learning (Wards, 2001).

In contrast, Path 2 shows a negative influence by pointing to the part of relational group that excludes the subgroup. Extending previous research on the cultural significance of college sport (McDonald & Karg, 2014), we found international students associated college football with intensive cultural meaning that heightened their cultural awareness. This awareness led to constant comparisons of how international students act and think differently from American students and inhibited the development of a strong shared identity between the two student groups (Tajfel & Turner 1979). Participants often referred to American students as "they" and international students as "we", indicating group membership based on culture identity. Moreover, cultural labels such as "Americans are crazy" vs. "Asians are calm" indicated intercultural bias as a result of intergroup comparisons (Tajfel & Turner 1979).

The opposing effects of Path 1 and Path 2 revealed a complex interaction between college sport and acculturation among international students. Previous research has provided evidence on both positive and negative social impacts of college sport in the university community (e.g., Clopton, 2011). The acculturation literature has discerned behavioral and cognitive changes in newcomers in response to a new culture (e.g., Ramanathan, 2015). By connecting college sport with acculturation, we found while international students were interested in American football and the culture surrounding it, they hesitated to establish connections with the American culture and American students on a more personal and meaningful level. Hence, although acculturation motivated international students' college sport spectating behavior, which provided opportunities for university identification, it also highlighted intergroup cultural biases that hindered university identification. This finding draws attention to the potentially negative role of college sport in addressing the integration of international students (Zhou et al., 2018).

Practical Implications

The current research offered practical insights into how college sport could be optimized to integrate international students into university communities. A major finding of this research was that international students formed exclusive relational groups based on cultural identity. Universities should use more effective communication strategies to bridge gaps with smaller exclusive groups. For example, universities and athletic departments can disseminate game information through channels familiar to international students, such as WeChat and KakaoTalk, two social media platforms popular among Chinese and Korean nationals, respectively.

Given American students served as the primary agents for international students' subgroup identification, universities should design activities that foster quality interactions between international and American students in college sport events. Existing programs implemented by universities, such as the Football 101 session,

have mainly focused on improving international students' sports knowledge. However, our findings indicated language and social skills are also crucial concerns when international students attend sport events. Universities should consider socially and linguistically oriented programs for international students to practice language in non-academic social environments. For example, universities could implement a program in which international students are paired with American students and watch college sporting events to facilitate cultural learning.

More efforts should be directed at bridging intergroup biases between international and American students. Existing practices such as setting up special tailgating zones for international students might have the unintended consequence of highlighting intergroup differences and reinforcing stereotypes. Instead, college sport events should promote socialization that highlights intergroup similarities to foster shared university identity among students of different backgrounds. Using sports familiar to international students, such as college basketball and soccer, may be more effective in bridging the intergroup gap.

Importantly, universities should be aware that international students desire a sense of belonging to the university. While universities are now placing greater emphasis on diversity, equity, and inclusion, a major finding of this research was the limitation of college sport in addressing international students' integration issue as international students perceive many obstacles when interacting with American students in college sport. International students still feel inferior to their American peers and lack confidence and sense of power within the university community. East Asian students are especially vulnerable to such perceptions as they tend to be stereotyped as unsociable and physically unattractive (Lin et al., 2005). The intense social and cultural elements of college sport may alienate international students if they are not designed in ways that embrace and empower international students as essential in-group members. Universities could utilize expertise from various academic and auxiliary departments (e.g., sport management, student affairs, athletes, campus recreation) to promote global sport education that enables international and domestic students to exchange knowledge and find commonalities as sport spectators. Such a program would reduce intergroup biases and promote two-way communication to allow international students a more proactive role in the learning process. Overall, universities can utilize college sport to facilitate a shared sense of identity and belonging to shape university culture, rather than requiring international students to conform to existing norms in order to gain in-group status.

Limitations and Future Research

We recognize limitations of our research related to the research context, sampling, and the general methodology used. First, the research was conducted in the context of an NCAA D-I football program. A different study context, such as a different university with a different sport program, could produce different findings. For example, interactions between international and American students in the context of college basketball or soccer might differ from football due to students' different knowledge and previous experience with these sports. However, we believe using

college football as the research context provided valuable insights to address our research questions because of its crucial role at U.S. college campuses (Pratt, 2013). Future studies can compare international students' experience with different college sports to examine how familiarity with the sport influences students' identification.

We focused on international students from East Asian countries given their significant contribution to U.S. universities. Findings might be different if we recruited international students from Australia, Canada, New Zealand, and United Kingdom given cultural and language similarities between the U.S. and these countries (Harrison & Peacock, 2009). Future studies can address this limitation and compare international students from different cultures and countries to further understand the role of college sport in fostering the university identity of international students.

In order to collect rich information on our research questions, we recruited participants who had attended at least one football game at the university. Hence, the findings may only be applicable to international students who are interested in college football and open to sharing their experience with us. Students who were disinterested in college sport or unwilling to integrate into the university culture might have been excluded from the study. Future research should reach out to this group of students to understand factors that negatively impact their game attendance and inform strategies for attracting more international students to college sport games.

Interestingly, we observed that students' existing football fandom and life experience in the U.S. influenced their perceptions of and reactions to college football. For example, participant Jia, who had stayed in the U.S. for more than two years and had strong knowledge and interest in football, appeared to be less sensitive to the cultural elements of college football compared with other participants. Future research can examine how sport knowledge and understanding of American culture interact to influence international students' university identification.

Finally, while our qualitative methodology enabled in-depth understanding to address our research questions, we recognize its limitations in generalizing findings (Gratton & Jones, 2014). Our research uncovered interesting relationships that await future inquiry on a larger scale. Future research can collect quantitative data from international students to test the relationships among relational, subgroup, and superordinate identities to further understand their interactions with acculturation.

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Journal of Intercollegiate Sport, 2021, 14.1, 66-89
https://doi.org/10.17161/jis.v14i2.14676

"Are the Punishments Consistent?": A Quantitative Analysis of NCAA Enforcement

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The present study focuses on the National Collegiate Athletic Association (NCAA) as a social control agent and the likelihood of the NCAA administering various types of penalties to Division I member institutions that participated in organizational misconduct (e.g., major/Level-I/Level-II infractions) between 2003 to 2015. Six probit regression models were employed in order to examine 4,589 university-year observations and the 148 documented instances of misconduct with subsequent punishments. The present study indicated that engagement in academic violations would increase the likelihood of probation and lead to a reduction in financial aid. Amateurism violations increase the likelihood of receiving probation, a postseason ban, reduction of financial aid, and the vacation of win-loss record. An athletic department's participation in improper financial activities would increase the likelihood of receiving probation, a postseason ban, reduction in financial aid, and the vacation of win-loss record. Partaking in institutional control violations would decrease the likelihood of receiving probation, and increase the likelihood of a postseason ban and show cause penalty. Additionally, team-related violations would increase the likelihood to receive probation and result in a reduction in financial aid. Recruiting violations would increase the likelihood of probation, show cause, recruiting, and lead to reduction in financial aid sanctions.

Keywords: NCAA, Social Control, Infractions, Enforcement

In terms of understanding social-control agent behavior, the present study utilized the theory of social control. Social control is simply defined as the efforts practiced by leaders to ensure conformity to the norms (Goode, 2015). In other words, rather than society being self-governing or self-regulating, there are individuals or groups who are appointed to ensure that members act in an appropriate way (Goode, 2015). These individuals or groups, termed social-control agents, possess the legitimate authority to punish individuals or organizations who engage in activities deemed by social-control agents as misconduct. While social-control agents are recognized in the literature, the research understanding their behavior is limited (e.g., Greve, et

al., 2010). Furthermore, additional examination of social control agents is critical to fully comprehend the roots of organizational wrongdoing (Palmer, 2012).

The purpose of the present study aimed to analyze the likelihood of social-control agents handing down different types of penalties to organizations who commit misconduct. More specifically, we sought to understand any difference in behavior regarding social-control agents in the wake of a change in leadership as well as the influence of the media coverage concerning wrongdoing. By exploring social control agents, we realize an opportunity to better grasp the origins of organizational misconduct. Within the current study, the role of the National Collegiate Athletic Association (NCAA) as a social-control agent is examined.

Of particular interest was the punishment levied by the social-control agent [i.e., NCAA through the Committee on Infractions (COI)] in response to the misconduct of the organization (i.e., university). Division I-Football Bowl Subdivision (FBS) universities were chosen due to their popularity (athletics and overall institution), as well as amount of revenue the athletic department generates (Brown et al., 2007; Otto, 2005). Athletic departments within the Division I classification include member institutions within FBS, Football Championship Subdivision (FCS), and programs that do not sponsor football (NO). Of note, some of the historically prestigious athletic departments in Division I that achieved high levels of success in revenue-generating sports, such as football and men's basketball, saw increased donations to their institution (Chressanthis & Grimes, 1994) and to the athletic department (Humphreys & Mondello, 2007), more student applications (Chressanthis & Grimes, 1994; Pope & Pope, 2014), and more opportunities for state funding (Humphreys, 2006). However, some of these institutions pursued and sustained success through misconduct activities, especially revenue-generating sports, and likely prompted participation in misconduct by other peer institutions competing at their level (Fizel & Brown, 2014; Mahony et al., 1999; Otto, 2005; Walker et al., 2018a, 2018b).

In order to understand the likelihood of different penalty types assessed by a social control agent, a two-stage probit model was estimated in order to control for the inherent endogeneity of punishment type contingent upon an organization committing misconduct. Overall, the results from a twelve-year sample (2003 through 2015) find evidence that the type of violations committed in major infraction cases (e.g., amateurism, financial, institutional control, and team-related) are significant in determining the likelihood of sanctions. This present study examined the qualities which make up Division-I institutions and investigated whether the NCAA assesses penalties based upon the structure of each college and university.

Literature Review

In order to understand organization misconduct, an individual has to consider that an action by the organization is considered misconduct because an individual or a collective body assesses actions as misconduct. Greve et al. (2010) defined misconduct as "behavior in or by an organization that a social-control agent judges to transgress a line separating right from wrong; where such a line can separate legal,

ethical, and socially responsible behavior from their antitheses" (p. 56). They further defined social-control agent as "actor(s) that represents a collectivity and that can impose sanctions on that collectivity's behalf" (Greve et al., 2010, p. 56).

Social-control agents have roots within social control theory (Greve et al., 2010). For example, Gibbs (1994) and Deflem (2015) framed social control as involving informal or formal power levied against or toward other person(s) or group(s) to foster or strengthen desirable behaviors. Goode (2015) similarly positioned social control as the selection and implementation of special behaviors employed by leaders to ensure conformity to the norms (Goode, 2015). Pollock et al. (2016) elaborated on the individual responsibility of social-control agents, stating that "social-control agents include various entities that differ in the formality of their constitution, the breadth of their jurisdiction, and the severity of the punishments that they can administer" (p. 240).

Formal social control power is established by third-party regulators and often surfaces with efforts to enhance or maintain commitments to established rules and regulations produced by a professional society (Hollinger & Clark, 2005). Formal social controls are necessary because, within institutions where competition is present, a professional society is not self- governing or self-regulating. Social controls like governing bodies and enforcement groups are necessary to ensure that members of society avoid misconduct and understand the consequences related to such behavior (Goode, 2015). Greve et al. (2010) offered several examples of third-party regulators (e.g., international governing bodies, national governing bodies, local governing bodies, and professional associations) responsible for such oversight.

The existence of social-control agents contributes to the usage of the sociological approach of defining wrongdoing, which simply states social-control agents punish the behaviors of individuals/organizations that they label as wrong (Palmer, 2012). In doing so, this approach places the power of enforcement directly upon the social-control agents. Like previous literature, the present study argues social-control agents make enforcement decisions about misconduct through sanctioning or penalty assignments (Greve et al., 2010; Palmer, 2012; Walker et al., 2018a, 2018b). Penalizing individuals and organizations for engaging in wrongdoing is common and well researched, but analyzing the punishments administered from social-control agents is still developing (Greve et al., 2010; Vaughan, 1999). The present research used the NCAA as its empirical setting to further understand how social-control agents punish misconduct or organizations.

Empirical Setting

Within the literature, the NCAA is recognized as a cartel (e.g., Fleisher et al.,1992; Kahn, 2007). Humphreys (2012) defined a cartel as

> . . . a formal economic agreement among agents or organizations that would normally compete with one another to not compete in some dimension. Cartels engage in collusive behavior, and the success of a cartel depends on all members of the cartel abiding by the agreement (p. 710).

This incentive to cheat by organizations, to act in their own self-interest, threatens the strength and stability of the cartel over the long-term (Humphreys & Ruseski, 2009). Thus, the social-control agent's responsibility is to not only punish members who engage in misconduct, but to punish in such a way as to deter future organizational misconduct and to maintain the stability within the cartel agreement.

Since 2003, an increase in major violations committed by member institutions of the NCAA and subsequent penalty assignments has occurred, which prompted some scholars to associate the increase with the growth of commercialism in college athletics (NCAA, 2017; Otto, 2005; Parkinson, 2012; Walker et al., 2018b; Weston, 2011). A number of studies examined misconduct throughout the history of the NCAA from a variety of angles including sociology, law, and economics, such as Fizel and Brown (2014), Mahony et al. (1999), Otto (2005), and Walker et al. (2018b). Organizational misconduct is presented in the NCAA as several types of violations that include a breach of contract, such as lack of institutional control, academic fraud, failure to cooperate with the NCAA, unethical conduct, recruitment of student-athletes, and failure to monitor (Clark & Batista, 2009; Walker et al., 2018a). Research acknowledged the pursuit and effort to sustain success, especially with revenue-generating sports, can prompt participation in misconduct (Fizel & Brown, 2014; Mahony et al., 1999; Otto, 2005). Such examples of negative behavior associated with athletic departments result from individuals and/or groups that place more value on the servicing of self-directed interests (Agle & Kelley, 2001; Kelley & Chang, 2007).

Davis and Hairston (2013) argued some institutions and/or individuals also use a risk- reward analysis to engage in wrongdoing. More specifically, Cullen et al. (2012) surveyed a number of student-athletes asking about their behavior in violation of NCAA rules and regulations. Their findings suggest that many infractions committed by students are minor in nature. Broadly, the results suggest the reason for committing individual violations relates back to theories of social control more than to economic motives (Cullen et al., 2012). More recent research by Fizel and Brown (2014) found, over a 30-year period (1981-2011), there were a number of determinants of a university's football program that would lead to an increase in the likelihood that the program would engage in misconduct. Some of these determinants include current on-field team performance and conference affiliation. Fizel and Brown (2014) also looked at four specific time periods, finding that playing in the 1980s, an era where there was significant structural change in Division I processes and leadership, significantly impacted the likelihood of misconduct.

As it relates to behavior of the social-control agent, Cullen et al. (2012) stated that formal social control (i.e., punishment from the NCAA) is not effective; rather, informal social control is much stronger in reducing misconduct. In addition to Cullen et al.'s (2012) research, Humphreys and Ruseski (2009) sought to understand the likelihood of Division I-FBS football teams being put on probation due to their misconduct. Of specific interest is the change in behavior following a change in policy by the NCAA eliminating mandatory penalties for violations as it relates to the

recruitment of athletes. Their results showed changes in behavior by the Committee on Infractions (COI) as it relates to the determinants of punishment. For example, the more successful the football team was as it relates to its winning percentage in the previous year led to an increase in the likelihood of being placed on probation prior to the rule change in 1993. Following the rule change, recent performance is insignificant.

Winfree and McCluskey (2008) also sought to understand the incentives for a school to self-report their violations to the social-control agent. The rationale is that by pursuing this action, schools may be able to convince the social-control agents to punish them lighter than if the social-control agents uncovered the misconduct. Over a 20-year sample, Winfree and McCluskey (2008) looked at three common punishments by the NCAA: television ban, postseason ban, and probation. They found that self-report violations and punishment by organizations did significantly impact the likelihood that social-control agents would agree with that form of punishment.

In summary, the incentives are aligned within the NCAA's cartel agreement for organizations to engage in misconduct for their own self-interest. Further, the social-control agent within the cartel, the association and in particular the COI, has the legitimate authority to punish actions they deem to be misconduct. Still, while some research has looked at enforcement behavior of the NCAA, little research incorporates elements of social control theory to understand behavior by social-control agents. We analyze this behavior below.

Methodology

The present study focused on the actions by all Division I universities judged to be engaging in misconduct by the social-control agent (NCAA, COI) that subsequently received punishment. The sample period in our panel dataset was from 2003 to 2015, with the start year corresponding to the year in which Myles Brand began his tenure as the president of the NCAA. The dataset contains the six years of Brand's tenure (e.g., 2003 to 2008) and then the first six years of current NCAA President Mark Emmert (e.g., 2010 to 2015). Additionally, the interim tenure of Jim Isch in 2009 was included within this dataset as a part of Brand's tenure. The unit of observation was a university-year, and the sample period consisted of 4,589 university-year observations. The present research looked at punishments given by the social-control agent, which is the NCAA COI. Data on punishments delivered by the NCAA were provided by the NCAA Legislative Services Database (LSDbi). During the sample period, there were 148 documented instances of misconduct with subsequent punishments.

Examining these cases, punishments were coded into seven categories: probation (*Probation*), postseason ban (*Postseason*), show cause (*ShowCause*), recruiting (*Recruit*), reduction of financial aid (*FinAid*), vacation of on-field records *(Vaca*), and public reprimand *(PublicRep*). Each variable was equal to 1 if the

NCAA delivered the punishment in the observed year. There were many cases where multiple penalties were delivered by the social-control agent (e.g., probation and public reprimand). In these cases, all penalties are included.

The present study included a number of explanatory variables that were grouped in four categories: misconduct characteristics, environment, university characteristics, and social-control agent characteristics. The first group of variables consisted of defining the intensity and scope of organization misconduct. Similar to punishment, organization misconduct was also obtained through the LSDbi. The LSDbi includes the details of misconduct committed by the organization. From reading the description, misconduct was coded into six groups: academic (*Academic*), amateurism (*Amateur*), financial (*Finance*), institutional control (*Icon*), recruiting (*Recru*), and team (*Team;* Table 1).

In addition to the type of misconduct, other characteristics from the report were included. First, the present study included the total number of teams involved in each misconduct case (*#Teams*). The second characteristic was an indicator variable to establish if the university self-reported their violation (*SelfRep*). Previous research by Winfree and McCluskey (2008) found self-reporting violations could affect the punishment given to the university by the NCAA. Third, an indicator variable was included for if the institution was a repeat violator (*RepeatVio*). Consideration for being a repeat violator included identifying whether this was not the first instance of a major infraction case against the institution since 1953, the start of the LSDbi. Finally, a variable was included to indicate if at least one revenue generating sport contributed to the misconduct (*RevSport*). The Sport Industry Research Center at Temple University (2016) conducted research on NCAA major violations from 1953 – 2014 and determined that 82.9% of major violations in that time period involved the revenue generating sports of football and men's basketball. Similarly, this variable was equal to 1 if at least one of these sports were included, 0 otherwise.

The second category was labeled environment, which encompassed the coverage of misconduct in the external environment as well as the institutional environment for misconduct. The first variable was media coverage (*MediaCov*), which was an unduplicated newspaper count in the initial 30 days mentioning the organization's misconduct. This 30-day window began on the date of the initial notice of allegations by the social-control agent (i.e., NCAA) to the organization (i.e., university). The newspaper counts were done by searching "*institution name, major violations, year of infraction, sport involved"* within the Google News and Newspaper Source databases. The second variable in this category, *Similar*, is a count of the number of incidents in the same category as the original act of misconduct over the past 365 days of the initial notice of allegations. Finally, we included a count of all misconduct that occurred over the past year from the initial notice of allegations (*AllInc*). Both of these counts were obtained from the LSDbi database.

The third category was university characteristics, which were obtained from the Integrated Postsecondary Education Data System (IPEDS) and the Equity in Athletics Data Analysis (EADA) websites. The first variable was an indicator variable for if the observed school is a Historical Black College and University (HBCU)

Table 1
Summary Statistics and Examples of Violations Per University-Year (n=3,832)

Name & Description	n (%)	Mean	Std. Dev	Examples
Academic Academic Violations	33 (0.8%)	0.008	0.083	• Academic Fraud • Improper Administration of Pre-college Administration Tests • Academic Misconduct
Amateur Amateurism Violations	46 (1.2%)	0.012	0.098	• Amateurism • Eligibility • Usage of a Professional Talent Scout
Finance Financial Violations	79 (2.1%)	0.021	0.134	• Extra Benefits • Improper Financial Aid • Outside Funds
Icon Institutional Control Violations	86 (2.2%)	0.022	0.136	• Failure to Comply • Unethical Conduct/ Questionable Practice • Institutional Control
Recru Recruiting Violations	73 (1.9%)	0.019	0.127	• Excessive Official Visits • Improper Recruiting Entertainment • Improper Recruiting Inducements
Team Team Related Violations	57 (1.5%)	0.015	0.116	• Improper Competition • Improper Entertainment/ Employment • Improper Lodging/ Transportation

institution (*HBCU*). The variable was equal to 1 if the observed university was an HBCU, 0 otherwise. The second variable was an indicator variable for whether the observed university is a private university (*Private*). The third variable was a dummy variable for whether the observed university is a member of a Power Five or Bowl Championship Series (BCS) conference (*PowerConf*). For the present study, the following conferences were classified as power conferences: Big10, Big12, Pac12, Atlantic Coast, and Southeastern. If a university was a member of one of these conferences in the observed year, the variable was coded as a 1 (0 otherwise). The present research included two variables controlling for the size of both the athletic department (*SizeAD*) and university (*SizeUniv*). For the athletic department, the total number of athletes was included for the observed year. These data were retrieved from EADA. The size of the university variable was operationalized by the total number of enrolled first-year students on campus at the beginning of the fall semester of the observed year. These data were obtained from the IPEDS website.

The final category of variables was social-control agent. In the present research, there were three variables within this category. The first was an indicator variable equal to 1 in the years in which Myles Brand was president of the NCAA (*Brand*). Brand's tenure began in 2003 and lasted until his death prior to the 2009 school year. The second variable was an indicator variable equal to 1 in the years in which Mark Emmert was president (*Emmert*). His tenure began in 2010. The third variable was an indicator variable equal to 1 in the years where the NCAA classified penalties into four levels (*Level*). Prior to August 2013, the violation structure was separated into two categories: major and secondary (NCAA, 2015). Currently, the four levels are defined as: Level I – Severe breach of conduct; Level II – Significant Breach of Conduct; Level III – Breach of Conduct; and Level IV – Incidental Issues. (NCAA, 2015).

Model and Estimation Issues

Due to the dichotomous nature of the dependent variables, a probit model was estimated in the present research. Equation 1 outlines the probit model:

$$\text{Penalty}_{it} = f(\text{Academic}_{it}, \text{Amateur}_{it}, \text{Finance}_{it}, \text{Icon}_{it}, \text{Recru}_{it}, \text{Team}_{it}, \#\text{Teams}_{it}, \text{SelfRep}_{it}, \text{RepeatVio}_{it}, \text{RevSport}_{it}, \text{MediaCov}_{it}, \text{Similar}_{it}, \text{AllInc}_{it}, \text{HBCU}_{it}, \text{Private}_{it}, \text{PowerConf}_{it}, \text{SizeAD}_{it}, \text{SizeUniv}_{it}, \text{Brand}_{it}, \text{Emmert}_{it}, \text{LevelVio}_{it}, \epsilon_{it}) \quad (1)$$

(1) where i indexes universities and t indexes years.

In the present study, there are a number of estimation issues to identify for transparency. The biggest estimation issue is the endogeneity associated with any penalty variable. When a social-control agent is thinking about what penalty, if any, to impose on an organization, the organization must first have committed some sort of misconduct. Thus, one must control for the likelihood that misconduct occurs.

In order to predict misconduct, the present study estimated an additional probit model with the dependent variable being misconduct (*Misconduct*). This variable

was equal to 1 if the observed university committed misconduct in the observed year, defined by appearing in the LSDbi database. A number of explanatory variables are included in the model. First, we controlled for the number of NCAA sports that were sponsored by the university in the observed year (*#Sports*). The second variable was the observed university's percentage of male coaches to overall coaches in the observed year (*%mcoach*). Research by Mahony et al. (1999) examined university misconduct and subsequent university impacts of that misconduct over a 45-year period. Their study highlighted previous research outlining the "male model", where male coaches would be more likely to commit misconduct. Thus, the *%mcoach* variable controls for this possibility.

The present study also included five university characteristics. The first was whether or not the observed school was a member of Division I-FBS (*FBS*) in the given year. The second variable was if the observed school was a Division I member with no football team (*NoFB*). It was anticipated that the *FBS* variable would have a positive and statistically significant increase in the likelihood to commit misconduct, while the *NoFB* would have a negative and statistically significant impact, based upon previous research by Smith (2015). Both of these impacts were in comparison to the reference group, a Division I-FCS university.

In addition to athletic membership, we included a variable for academic quality of the school. Previous research found that academic quality has a significant and negative impact on the likelihood of committing misconduct (e.g., Fort & Quirk, 2001; Humphreys & Ruseski, 2009). We operationalized academic quality as the average SAT Scores of the 75th percentile of their incoming freshmen (*TSAT*), similarly to Anderson (2012), Baumer and Zimbalist (2014), and Rooney and Smith (2019). The third variable, retrieved from IPEDS, was an indicator variable for whether or not the school was in a rural location (*Rural*). The rural variable was included within this study to examine whether there are differences in punishments administered from the NCAA dependent on the institution's degree of urbanization (Abney, 2003). The fourth variable, *Private*, was outlined above and included in the first stage model. The final variable was the number of sanctions imposed by the social-control agent in the previous year *(#Sanctions(t-1)*). It was anticipated the higher the total number of sanctions in the previous year would lead to a statistically significant lower likelihood of a university committing misconduct in the observed year. The rationale was the total number of sanctions would deter an organization to engage in misconduct. In addition, we included the variables for both the Brand (*Brand*) and Emmert *(Emmert*) presidencies.

This first stage probit model predicting misconduct was estimated. From the estimation, the Inverse Mills Ratio (IMR) was calculated and used as a control variable in Equation 1. In other words, the IMR was used to help predict the punishment contingent upon the organization engaging in misconduct. In addition to the endogenity issue, the other estimation issue in the present study dealt with the equation error term. In Equation 1, the error term (ϵ) had two components, a random component as well as a university component. Thus, the error term in Equation 2 is clustered by individual universities using the "*vce(cluster)*" option in STATA.

Results

Table 2 presents summary statistics for the punishment categories. An average of 3.7% of university-year observations included probation, whereas 3.1% of university-year observations resulted in public reprimand. Within the results, 1.9% of the observations exhibited show cause penalties and the reduction of financial aid capabilities. Additionally, 1.4% of the observations represented the limitation of recruiting capabilities and the vacation of team record. A ban from postseason competition represented 0.6% of observations in the sample. As far as the acts of misconduct, 1.9% represented institutional control violations, 1.8% represented financial violations, 1.6% detailed recruiting violations, 1.4% specified team-related violations, 1.0% described amateurism violations, and 0.7% referenced academic violations.

Table 2
Summary Statistics of Punishments Per University-Year (n=3,832)

Name	Description/Definition	n (%)	Mean	Std. Dev
Probation	Probation Sanction	143 (3.7%)	0.037	0.179
Postseason	Ban from participating in Postseason Competition	24 (0.6%)	0.006	0.074
ShowCause	Show Cause Penalty	72 (1.9%)	0.019	0.127
Recruit	Recruiting Limitations	56 (1.4%)	0.014	0.113
FinAid	Reduction in Financial Aid	73 (1.9%)	0.019	0.124
Vaca	Vacation of Record	52 (1.4%)	0.014	0.110
PublicRep	Press Release from the NCAA regarding violation	120 (3.1%)	0.031	0.166

Table 3 presents the rest of the summary statistics including variables from the first stage regression. The total sample observations for the study are 3,832. Recall from above that the total population for the sample period was 4,589. This reduction for the overall population during this time period was due to missing data from the IPEDS database detailing the University category, such as SAT scores or total enrollment for Division I institutions. Within the misconduct category, 2.8% of the observations involved repeat violators of major infractions, 2.5% of the observations included self-reported major violations, 2.7% involved revenue-based athletic teams (e.g., men's basketball & football), and there was a maximum of 18 teams implicated in infraction cases.

In the environment category, there were an average of 10.4 violations in the previous year of observations with a minimum of 7 violations and a maximum of 16 violations. Media coverage of major infractions had a mean of 0.40 articles within the observations with a maximum of 31 articles detailing a major violation case. The similar violation types in the past year had a mean of 0.077 and a maximum total of 6. The University category contains HBCUs, which represent 6.3% of the observations. Furthermore, 36.2% of the observations are classified as private institutions in the IPEDS database. Power Five and BCS institutions are represented in 19.2% of the observations. The size of the athletic department, in terms of student-athletes, had an average of 489 student-athletes per institution with a minimum of 69 student-athletes, and a maximum of 1,488 student-athletes. The first-year student enrollment size of the institution in the fall semester of the academic year has a mean of 2,391 students with a minimum of 199 and a maximum of 10,835. The social control category included the executive directors, in which 44.7% of observations were under the guidance of Myles Brand and 47.5% of the observations occurred under Mark Emmert. Also, 15.8% of the observations transpired after the NCAA made alterations to the violation structure, changing from two levels to four levels.

Within the first stage regression results, the number of sport teams represented within each athletic department had an average of 15.99 teams with a maximum of 35 teams. The percentage of male coaches within a Division-I athletic department has a mean of 45.3% with a minimum of 28.6% and a maximum of 81.8%. The classification of athletic departments is also used in this category, with 37.5% of the institutions representing Division I FBS and 28.2% representing Division I athletic departments without the sport of football. The average SAT scores of incoming freshman students in the 75^{th} percentile was 1,230 with a minimum of 840 and a maximum of 1600. Moreover, 12.2% of the institutions in this sample are located in a rural location, which is defined on the IPEDS database. The average number of sanctions distributed to member institutions of the NCAA was .08 with a maximum of 6 sanctions administered.

Table 3
Summary Statistics of Indicator Variables Used in the 2nd Stage Regression (n=3,832)

Variable	Mean	Std. Dev	Min	Max
#Teams	0.097	0.876	0	18
SelfRep	0.025	0.157	0	1
RepeatVio	0.028	0.164	0	1
RevSport	0.027	0.162	0	1
MediaCov	0.401	2.339	0	31
Similar	0.077	0.482	0	6
AllInc	10.410	2.363	7	16
HBCU	0.063	0.242	0	1
Private	0.362	0.481	0	1
PowerConf	0.192	0.394	0	1
SizeAD	489	200	69	1488
SizeUniv	2392	1673	199	10835
Brand	0.447	0.497	0	1
Emmert	0.475	0.499	0	1
Level	0.158	0.365	0	1
#Sponsor	16	4	5	35
%mcoach	0.453	0.047	0.285714	0.818182
FBS	0.375	0.484	0	1
NoFB	0.282	0.450	0	1
TSAT	1230	136	840	1600
Rural	0.122	0.327	0	1
#Sanctions(t-1)	26	11	0	45

Table 4 presents the first stage regression results with the dependent variable being misconduct committed by the organization in the observed year. Regarding the variables utilized in this model, both the number of sports the university sponsored in the observed year and the percentage of male coaches to overall coaches in the university's athletic department were statistically insignificant. The *FBS* variable was positive and statistically significant in comparison to the reference group, schools that are in Division I-FCS. The *NoFB* variable was negative and statistically significant in reference to the same group of universities. The average SAT score by the incoming freshman at the observed university was insignificant. Universities located in a rural setting were negative and statistically significant, while private institutions were negative and not significant. The number of different punishments delivered by the NCAA to member institutions in the previous year was not significant. Both variables controlling for the presidential eras of Brand and Emmert were not significant compared to the reference group, which was the interim presidential era of Jim Isch from 2009 through 2011.

Table 4
First stage regression results with the Dependent Variable being Misconduct

Variable	Description	Coef.	Std. Error
#Sponsor	# of Sports University sponsors	-0.001	0.012
%mcoach	% of university coaches that are male	-0.118	0.895
FBS	School is a member of DI-FBS	0.337***	0.101
NoFB	School is a member of DI-AAA	-0.261**	0.114
TSAT	Average SAT Score of the 75th percentile of freshmen	0.000	0.000
Rural	School is in a Rural Location	-0.257*	0.133
Private	School is a Private School	-0.103	0.104
#Sanctions(t-1)	# of Sanctions delivered by NCAA in previous year	-0.001	0.004
Brand	Myles Brand is President (1=Yes)	-0.020	0.176
Emmert	Mark Emmert is President (1=Yes)	0.005	0.163

Note. Significance at .1 level denoted by *, .05 level denoted by **, and .001 level denoted by ***.

Table 5 presents the second stage regression results across different penalty types. Recall the inverse mills ratio (*InvMillsRatio*) was calculated from the first-stage probit estimation. The first model details the probit regression model results

for the probation sanction only. The positive and statistically significant variables included academic violations, amateurism violations, financial violations, recruiting violations, team-related violations, self-reported violations, revenue sports, repeat violators, media coverage, the number of incidents in the NCAA in the past year, the size of the athletic department regarding the total number of student- athletes, the time under the leadership of Myles Brand, and the time under the leadership of Mark Emmert. Institutional control violations, the size of the university regarding the total number of incoming freshmen enrolled, the total number of similar NCAA incidents in a previous year, HBCUs, private institutions, BCS/Power Five institutions, and the violation levels were all negative, yet statistically significant.

The second model details the probit regression results for model with the postseason ban sanction as the dependent variable. In this model, within the types of punishment category, amateurism violations, finance-related violations, and institutional control violations were all positive and statistically significant. Additionally, the self-reported violation sanction was also positive and statistically significant. Finally, the variable for Myles Brand's presidency was negative and statistically significant in reference to the Jim Isch era.

The third model utilized in the second stage of the present study examined the probit regression results for the show cause sanction. The four positive and statistically significant variables included the institutional control violation, recruiting violation, repeat violators, and the total number of similar NCAA incidents in a previous year. The fourth model presents the probit regression results with the recruiting limitations sanction acting as the dependent variable.

Recruiting violations, self-reported violations, repeat violators, similar NCAA incidents in a previous year, and the number of incidents in the NCAA in past year were all positive and statistically significant. The implementation of the new violation levels variable was statistically significant and negative. The fifth model detailed the probit regression results for the reduction of financial aid sanction. The positive and statistically significant variables included academic violations, amateurism violations, financial violations, recruiting violations, and self-reported major infractions.

The sixth model examines the probit regression results with the vacation of record as the dependent variable. The variables which were positive and statistically significant included amateurism violations, financial violations, repeat violators, media coverage, and the number of incidents in the NCAA in the past year. The observations which were classified under the guidance of Myles Brand were also statistically significant, yet negative. The final model tests the probit regression results of the public reprimand sanction as the dependent variable. Within this model, there were three positive and statistically significant variables including self-reported violations, repeat violators, and media coverage. The observations which occurred under Myles Brand were negative and statistically significant.

Table 5

Probit Regression Statistics for Dependent Variables

Penalty	Probation		Postseason		ShowCause		Recruiting		FinAid		Vaca		PublicRep	
Variable	Coef	StdErr	Coef	StdErr	Coef	StdErr	Coef	StdErr	Coef	StdErr	Coef	StdErr	Coef	StdErr
InvMillsRatio	-1.295	0.807	-2.325**	1.139	-1.078	0.666	-0.076	0.657	-1.176	0.735	0.610	0.794	-0.349	0.470
Academic	8.039**	3.399	0.207	0.418	0.315	0.449	-0.411	0.420	0.995**	0.430	0.785	0.418	-0.650	0.821
Amateur	14.012***	3.013	1.293***	0.354	-0.036	0.357	0.410	0.327	1.207***	0.305	1.349***	0.355	1.159	0.635
Finance	8.110***	2.149	1.225***	0.341	0.416	0.311	-0.001	0.299	1.336***	0.327	1.416***	0.298	0.330	0.369
Icon	-4.822***	1.865	1.080**	0.516	1.604***	0.331	0.255	0.339	-0.183	0.317	0.376	0.346	-0.325	0.551
Recru	14.075***	3.648	0.239	0.437	1.002***	0.318	1.252***	0.295	0.683**	0.301	0.159	0.325	0.588	0.481
Team	12.481***	2.788	0.783*	0.444	0.536	0.340	0.468	0.337	0.677**	0.289	0.157	0.291	0.828	0.601
#Teams	-0.086	0.070	0.089	0.055	0.033	0.041	-0.035	0.046	-0.010	0.054	0.085	0.055	-0.013	0.073
SelfRep	2.501***	0.961	0.886**	0.407	0.035	0.345	0.880***	0.299	0.826***	0.268	0.107	0.310	0.888***	0.329
RepeatVio	5.311***	1.023	0.721	0.495	1.545***	0.396	1.064***	0.378	0.662	0.359	0.760**	0.367	1.539***	0.430
RevSport	8.832***	1.587	-0.326	0.425	-0.182	0.358	0.623	0.385	0.601	0.322	0.070	0.377	0.569	0.377
MediaCov	0.379**	0.172	-0.018	0.039	0.019	0.033	0.011	0.031	-0.002	0.026	0.106***	0.037	0.194***	0.052
Similar	-6.775***	1.384	(omitted)		0.234***	0.088	0.227**	0.109	0.077	0.139	0.006	0.254	-0.001	0.089
AllInc	1.020***	0.193	0.134	0.085	-0.009	0.041	0.270***	0.092	0.095	0.061	0.117**	0.058	0.081	0.076
HBCU	-11.102***	2.812	0.682	0.539	0.050	0.430	-0.705	0.663	0.437	0.356	-0.516	0.499	-0.211	0.202
Private	-11.390***	2.612	0.573	0.502	0.114	0.314	-0.309	0.378	0.043	0.393	-0.558	0.394	-0.228	0.329
PowerConf	-1.333**	0.553	0.538	0.392	-0.515	0.282	-0.089	0.303	-0.068	0.296	-0.044	0.336	-0.442	0.429
SizeAD	0.003**	0.001	-0.003	0.002	0.000	0.001	0.001	0.001	-0.001	0.001	-0.002	0.001	-0.001	0.001
SizeUniv	-0.003***	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Brand	9.444***	3.036	-1.119*	0.662	-0.157	0.418	-0.493	0.367	0.090	0.474	-1.149***	0.408	-0.540**	0.259
Emmert	7.887***	2.894	-0.010	0.615	0.176	0.381	-0.544	0.408	-0.339	0.501	-0.458	0.339	-0.309	0.205
Level	-18.8935***	3.774	-0.149	0.518	0.248	0.256	-2.301***	0.710	-0.225	0.404	0.095	0.316	(omitted)	
Constant	-17.485***	4.600	-0.515	2.887	-1.331	1.498	-5.473***	1.892	-1.303	1.841	-5.567***	2.154	-1.891	2.059
Pseudo R^2	0.9744		0.7274		0.7565		0.7023		0.7450		0.7376		0.899	

Note. Significance at .1 level denoted by *, .05 level denoted by **, and .001 level denoted by ***. Standard Errors are clustered by university. POST *is n= 3,732 observations*. Similar was removed due to perfect predictions. PUBLICREP *is n= 3,227 observations*. *Level* was removed due to perfect predictions.

Discussion

The present study analyzed the likelihood of social-control agents handing down different types of penalties to organizations who commit misconduct and also sought to understand any change in behavior regarding social-control agents in the wake of a change in leadership, as well as, the influence of media coverage of wrongdoing. Previous literature (Greve et al., 2010; Palmer, 2012; Vaughan, 1999) acknowledged the punishments delivered from formal social-control agents to violating organizations, yet the strategies and sanctioning process utilized by social-control agents has been neglected. Within this section, an evaluation of significant variables and corresponding literature is completed as a method to conclude how social-control agents assess penalties to member organizations.

Table 4 presents some interesting findings as it relates to detecting misconduct. First, we find that both the number of sports sponsored and the percentage of male coaches to overall coaches are insignificant. These two results are surprising because one could anticipate that more sponsored sports means larger athletic departments with additional coaches, supplementary administrators, and student-athletes to supervise. In essence, the complexities, bureaucracy, and oversight could further increase the likelihood of misconduct. The insignificant results could also, in contrast, mean that as the athletic department grows in terms of the number of sports, this growth leads to better self-regulation by the university in terms of compliance education of its athletes and employees. The insignificant result as it relates to male coaching percentage refutes the male model outlined by Mahony et al. (1999) and other research. However, the findings in the present study do support Mahony et al.'s (1999) findings that the majority of NCAA major violations occur in revenue sports.

Finding that a FBS-member school and revenue sports are more likely to engage in misconduct intuitively makes sense. FBS members generate the highest revenues and, generally, receive higher attention within the media. The pressure for athletic success placed upon these institutions and revenue sports from a variety of internal and external stakeholders would make it likely for them to engage in misconduct because of the available monies and media attention that potential winning or success can provide. Similarly, a school that is a Division I member but does not have football would be less likely to engage in misconduct.

Academic quality, defined by the 75th percentile score on the SAT from each institution, was insignificant. This result is surprising due to previous research indicating that academic quality reduces the likelihood that a university engages in misconduct (e.g., Humphreys & Ruseski, 2009). The institutions located in a rural setting, defined by the U.S. Census Bureau's Population Division, shows a negative and statistically significant relationship. This result makes sense as individuals have less opportunity to engage in misconduct due to the small size of the location surrounding campus. Furthermore, previous research acknowledged how geographic identity can be instrumental in the enhancement of a team identity (Heere & James, 2007). Within a rural area, there could be more attachment to the local college sports team, thus the likelihood of reporting violations or acts of misconduct would be

minimal. The results in Table 4 show that there is no significance in organizations committing misconduct during the different presidential eras in the sample period. This finding is consistent with previous results in showing stability in terms of the focus of each president during the time period (Walker et al., 2018b). Even though anecdotal evidence shows increasing counts of misconduct (e.g., NCAA, 2017; Otto, 2005; Parkinson, 2012; Weston, 2011), there is no indication that a president's (or social-control agent's) policy or action leads to increase in misconduct. Finally, we do not find the number of sanctions handed down by the social-control agent in the previous year to influence the likelihood that an athletic department engages in misconduct. This does not support Cullen et al.'s (2012) research regarding the role of social-control agents in administering sanctions strong enough to deter organizations from future organizational misconduct.

The results presented in Table 5 provide other interesting findings regarding social- control agent behavior. First, the results find that media coverage statistically impacts the likelihood of the social-control agent delivering the punishments of probation, vacating of on- field performance records, and public reprimand. These findings are interesting considering the previous literatures reference to the media being an informal social-control agent (Pollock et al., 2016). Thus, the media's role as the informal social-control agent leads to an increased likelihood of these three punishments. The public reprimand should be the least surprising of the three punishments, as the public reprimand would garner increased coverage by the media in terms of reporting the punishment. When media outlets frame major violation case, the reports are generated from the frame alignment of the NCAA, but also include re-framing which provides more depth regarding the infraction, and counter-framing, which gives the violators a chance to defend themselves (Walker et al., 2018b). The vacation of record sanction is newsworthy considering the impact that the punishment has on former teams, which could have accumulated winning seasons and championships. Community members, especially those with genuine interest in the athletic department of the violating institution, would be intrigued to receive information about what behaviors led to the sanction. Even though probation occurs often, the details regarding the infraction case are published to inform readers on wrongful behavior, but also increase awareness that any additional acts of organizational misconduct would lead to harsher sanctions.

In addition to the informal social-control agent's impact, the present study looks at similar incidents that occur over the past year to understand behavior. One may anticipate the higher the similar incidents may lead to differences in the likelihood of punishments. From Table 5, the present study finds that show cause and recruiting penalties are more likely to occur as a result of a rise in similar incidents in the past year. However, probation is less likely to be given by the social-control agent in the wake of an increase of similar incidents of misconduct. The social-control agent may deem show cause and recruiting penalties to be the harshest, hence, are more likely to use these penalties in the wake of similar incidents in order to potentially deter similar misconduct in the short term (Peterson, 2014). Similarly, probation may be too broad of a penalty to send a message to other organizations.

An increase in the total number of incidents in the previous year leads to an increase in the likelihood of probation, recruiting, and the vacating of on-field records as punishments levied by the social-control agent. The increase in probation sanctions to NCAA members derives from the understanding that the majority of major infractions result in probation. The recruiting and vacation of records sanctions relate to the increase of unethical conduct and recruiting violations which have also increased throughout time as acknowledged in previous research (Walker et al., 2018a).

Examining presidential eras, we find that Myles Brand was less likely to vacate records, publicly reprimand universities, or use a postseason ban as punishments in comparison to the other presidents during the time period. The reason being that during Brand's tenure as President, the focus was on the enhancement of the academic experience of student-athletes, which meant examining cases of academic misconduct (Walker et al., 2018a). Participation of academic misconduct did not result in the vacation of records or postseason bans, unless the participating student-athlete was deemed ineligible. Public reprimand was neglected during Brand's tenure due to protecting the identity of the violating student-athletes. However, Brand was more likely to hand down a punishment of probation. As it pertains to Mark Emmert, he was also more likely to hand down a punishment of probation. However, he was not any more likely to hand down other punishments in reference to the interim president. Mark Emmert made a concerted effort to pay more attention to the other classifications (e.g., Division II & Division III) within the NCAA in order to assure fairness in rule enforcement. The probation sanction was used as a method with Division I institutions to provide a warning in infraction cases where the violation did not call for harsher punishments.

Finally, the change in NCAA protocol from two levels of violations (i.e., major and minor) to four levels of violations (i.e., Levels I, II, III, and IV) led to a decrease in probation and recruiting punishments. The results could be due to a couple of reasons. First, it could be that the social-control agents recognized those as insufficient in the new classification of violations. The NCAA manual specifically outlines each violation level and misconduct that would lead the social-control agent to classify actions as such. Thus, this specificity might lead to a more specific punishment. The second reason could be due to the limited number of cases under the new classification system in the sample. As more cases arise, one might get a better understanding of the behavior of social-control agent.

Other findings from the results in Equation 1 are interesting. This present study supports the results provided in Winfree and McCluskey's (2008) research regarding the incentive of reporting sanctions directly to the NCAA. As Winfree and McCluskey noted, generally when schools self-report and provide suggestions for the penalty, the NCAA goes along with these penalties. While we do not look at the penalties suggested by the universities engaged in misconduct, we could assume that the positive and significant variable coefficients for five of the penalty models would indicate the social-control agent agreeing with those penalties.

Academic violations were found to increase the likelihood of probation, postseason, reduction in financial aid, and vacation of records. These punishments, in particularly postseason bans, reduction of financial aid in terms of scholarships, and vacation of records intuitively make sense since the NCAA model revolves around amateurism. Given this model, one would expect an increase in recruiting penalties. However, this increase did not occur.

Regarding the conference affiliation of member institutions, prior research varied on whether larger conferences (i.e., BCS/Power Five) were investigated differently from smaller Division-I institutions (i.e., Non-BCS/Group of Five; Fizel & Brown, 2014; Otto, 2005). The present study supports Fizel and Brown's (2014) assumption that larger institutions and those highly recognized for their athletic achievement are not punished differently in comparison to other Division I athletic departments. The *PowerConf* variable was statistically insignificant within every model except probation, which differed from the results provided in Cox and Davis (2011), which determined that the odds of larger athletic programs with football teams receiving major violations were higher than other members. This could be attributed to the increased usage of the probation sanction for repeat violators and institutions that participate in acts of misconduct outside of academic fraud (Smith, 2015).

Conclusion

The present study looked to further understand the punishment role that a social-control agent plays within intercollegiate sport. There have been investigations on the impact of sanctions within organizations (Davis & Hairston, 2013), yet there has been minimal research exploring how social-control agents assess violations and determine proper sanctions to distribute to violators (Greve et al., 2010). Social-control agents are responsible for enforcing policies set within an organization and ultimately decide what conduct will be considered as wrongdoing. In addition, there is an opportunity to understand how the line has evolved through the examination of violations over a period of time. The present study acknowledges that the NCAA can hold member institutions accountable as a social-control agent by assessing cases of organizational misconduct, determining the type of violation committed, and distributing sanctions as an attempt to minimize future cases of organizational misconduct.

Utilizing data on punishments within NCAA Division I athletics, the results from a twelve-year sample indicated that various violation types impacted the likelihood of sanctions distributed in major infraction cases. The present study indicated that engagement in academic violations would increase the likelihood of probation and a reduction in financial aid. Amateurism violations increase the likelihood of receiving probation, a postseason ban, reduction of financial aid, and the vacation of win-loss record. An athletic department's participation in improper financial activities would increase the likelihood of receiving probation, a postseason ban, reduction in financial aid, and the vacation of win-loss record. Partaking in institutional

control violations would decrease the likelihood of receiving probation, increase the likelihood of a postseason ban and show cause penalty. Additionally, team-related violations would increase the likelihood to receive probation and a reduction in financial aid. Recruiting violations would increase the likelihood probation, show cause, recruiting, and reduction in financial aid sanctions.

The present study provides an opportunity for athletic departments to assess the enforcement strategies implemented by the NCAA as a social-control agent. The NCAA has been assessing cases of major infractions since 1953 and consistently attempts to update the evaluation process to remain current (NCAA, 2019). Yet, not all athletic departments have the same departmental structure regarding compliance considering that some Power Five institutions have larger administrative staffs compared to other institutions in the NCAA. As a result, a practical implication of this study is for NCAA administrators to examine and implement a consistent compliance structure for all Division I institutions. Currently, individuals are hired by the university to serve in the athletic compliance department. Yet, previous research has shown how the hiring process could lead to a future potential conflict of interest regarding reporting acts of misconduct (Chandler, 2000). To ensure rule compliance and to deter organizational misconduct, the NCAA could investigate hiring their own staff that would be placed within athletic departments and directly report to the Association rather than the Athletic Director or University President.

Although there were contributions to the literature, there were limitations with the data analysis. The first limitation of the study was the lack of information provided on the EADA and IPEDS database regarding the university characteristics. Both the EADA and IPEDS databases only began assembling specific data points utilized in this study in 2003 (e.g., SAT scores, total enrollment data, total student-athlete count in an athletic department). For example, the gathering of additional data regarding the university characteristics provides an opportunity to investigate the misconduct cases of each major violation after the introduction of the BCS conferences in 1998.

An additional limitation of this study was inconsistencies within the LSDbi database. Details regarding major infractions were collected from the case summary provided on the LSDbi database prior to March 2016. However, the database was reformatted shortly after and there were differences in the numbering of cases, as well as, the details of each case summary, including violation type, sanction distribution, and the length of sanctions. As a reinforcement, the public report of each infraction case was analyzed to determine essentials of each case. However, inconsistencies still existed and, in many cases, information pertaining to the case was gathered from NCAA press releases rather than the information provided on the database.

Future research should seek to understand further actions of the social-control agent and the consequences of punishments rendered by social-control agents on the broader organizational community. Two potential consequences are applications and donations. There has been some research conducted to understand the impact that NCAA punishments have on the university. For example, Grimes and Chressanthis (1994) found that sanctions administered by the NCAA do negatively impact alumni donations and resulted in a $1.6 million dollar per year difference at Mississippi

State University from 1962 to 1991. Rhoads and Gerking (2000) assembled data on 87 universities regarding the effect of the men's basketball team receiving probation from the NCAA and how probation impacts alumni contributions. They discovered that because of an institution being on probation, alumni donations decreased by 13.6% per student. Goff (2000) found that the impact of the "death penalty" sanction administered to Southern Methodist University by NCAA led to a 12% decrease in the total number of applications while the school was serving their penalty and remained on probation. These studies, however, are limited in that they either investigate one school or one specific punishment. Future research should develop a more comprehensive understanding of the role that punishments have on outcomes of the organization that commits misconduct.

In addition to understanding consequences to the organizations that engaged in wrongdoing, it is also important to understand how potential wrongdoing and subsequent punishments by the social-control agent impact other organizations. As Greve and Teh (2016) remarked, "[t]he range of organizations that get punished is broad and, as a result of stigmatization, includes organizations that did not engage in the original misconduct" (p. 370). Hence, future research should further understand these dynamics and consequences.

Additionally, future research should further explore actions taken by social-control agents in terms of variation of punishment. For example, NCAA Division I institutions have a wide variation in terms of university size along with its status and reputation. Thus, future research should consider how different punishment decisions made by social-control agents are moderated by these factors. Finally, future research should explore reasons surrounding the duration between the uncovering of organization misconduct and the punishment by the social-control agent. This duration between misconduct and punishment would be of interest in understanding the social-control agent's role in deterring future organizational wrongdoing in addition to its legitimacy as an entity who decides what actions constitute misconduct.

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Journal of Intercollegiate Sport, 2021, 14.2, 90-115
https://doi.org/10.17161/jis.v14i2.15007

The Career Experiences of Female Registered Dietitians in NCAA Division I Athletic Departments

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NCAA member institutions began to have the option to provide unlimited meals and snacks to athletes in 2014, and this change in policy created a need for full-time registered dietitians (RDs). This position was necessary to ensure athletes were receiving proper nutritional guidance. This has created a professional niche for RDs as they are now considered to be a key member of the college athlete holistic care team. However, there is a lack of research exploring the experiences and challenges of this emerging profession in college athletic departments. Thus, the purpose of this study was to examine the career experiences of RDs working in NCAA Division I athletic departments. Nine RDs participated in semi-structured interviews, and three themes were constructed from the data analysis: (a) professional transition; (b) nutritional education; and (c) (dis)respect. The respondents discussed their participation in sport or volunteer experience was what pushed them to pursue a career as a sports dietitian. One of the primary functions of their position is to build trust with the athletes and provide them with nutritional education so they will develop healthy eating habits. The respondents also struggled with a lack of acceptance of the importance of their position on the interprofessional care team. Some have positive experiences with administrators, but most have negative experiences and a general lack of understanding of the professional expertise they had.

Keywords: Holistic care, Student-athletes, Nutrition, Career mobility, Women

The National Collegiate Athletic Association (NCAA) passed legislation in 2014 to allow unlimited meals and snacks to athletes at member institutions with the intent to meet their nutritional needs (*2020-21 Division I Manual*, 2020; Hosick, 2014). Prior to this legislation, NCAA members were only allowed to offer one training table meal a day and snacks that were limited to fruits, nuts, and bagels (Hosick, 2014; NCAA Academic and Membership Affairs Staff, 2013). This policy change created a need for full-time registered dietitians (RDs) to ensure athletes are properly fueled and monitor their dietary habits. This also resulted in an increase in the number of registered dietitians working in collegiate athletic departments. There was

a 70% increase in the number of universities who employed at least one full-time dietitian from 2013 to 2017 (Collegiate and Professional Sports Dietitians Association, n.d.). RDs are now considered to be a key member of the college athletes holistic care team (McHenry et al., 2020; Waller et al., 2016). This has created a unique professional niche for RDs, but there is a lack of research exploring the experiences of this emerging profession in college athletic departments. Thus, the purpose of this research is to examine the career experiences of RDs working in NCAA Division I athletic departments.

This change in policy for unlimited meals was prompted by one visible incident and one proposal made in 2012. The visible incident involved Connecticut basketball player Shabazz Napier. Napier was being interviewed during the NCAA men's basketball tournament and noted that were many nights that he went to bed hungry (Phillips, 2014). This brought a great deal of attention to the idea of unlimited meals for college athletes. This change had actually been brought to the NCAA by the Collegiate and Professional Sport Dietitians Association (CPSDA) in 2012 in a report that indicated college athletes were not receiving proper nutrition. The report also advocated for the for the inclusion of RDs in collegiate athletic departments (Collegiate and Professional Sport Dietitians Association, 2012). It took two years for the proposal to work itself through the bureaucracy of the NCAA and to the Division I Legislative Council (Jessop, 2014). It was a perfect scenario to have the momentum to pass the unlimited meals provisions with the support of the CPSDA. The other key aspect of this change is that member institutions could choose to provide unlimited meals if financial resources allowed it. Member institutions could also choose to provide some other variance of one meal a day to unlimited meals (*2020-21 Division I Manual*, 2020).

Holistic Care

Holistic care grew out of the concept of holism, the idea that the whole is better than its parts (Smuts, 1926). Applied in the healthcare setting, holism situates health as physical, mental, and spiritual well-being, and true care means attention to each aspect of the person (Waller et al., 2016; Zamanzadeh et al., 2015). Therefore, a physical injury cannot be fully healed without also healing the mental and spiritual impacts of the injury. In response, a reimagined concept to healthcare—in contrast to the traditional medical model—emerged. Termed holistic, collaborative, interdisciplinary, or interprofessional care, healthcare is provided to individuals by a variety of professions, including medical doctors, behavioral health specialists, psychiatrists, chaplains, social workers, dietitians, and other helping professionals (Burns et al., 2004; McHenry et al., 2020; Raney, 2015; Waller et al., 2016). Models of holistic care have become a best practice in all aspects of healthcare due to its focus on the whole person (Leung et al., 2018; Tjale & Bruce, 2007).

The holistic care model has also recently become popularized in collegiate athlete wellness (Barkley et al., 2018; McHenry et al., 2020; Waller et al., 2016). Similar to holistic care programming in healthcare, there are many stakeholders in the holistic care model for college athletes ranging from coaches, to athletic trainers, to

chaplains, to dietitians. Understanding each professional's role is imperative to the well-being of athletes (Berg & Warner, 2019). However, due to the infancy of the model (Waller et al., 2016), there is some, albeit limited, research on the different types of professionals that provide care to athletes. Arvinen-Barrow and Clement (2015) did explore the role of athletic trainers in the care of athletes, and found that they were identified as the point person in the holistic care team due to their close relationship to the athletes (i.e., seeing them daily). Beasley and colleagues (2019) also qualitatively explored the work experiences of social workers working in collegiate athletic departments. The findings suggested that social workers were an important part of the holistic care team, but misunderstanding of their role by other members of the holistic care team hindered effective interprofessional care. Research on sport chaplains has focused on college athletic directors' perception of the value of the role (Hardin et al., 2019) as well as their role in the holistic care model of college athletes (Huffman et al., 2016). The role of certified mental performance coaches has been examined as well in regards to their value, desired characteristics, and contributions to athletic success (Schimmel et al., 2014; Wrisberg et al., 2012; Zakrajsek et al., 2016). Academic advisors have been examined as well in their role in providing support for college athletes and their overall success both in and out of competition (Hardin et al., 2020; Hardin & Pate, 2013; Pate et al., 2011). There seems to be consensus that support staff personal are critical in supporting collegiate athletes but those positions do not always take priority in the overall staff of collegiate athletic departments. Athletic directors have indicated that the education and personal development of collegiate athletes is important but are not always made a priority in terms of staffing and funding (Wood et al., 2018). Regardless, it is important to understand the experiences of these the members of the holistic care team for collegiate athletes and that includes registered dietitians.

The Role of Registered Dietitians in Interprofessional Teams

Interprofessional teams have been defined as "an integrative cooperation of different health professionals, blending complementary competence and skills, to the benefit of the patient, making possible the best use of resources" (Samuelson et al., 2012, p. 205). RDs, with their nutritional competencies and expertise, are an essential member of interprofessional teams across healthcare settings (Casas-Agustench et al., 2020; Eliot & Kolasa, 2015; Jortberg & Fleming, 2014; Mailliet et al., 2013). Specifically, research has found that including RDs in patient care plans lead to better health outcomes due to the changes in dietary habits (Casa-Agustench et al., 2020; Warner et al., 2018). RDs are also essential in preventative healthcare practices (Jortberg & Fleming, 2014) and in eating disorder care teams (Thomas, 2000). The role of RDs in interprofessional teams is to provide nutritional counseling, patient self-management support, and care management services (Jortberg & Fleming, 2014).

Interprofessional teams are the collaboration of many different professionals in the care of athletes and is considered a best practice (Newman et al., 2019; Samuelson et al., 2012; Waller et al., 2016). The RD is just one member of the interprofes-

sional care team, and provides nutritional guidance and counseling. These teams can also include mental health counselors and social workers to care for the emotional needs of athletes. Certified Mental Performance Coaches (CMPC) are available to assist with issues related to athletic performance, and chaplains are a part of this team to tend to the spiritual needs of athletes. Strength and conditioning coaches ensure the physical development and physical maintenance of athletes. Athletic trainers are key member of this team to aid in injury rehabilitation as well as injury prevention. Academic counselors are vital component in the college athletic setting to provide guidance in major selection, class selection, tutoring, and maintaining academic eligibility. It takes all of these team members working together to ensure college athletes have the opportunity to perform at their best both athletically and academically as well as develop into young professionals in their chosen career path (Waller et al., 2016).

However, there are challenges to the inclusion of RDs in these teams. Other healthcare professions may not see the value of an RD due to lack of knowledge on the dietetic professions (Siopis et al., 2020) and unclear roles delineations (Gurau et al., 2013). Dejesse and Zelman (2013) found many challenges associated with interprofessional care teams comprised of RDs and mental health providers working with eating disorder patients. The main issues identified were lack of communication, role encroachment, placing the patient as the middle person for communication between the two professionals, lack of specialized knowledge on eating disorders, and conflicting treatment strategies.

Addressing these challenges of including RDs on interprofessional care teams is important as Eliot and Kolasa (2015) suggest that including RDs in an interdisciplinary approach is essential when issues include "eating disorders, human immunodeficiency virus/acquired immune deficiency syndrome, coronary heart disease, diabetes, maternal and infant health, (and) pediatrics" (p. 1578). The authors also specifically state that RDs are essential when working on sport and exercise related health challenges. Not surprisingly then, sports literature has specifically pointed to the need for registered dietitians to be included on interprofessional teams working with athletes (Arvinen-Borrow & Clement, 2017; Waller et al., 2016). RDs can provide a level of expertise that will assist in optimizing athletic performance as well serving as key member of the holistic care team of athletes. Consequently, a subspecialty of sport dietetics emerged.

Emergence of Sport Dietitians

The Collegiate and Professional Sports Dietitians Association (CPSDA; n.d.), the leading organization for registered RDs working in sport settings, defines the role of sport dietitians as:

> A specialist in sports dietetics and applies evidence-based nutrition knowledge in exercise and sports. RDs specializing in sports dietetics assess, education, and counsel athletes and active individuals. They design, implement, and manage safe and effective nutrition strategies that enhance lifelong health, fitness, and optimal performance. (para. 3)

RDs can receive a certification in sports nutrition from the Academy of Nutrition and Dietetics: The Board-Certified Specialist in Sports Dietetics (CSSD; Commission on Dietetic Registration, 2019). An individual must meet several criteria to earn the CSSD distinctions: (a) currently registered as an RD, (b) registered as an RD for at least two years; (c) documentation of at least 2,000 hours of practice in a sport setting, and (d) pass the CSSD examination (Commission on Dietetic Registration, 2019). The test must be taken and passed every five years in order to maintain the credential. The CSSD is relatively new as it became an option in 2005 (Academy of Nutrition and Dietetics, 2015). The number of RDs working in college athletic departments has grown not only due to the change in NCAA policy but also the professionalization of the specialty of working in a sport setting. The CPSDA (n.d) estimates that approximately 90 NCAA member institutions had at least one full-time RD on staff in their athletic department in 2020. The certification adds an additional competence to RDs pursuing this specialty. This is in contrast to other helping professions, such as chaplains and mental health care providers, working in a sport setting. These two professions work in a sport setting but there is no recognized specialization for working in a sport setting. However, mental performance coaches can earn certification through the Association of Applied Sport Psychology (AASP; Wrisberg et al., 2012), and strength and conditioning coaches can earn certification through the National Strength and Conditioning Association (NSCA; Certification Overview, n.d.). The major differentiator among all of these helping professionals is that RDs are licensed to practice in their respective states whereas the other professionals do not require license to practice.

Regardless, there has been limited academic attention to experiences of RDs in the sport context due to the infancy of the specialized profession. Research has mostly focused on the importance of nutrition to performance enhancement (Baker et al., 2014; Holway & Spriet, 2011; Hull et al., 2016; Hull et al., 2017). Hull and colleagues (2017) found that collegiate baseball teams that had access to a dedicated RD had healthier eating habits and better performance outcomes than teams that did not. Further, some research has identified best practices for RDs working with athletes. Holway and Spriet (2011) suggested that RDs should individualize nutritional plans for each athlete, and Kreider and colleagues (2010) recommend that RDs in sport contexts should stay up-to-date on dietary supplements and other nutritional research to assure athletes are receiving evidence-based advice. However, there appears to be no research that has qualitatively explored the experience of RDs in collegiate athletic departments.

Women in Collegiate Athletics Administration

Adding another layer to the importance of examining this profession is the role of women working in collegiate athletics administration. The RD profession is dominated by women as more than 93% of RDs are women (Commission on Dietetic Registration, 2020). Women are underrepresented, marginalized, and face career challenges that men do not in the male-dominated world of sport, and their repre-

sentation can be a contentious issue (Burton, 2015; Moran-Miller & Flores, 2011; Walker & Bopp, 2011). Gender bias in collegiate athletic administration is based on representation in leadership positions, how job responsibilities are assigned, and gendered discourses surrounding positions held by women (Burton et al., 2009; Burton & Hagan, 2009; Knoppers & Anthonissen, 2008; Shaw & Hoeber, 2003; Tiell & Dixon, 2008).

Collegiate athletics is considered a place that perpetuates masculine hegemony, further legitimizing the power of men in society (Fink, 2008; Whisenant, 2008). Women have struggled to gain entry into collegiate athletics administration (Kamphoff, 2010; Taylor & Hardin, 2016), and are often put in charge of the "soft" areas of the department such as academic advising, life skills, and women's sports (Grappendorf et al., 2008; Hoffman, 2010). Societal views of masculinity and femininity contribute to the issue in the context of sport, as masculinity is associated with superior leadership and decision-making (Anderson, 2008). Thus, women many times are perceived to lack the skills necessary to assume leadership positions in sport and should have caretaker roles (Burton et al., 2009; Walker & Satore-Baldwin, 2013). These socially constructed views of masculinity and femininity then lead to gender normalcy and homologous reproduction within sport organizations, which perpetuate the belief that women should hold only specific positions with college athletics (Burton, 2015; Mazerolle et al., 2015; Staurowsky & DiManno, 2002). Burton (2015) suggested that there are numerous reasons why women have been able to secure only certain positions in sport, including the gendered nature of sport, stereotyping, discrimination, organizational culture, leadership expectations, and occupational turnover. Although the aforementioned may occur within different levels (i.e., society, the organization, and the individual), they work together to limit the opportunities of women within the sport industry (Smith et al., 2019). The experiences of RDs adds to this discussion as food sociologists have identified how food and food preparation offer key insight into how women reproduce and contradict gender norms (Avakian & Haber, 2005), and cooking is most often associated with being a feminine task (Inness, 2001). Thus, RDs are positioned in an overly feminized role in the overly masculinized culture of college sport.

Method

RDs are a recognized member of college athletes' interprofessional care time, however, research has yet to understand the experiences of the RDs themselves. Therefore, the purpose of this study is to understand the experiences of female registered dietitians working in college athletics. The study explored the experiences of RDs embedded in athletic departments at the NCAA Division I – FBS level, specifically in the autonomous conferences which are comprised of the Atlantic Coast, Big Ten, Big 12, Pacific 12, and Southeastern conferences. The focus was on this subdivision of Division I, because of the substantial differences in resources within those athletic departments compared to the remaining members of Division I as well as Division II and Division III. Thus, Division I—FBS Autonomous Conference mem-

bers are more likely to have a RD on staff within the athletic department (National Collegiate Athletic Association, 2020b). Athletic department staff sizes are much larger in this subdivision as well as those departments have all the necessary support personnel, which includes RDs, to provide services to athletes (National Collegiate Athletic Association, 2020a). Thus, it more likely to have find participants who meet the criteria in this study embedded in Division I—FBS Autonomous Conferences member institutions.

Participants

Purposeful criterion sampling was used to recruit participants for this study as specific characteristics needed to be met prior to participation in the study (Patton, 2002). The criterion for this study were women who were RDs currently employed in Division I FBS – Autonomous Conference athletic departments. Patton (2002) suggests the purposeful sampling yields "information rich" qualitative data because participants are specifically selected within the aims of the study (p. 230). Participants were identified through public, online university staff directories, and contacted via their publicly-available email address. Twenty-nine RDs were contacted with a recruitment email, and nine RDs agreed to be interviewed for this study. Demographic information is reported as a group in an effort to maintain confidentiality due to the small population of participants (Streubert & Carpenter, 2011; Taylor et al., 2018). All of the participants were women and White. This is representative of the RD profession in general as 93.9% of RDs are women and 81% are White. No other ethnicity is represented by more than 4% of any ethnic group among RDs (Commission on Dietetic Registration, 2020). The average age of participants was 35-years old. Eight participants have their master's degree, and five of the participants have their CSSD certification. The participants have worked in a sports nutrition setting for an average of 7.5 years. Institutional Review Board approval was obtained prior to participant recruitment, and participants signed consent forms prior to their interview.

Data Collection

Qualitative interviews were utilized for data collection as the focus is on understanding the participants' experiences (Agee, 2009; Denzin & Lincoln, 2011; Josselon, 2014). Semi-structured interviews were conducted with an interview guide (see Table 1) leading the discussion but the participants led the conversation to facilitate an in-depth discussion of the participants' experience (Merriam & Tisdell, 2015). The interview guide consisted of 13 open-ended questions and was based on the work of Taylor and Hardin (2016) on their interviews with female collegiate athletics directors and Beasley, Magliocca, Smith, and Hardin (2019) interviews with social workers working in collegiate athletic departments. The open-ended questions gave participants power to express their experiences fully and to allow for follow-up questions, which leads to rich data (Turner, 2010). The questions inquired about the participants' career paths, their interactions with co-workers, the role gender has played in their career as well as their daily responsibilities. All participants were interviewed via the phone, due to geographic considerations (Cachia & Millward, 2011; Fenig et al., 1993). The average interview length was 29 minutes and ranged from 20 to 60

minutes. Saturation was determined by the research team to have been met after the ninth interview due to the redundancy of initial themes (Merriam & Tisdell, 2016). Therefore, no additional recruitment emails were sent. Interviews were recorded, and then transcribed into a Microsoft Word document, which were then copied into Excel for analysis (Saldana, 2015).

Data Analysis

A thematic analysis was completed following Braun and Clark's (2006) six steps: familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining the themes, and producing the report. The lead researcher began with a close-reading of the transcriptions, from which in-vivo coding, actual words and terms the participants used (Strauss, 1987), were identified as initial codes (Saldana, 2015). A second round of coding was completed to group the in-vivo codes into overarching themes (Braun & Clarke, 2006). A codebook was then created to define the themes. The lead researcher and another member of the research team independently re-coded each transcript for the themes using this codebook. The research team then met after this individual coding was complete for peer debriefing to discuss any discrepancies in codes and come to a full agreement on all codes to finalize the themes (Saldana, 2015). This adds creditability to the data analysis process by bringing in multiple perspectives (Denzin, 1978; Lincoln & Guba, 1985).

Trustworthiness

Several methods were used to ensure the trustworthiness of the qualitative dates. First, member-checking was completed by sending participants a copy of the transcription which they were edited for accuracy (Lindlof & Taylor, 2011; Lincoln & Guba, 1985). Only one participant returned the transcript with edits, and all of the edits were incorporated. Second, members of the research team used analytical memos, which are reflexive notes on the connection of certain concepts and the reasons codes were coded in certain ways (Saldana, 2015), which adds credability to researcher process by increasing transparency throughout the research process (Given, 2008).

Grounded in social constructivism and interpretivism, the authors recognize the importance of acknowledging the research team's positionality (Denzin & Lincoln, 2011). The lead researcher of this study is an RD herself employed in a collegiate athletic department, and conducted the interviews, which inherently brings in biases being a member of the study's population (Peshkin, 1988), and may have influenced interview guide construction, the framing of questions, or data interpretation. Conversely, accompanied with reflexive work (i.e., keeping a researcher's journal), due to shared identity of the lead researcher and participants, she was easily able to build rapport, and was sensitized to professional language during data analysis that may have been missed by people not familiar with the profession (Gobo & Molle, 2017). Additionally, collaborative work with a research team, such as the use of peer debriefing in the data analysis process, whose members included a doctoral student in sport management and a full professor in sport management both of whose research has focused on holistic care, was used to ensure data trustworthiness (Saldana, 2015).

Table 1
Interview Guide

Questions

• What was your career path? Was being a sports dietitian your career goal? If not, what brought you here?
• Is there a specific path required in order to get into sports as a dietitian?
• The CSSD is a special certification in sports. Do you have yours? What does this certification mean in terms of what you can do and where can you work?
• How important do you think the CSSD is for dietitians working in sports?
• Are there any other higher education or certifications required to be a sports dietitian?
• What is your end career goal? How do you see yourself getting there?
• Can you take me through your average day at work?
• What are common misconceptions about what you do?
• What have your experiences been with the following people in the athletic department?
  • Administrators
  • Coaches
  • Strength & Conditioning Coaches
  • Athletic Trainers
• Tell me about your relationship with your athletes.
• In what ways, if any, has this relationship been impacted by your gender?
• How important is educating in your role? What strategies do you use to educate your athletes?
• How do you work with other members of the student-athlete's care network (i.e. athletic trainers, therapists, MDs)?

Results

Professional Transition

The majority of the participants stated that their initial desire to specialize in sports as a RD stems from their own previous athletic careers or internship experiences in sports nutrition. Participant 8 explained how her experience as a college gymnast made her want to pursue a career in sports. She said:

> I did gymnastics and it was about halfway through my junior year and that's really when you're getting deep in to your dietetics courses. (I) was really noticing my own performance. I was performing better, and so I would say about my junior year of undergrad is when I knew that I wanted to work in sports.

Participant 3 mirrored a similar experience, "I was a competitive athlete in high school…so I saw firsthand (how) nutrition played a role in performance and health and body composition."

Although this initial desire for many of the participants to seek a career related to athletics was sparked a at a young age, there were several different paths taken to work in the collegiate setting. However, no matter how, the majority of the participants believed gaining hands-on experience was the most effective pathway to enter

to the profession. The participants discussed their experience volunteering to not only get their foot in the door, but to understand the day-to-day responsibilities of a dietitian working in a sport setting. Participant 2 explained that it was not until she volunteered that "I saw what they actually did and how involved they were with the teams and the athletes." Participant 6 further acknowledged that, because this is a new field, finding a position as an RD in a collegiate athletic department can be difficult. However, she clarifies this stating, "I think those that are trying to get into the field and are still having trouble getting their foot in the door because they haven't volunteered enough or haven't done the lower level experience to get that first step in the door." Overall, although the participants had different career paths, beginning to volunteer early in one's education experience was identified as the first step in establishing a career as a sport dietitian.

Similarly, all the RDs in the study discussed the importance of completing the dietetic internship. The dietetic internship is an accredited post baccalaureate program that provides the required competencies to take for the Commission on Dietetic Registration Registered Dietitian Exam (2020). All interns must have a minimum of 1,200 hours of supervised practice during this internship. Individuals must have bachelor's degree and complete specific coursework to be qualified for a dietetics internship. As Participant 5 stated, "to get into sports you definitely first need the credential as an RD." The Registered Dietitian credential is not specific to sports, however, as the participants suggest, it is the first step.

RDs who meet minimum requirements have the option to sit for an exam to become a Certified Specialist in Sports Dietetics (CSSD; Commission on Dietetic Registration, 2019). This specialist credential sets registered dietitians who work in sports apart from those who work in a clinical, community, or foodservice setting. Some of the participants did not value this specialized certification, but many still thought the credential, though not required, was a step toward becoming a more qualified professional. Participant 9 explained that having this credential meant:

> We're experts. We're professionals. And I think it speaks a lot for our investment. I think that's really important and it shows the commitment and their passion to the field of performance nutrition.

Overall, some type of previous experience with sport—whether as an athlete, through sport-related internships or volunteering—was recommended as a first step in pursuing this career. As Participant 6 summarized, "having some kind of hands-on experience in sports will really help you get your foot in the door."

Nutritional Education

All of the participants agreed that the most important service they provide to student-athletes is nutritional education. Participant 4 stated that collegiate sports RDs are "educators first and foremost." Participant 2 explained why they feel education is so important to college athletes:

> At the end of the day, we're not going to be standing next to the athletes for every meal or many of their meals so for them to be educated enough to make decisions on how to eat. I think is extremely important. They're faced with it multiple times a day.

Due to the importance of education, many participants stressed this was the main part of their job, and was integrated into all parts of their work. As Participant 8 stressed that as an RD, "you can't give enough education even if you feel like you're repeating yourself. An athlete might hear the same thing four or five times and it might be that fifth time where they actually hear what you're saying."

This education can come in a variety of formats, i.e., teaching a class, individual consults, team talks, cooking demonstrations, nutrition handouts, grocery store tours, or even subliminal messages. Participant 1 described these formats as two different types of education, active education—"like team talks and grocery store tours and cooking classes"—and passive education—"through GroupMe, going to meals, making sure they're eating what they're supposed to be eating, making snack bags." Similarly, Participant 3 explained that they also do active education, such as one-on-one talks with athletes; however, it was in the passive education efforts where true learning happened: "we sort of slide it (nutritional education) in without even realizing that I'm teaching them. So, I think the formal stuff is fine to get in but the equal to that is the informal conversations we end up having that I'm teaching them something." One of the places where a lot of this informal educational conversations where at the nutrition centers and fueling stations. Participant 3 explained this phenomenon by stating:

> (The) nutrition centers and fueling stations (have) exposed the dietitian to the students in a much more casual and informal role so they don't have to set up an appointment with you. We do that now but there's just so much more impromptu conversations and education that happens because of the fueling stations.

A key part of this passive education process is creating and developing relationships with college athletes. The participants pointed to the importance of knowing them as individuals first. Participant 1 explained:

> I keep (our relationship) professional but also get to know them outside of their sport. Obviously, their sport is super important to them. That's why they're here, but showing them that I care about them as a person and not just as the point guard on our basketball team or the No. 1 pitcher on the softball team.

Participant 9 mirrored this and stated that their relationship with athletes is what drives them the most, joking, "It's all about the person first and again that's what drives me—I don't do it because I enjoy making smoothies that much with a master's degree and 15 years as a dietitian." Overall, education was the main part of the RDs' jobs; however, it appears that it the passive education, happening outside of formalized sessions, is where the most meaningful nutritional learning took place, which could not happen without a trusting relationship with the student-athletes.

(Dis)Respect

The RD plays an important role on the college athletes' interprofessional care team, and interacts with other athletic staff daily. The role of the RD is still relatively new in sport, so RDs in this study had both positive and negatives experiences with each member on this team. The participants were mixed in responses when asked

about relationships with administration. Participant 5 explained that their administration is extremely supportive toward nutrition: "our administration is very connected to what we do." However, they continued that this is because the RDs in the department intentionally keep in communication with the upper administration: "I think it's a two-way street. We communicate a lot on what we're doing. We're sending them yearly accomplishments. We do an annual report. We're at senior staff meetings."

Participant 2 echoed this response by stating:

> My boss gets nutrition. He understands it. He knows what I do. He's very sharp too so he knows where we should be and what we should be doing. (He knows) where the rest of the sports nutrition programs are headed in the country as well. We communicate pretty regularly and he knows pretty much everything that's going on in nutrition.

Other responses countered this support. For example, Participant 7 stated that the administration views sports nutrition as a cost and not so much an investment: "they understand the need for nutrition and food, but at the end of the day they see the nutrition staff and the food that we are asking for to give to athletes as a cost." Participant 1 took this step further, commenting that their administration does not "fully understand it [sport nutrition]" as "sports nutrition is so new that they probably didn't have a dietitian if they were an athlete." However, similar to the participants with positive experiences with the administration, these participants also spoke about the important of being in communication with senior staff members. As Participant 7 commented, "you're always going to have to push the envelope with administration to say 'we really need to spend more for these athletes on food.'" Participant 1 intentionally travels with her teams during the post-season, "because that's really when the administrators are more present and I think it helps as well. They're busy dealing with much bigger fish than what I'm dealing with, so I think it's good for them to actually see what we do." Therefore, a key strategy for the RDs in this study to improve relationships with the athletic administration were keeping in communication with them, and demonstrating the RD's role in the interprofessional team.

All of the participants mentioned their struggles in validating their role and observed an overall lack of knowledge about the profession in both college athletics and in the general public. One of the biggest misconceptions about the profession stemmed from constantly being around food. Participant 1 stated that people often think their job is more "foodservice and that I'm cooking all of the food and serving it" which reinforces the stereotype that RDs are the food police. Participant 6 said "it's not like people are disrespecting us but it's more of they don't realize everything that we are able and capable of doing." Participant 4 added this is not only an issue in sports, but also in the general public. She said "anyone can see something, read something, and suddenly they think they're an expert. I think that's the whole challenge."

Nutrition most likely was the responsibility of either the athletic training staff or strength and conditioning coaches depending on the institution before the emergence of the sport dietitian profession. The relationships with these two groups of professionals has generally been positive. This may be due to the fact that they all

care for the physical needs of the student-athletes, so they have natural connection with that aspect of care for the student-athletes. Most participants, when discussing strength and conditioning coaches, stated they have a feeling of being "lucky" when describing their relationship. Participant 4 reported, "If you're lucky, you have a strong performance team—strength coaches that support you." Similar to this feeling, Participant 1 stated that they have been "really lucky to have good relationships with the strength coaches and if you have their support it helps so much." The majority of the participants described their relationship with athletic trainers as innately better, with Participant 6 describing this relationship as "our best relationships." All of the participants stated that communication is the key to working together on this interprofessional team in order to build and keep these relationships.

Several participants also pointed out the challenge of overcoming past practices of other members of the staff providing nutritional advice. Participant 4 explained that, before they got to their program, the strength and conditioning staff managed the day-to-day nutrition operations, and they staff members still "chime in on their nutrition opinions" even though "I was hired for a reason." Participant 9 echoed this experiencing indicating its difficult sometimes for other staff members to accept sport dietitians as part of the interprofessional care team.

Interestingly, many of the RDs pointed to their gender as a strength in overcoming professional challenges, provided them credibility and thus a level of respect. Participant 8 explained that "both male and female athletes are more willing to open up about nutrition to a female." Participant 3 mirrored this feeling:

> I think I'm looked at a lot as a mom. My relationship with them [athletes] is great and I think a lot of them do look to me like that motherly figure, someone they can go to for anything and it drives me.

Participant 9 explained how other professionals that she has worked with told her "it's good to have a female on our staff, because they're going to talk to you differently and they're going to talk to you about different things than they're going to talk to us about". They continued discussing how being a woman in a male-dominated profession motivated them:

> I'm happy, excited that I'm a female in kind of a man's role in that I have the ability to impact my athletes in a different way, in a different light. And kind of bring that piece of diversity to the field in the world of athletics.

Overall, the participants felt both respected, and disrespected, in their position. However, the majority of negative experiences stemmed from others lacking knowledge about sport dietetics as a profession.

Discussion

The purpose of this study was to explore the experiences of female registered dietitians working in collegiate athletic departments. The study was guided by the interprofessional model of holistic care teams in sport. Holistic care teams have become more popular in both research and practice (Waller et al., 2016). RDs are a key member of athlete care teams, and this study expands the ever-growing literature on

holistic care for college athletes (Barkley et al., 2018; McHenry, 2020; Waller et al., 2016) by describing the work experiences of registered dietitians in college sports. Overall, the participants offered many insights on the experiences of RDs in a collegiate sport setting, as well as the challenges faced.

Research has examined the challenges women encounter while trying to gain entrance into the collegiate athletics profession (Hardin et al., 2017; Siegele et al., 2020; Taylor et al., 2018). Hardin and colleagues (2017) described the glass door concept as an extension of the glass ceiling. The glass door refers to the difficulties and challenges that women have in entering professions in sport, and thus must develop strategic career plans to find their way into college athletic administration (Smith et al., 2017). The RDs in study employed three specific strategies: earning their master's degree (even though it is not necessary to become registered yet), earning and maintaining their CSSD (specifically for early-career RDs), and gaining experience in sport, many times through unpaid internships. These strategies were specifically used to prove professional competency both as a dietitian and as an athletic expert. This need to "prove" oneself to be respected is common for female professions in sport settings due to the hypermasculine culture of college sport (Taylor & Hardin, 2016).

It is promising that there is a direct path into becoming a sport dietitian and provides an opportunity for women to enter the collegiate athletics profession. For other emerging professions in sport this is not the case. For example, research with social workers employed in collegiate athletic departments found that many of the social workers accidentally found their way into the profession, not even knowing working in sport-settings was something they could do with their degree (Beasley et al., 2019). Similarly, there is no formalized process for chaplains to become certified to work in sport or even gain access to work in collegiate athletics (Waller et al., 2008). Therefore, even though there are challenges in the career path related to gender, it is a strength of the sport dietetic profession that there are specialized internships in sport-settings and a specialized certification to indicate sport-specific competence.

RDs found strength in their female identity contrary to previous research on gendered experiences in collegiate athletic administration. Gender has been seen as a barrier to positive career experiences for women (Burton et al., 2011; Hoffman, 2010), but the majority of participants in this study actually stated being a woman was a strength in their career as an RD working in college athletics. Women usually take on a more nurturing role that more closely aligns with societal gender norms in sport (Acosta & Carpenter, 2014; Claussen & Lehr, 2002; Pent et al., 2007; Raphaely, 2003). Further, the RDs in sport, with their relationship and proximity to food, can take on a motherly role to their athletes. Though conforming to this stereotype, the RD participants felt that their gender, and their natural instincts that are often viewed as weakness, give them strength in their position. The participants' experiences suggested that their gender identity benefited their role as a support staff member. The inclusion of a strengths perspective to research with women is a promising way to empower women in a patriarchal culture, such as sport (Black, 2003; Pollio et al., 1997).

The women also saw their gender as a strength as they were able to build rapport with their athletes and being a women provided a sense of comfort to the athletes. Research has shown that women are often funneled into the "soft" areas of college sport such as academic counseling or life skills but sport dietetics is certainly not a "soft" area (Hardin et al., 2020). RDs most likely have a degree in nutrition which is a science, and they must be licensed to practice. In fact, the sports dietitian is most likely only one of two licensed professionals working in a college athletic department with the other one being the mental-health care provider. This position allows women to gain entry into the profession and then perhaps continue upward mobility to a senior-level position.

The second major finding from this study was that the RDs' experiences supported the idea of collaborative, interprofessional teams as the most effective way to work in college athletics, just as Arvinen-Barrow and Clement (2015; 2017), in their work with athletic trainers and mental performance coaches, pointed to the importance of athlete access to interprofessional care. Specifically, interprofessional teams—wherein a group of professionals from different specialties work together to form one collaborative care approach—can be more beneficial for collaborative care than a multidisciplinary team—wherein multiple professions work with the same client but provide distinct, rather than collaborative care (Tsakitzidis et al., 2017). Benefits of interprofessional care teams are many times related to the support and communication between professionals to best meet care of clients (Breitbach & Richardson, 2015; Körner, 2010, McHenry et al., 2020). For example, the participants in this study explained that both informal and formal referrals from support staff have increased, giving athletes more exposure to the RD on a day-to-day basis. Having the support of coaches, athletic trainers, and strength & conditioning coaches has helped increase athlete awareness of the RDs and the nutrition services provided within interprofessional teams. Therefore, recognizing and including RDs as key member of this interprofessional team, as suggested by the model of athlete care introduced by Waller et al. (2016), is an opportunity for RDs to demonstrate their unique contribution to athlete care, ultimately showing the importance of their services to athletic administrators.

There were, however, misinformed perceptions of registered dietitians by athletic administrators and coaches, which required attention from the RDs. Athletic trainers and strength & conditioning coaches still gave dietary advice to college athletes, disregarding the skills and knowledge of the RD. Either misunderstanding of what they do on a regular basis, or misunderstanding of what dietetics is, administrators, coaches and support staff require education on the RDs role within the department. This study specifically found that there is some understanding by administrators of the skillset that RDs bring to the support staff, but there are still times when RDs are not recognized for the training, education, and licensing that they have. This may stem from misrepresentation of the profession in popular media. The media misrepresents this profession by photographing RDs with fruit and vegetables in a staged setting rather than in an actual work setting (Porter & Collins, 2020). Similar to this study, the registered dietitians experienced a misrepresentation as the "food person"

rather than a licensed professional. Communication and professional education is thus crucial to effectively work together.

This experience is not unique to the emerging profession of sport dietetics. Both sport psychology professionals (Arvinen-Barrow & Clement, 2017) and social workers (Beasley et al., 2109) in sport have also felt there is a lack of understanding of their role by some members of the interprofessional team. Therefore, as more and more research supports the lack of knowledge of traditional sport professionals (i.e., athletic trainers) about emerging professions in sport (i.e., RDs), there appears to be a need for more systematic interprofessional education for athletic staff. However, true interprofessional work is difficult to learn from the standard model of training that is currently in place, which is constructed around profession-centrism which promotes isolation and elitism (Pecukonis et al., 2008). Health practitioners can learn to "avoid effective communication and diminish the benefits of integrated health care delivery by perpetuating their discipline centric beliefs" (Pecukonis et al., 2008, p. 423). This is seen through the participants' interactions with other support staff members in college athletic departments. Since nutrition guidance formally fell to athletics trainers and strength & conditioning coaches, these professionals learned their own views of nutrition and can have trouble relinquishing their beliefs when a registered dietitian is present. Interprofessional competence should be taught regularly so that effective athlete-centered care can be achieved. Indeed, scholars suggest that interprofessional education efforts can help overcome barriers, and further cement the role of RDs in interprofessional care teams in other settings (Hark & Deen, 2017; Johnson, 2013).

Ultimately, even though participants discussed the many ways their gender benefited their work with the athletes, there clearly are gender-related factors at the same time inhibiting the experiences of females RDs in athletic departments; for example, having to employ specific strategies, such as specialized educational certifications, to "prove" their competence to break through the glass door that their male counterparts may not have to consider (Hardin et al., 2017). Furthermore, there are clearly gendered norms related to food preparation (Avakian & Haber, 2005) that may be contributing the misrepresentation and misunderstanding of the roles of female RDs in the athletic departments. However, much of this misunderstanding is most likely also related to and exacerbated by the fact that sport nutrition is a relatively new profession, and the inclusion of RDs on the interprofessional team, as many of the participants in this study discussed, is relatively new. Therefore, it is additionally necessary to demonstrate as part of the aforementioned interprofessional education the importance that food and nutrition play in the success of athletes. For example, proper nutrition has been found to be necessary for successful injury rehabilitation (Smith-Ryan et al., 2020), and can have impacts on performance outcomes (Logue et al., 2017). Clarifying this importance of nutrition to athletes, coaches, athletics trainers, athletic administrators, and other members of the athletic department may help deconstruct the misrepresentation and misunderstanding of the importance of sport nutrition, and make the case to administrators for more financial and professional support of the RD role in the athletic department. Furthermore, this frames what is commonly thought to be a women's task of food preparation to be an essential part

of elite athletic success, which may be a step in carving out a space for femininity in a traditionally masculine space.

Limitations and Suggestions for Future Research

Findings are not meant to be generalized to the RD population as a whole because of the qualitative nature of the data collection. Therefore, future research should explore the experiences of RDs across NCAA divisions, as well as in other sport settings. Furthermore, only female RDs were interviewed due to the overrepresentation of women in the dietetic profession; however, interviews with male RDs working in sport can provide an important perspective. Research should also examine the perceptions of RDs among other members of the interprofessional team, administrators, and athletes to gain a fuller perspective of the role of RDs in athletic departments. Additionally, the participants pointed to their gender as a strength in their practice. As this in contrast to other women in college athletics, future research should examine the experiences of female RDs in sport settings through a feminist lens.

Another line of research that should be examined with RDs is the athlete's perceptions of RDs, and the role RDs play in the overall collegiate experience of the athletes. The interprofessional care team is critical to the athletic success of the athletes as well as their overall holistic development. Examining if the athletes are actually learning healthy dietary habits or just eating what they are told would be an interesting concept to examine. The RDs in this study emphasized that they are focused on educating athletes on healthy eating habits so it would be interesting to explore if the athletes are actually learning what they should or should not be eating or are just doing what they are told by the RDs. This is vital in the overall development of the athletes as this would be beneficial for them when they transition into life post college athletics. Saxe et al. (2017) found that female athletes struggled with their dietary habits when they transitioned out of college athletics. It would then be pertinent to examine if RDs are providing education on healthy eating habits for when athletes are no longer competing at the collegiate level as well as the role RDs play in holistic development of athletes.

Implications

The insights from the study provide college athletics administrators a glimpse into the profession of RDs working in a collegiate athletic setting. Athletic directors and other senior-level administrators should note the training and expertise these professionals have, and they are not simply the person who makes smoothies after practice. They are most likely one of three athletic support staff required to have a license (professionals providing counseling and medical doctors) so their level of competency is extremely high. Continual education among staff members of the skillset these professionals would be beneficial for everyone in the athletic department to have a better understanding of this profession. Deepening this understanding would increase the efficiency of the interprofessional care team. This directly ties in the theme of (Dis)respect as there seems to be misconceptions of the expertise RDs

have, and the value they can provide the interprofessional care team. The results of athletic trainers and strength coaches can be seen and measured as athletes recover from injury or gain more muscle mass. It is important to acknowledge that RDs play a critical role in this as well. Providing proper nutrition is critical to injury recover and strength training yet the value of the RD is not always recognized. Athletes are also more likely to value the role of the RDs if administrators are also supportive of RDs role in the overall care and development of the athletes.

The findings also provide information for RDs who are considering entering into the college athletics. Obtaining an internship in a sport setting is a key for entering the profession. Once in the profession, educating athletes on proper nutrition is vital as well as providing education to administrators so they will have a deeper understanding of the profession. Additionally, nutrition programs should also highlight the career opportunities available in college athletics as they may be a pathway into collegiate athletics administration. Overall, the information from study can help inform future hiring decisions and programmatic decisions by NCAA Division I athletic departments when implementing nutrition services for their athletes and assembling interprofessional care teams.

Conclusion

It is apparent there is a growing need for sport dietitians in the collegiate athletics. This is particular evident among the NCAA member institutions that are in the Division I – Autonomous conferences. Those members have the necessary financial resources for increasing their staff sizes to ensure complete holistic care for their athletes. These athletes are performing and competing at elite and world-class levels so optimal nutrition is key for their them to reach their peak athletic performance. There have been considerable resources spent to ensure the physical well-being of college athletes in terms of athletic trainers and strength & conditioning coaches as well as facilities to support these two aspects of student-athlete care. College athletics are now beginning to focus on the complete health of athletes which includes the mental, emotional, and spiritual well-being as well as the physical. Nutrition would fall under the physical aspect of athlete well-being, but would add to the overall holistic care and interprofessional care team. Therefore, understanding RDs' experiences of their professional role in college athletic departments is an important contribution to literature on interprofessional care teams in the athletic context.

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Journal of Intercollegiate Sport, 2021, 14.2, 116-135
https://doi.org/10.17161/jis.v14i2.14829

Stress, Anxiety, Binge Drinking, and Substance Use Among College Student-Athletes: A Cross-Sectional Analysis

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Student-athletes face considerable stress in balancing participation in sports with other responsibilities, which can contribute to unhealthy coping behaviors including alcohol and drug use. We administered online surveys to 188 college athletes to examine stress, athletics-related anxiety, and perceived control of stress as predictors of binge drinking, substance use, and associated risk behaviors. Participants rated athletics as the second greatest source of stress in their lives, trailing only academics. Athletics-related anxiety was associated with significantly higher cannabis use and substance-related risk behaviors and represents an understudied area in the literature. Reports of alcohol and drug use in our sample were comparable to national surveys of student-athletes, but opioid misuse was troublingly high. Participants over the age of 21 and males were more likely to report substance use and risk behaviors. Athletes are susceptible to orthopedic injury and associated pain, which may lead to early exposure to opioids with high potential for abuse. Interventions for this population must target social contributors to substance use among student-athletes, opioid prescription and misuse as a gateway to opioid use disorders, and untreated anxiety as a potential driver of substance use, including anxiety associated with athletic performance.

Keywords: Alcohol use disorder, Alcoholism, Alcohol drinking, Cannabis, Risk-Taking, Sports, Students, Substance use, Substance-related disorders

Background

The immense stress faced by college students as they navigate multiple responsibilities and pressures can contribute to unhealthy coping behaviors including alcohol and drug use (Auerbach et al., 2018). Student-athletes may face unique challenges related to their need to balance the academic and interpersonal stressors common to all students with the additional pressures of competition and training (Brown et al., 2014; Hatteberg, 2020; Papanikolaou et al., 2003). Students whose financial well-being is tied to their athletic performance, including scholarship ath-

letes or those aspiring to compete professionally, may face even higher pressures (Judge et al., 2012). As alcohol and other substance use are common in the social culture of some collegiate athletics teams, athletes may also face social pressure to use substances (Graupensperger et al., 2018; Parisi et al., 2019).

Two systematic reviews found that both male and female student-athletes are more likely to abuse alcohol and experience alcohol-related problems compared to their non-athlete peers, but are less likely to use marijuana and illicit drugs (Kwan et al., 2014; Lisha & Sussman, 2010; Parisi et al., 2019); however, rates of substance use and abuse are unacceptably high in this population. In relevant studies, 34% of student-athletes self-reported binge drinking in the prior two weeks (Lewis et al., 2017), 28% reported using cannabis during the prior year (Reardon & Creado, 2014), and between 1-4% reported using cocaine, MDMA (aka "ecstasy" or "molly"), hallucinogens, and amphetamines during the prior year (NCAA, 2018a). Athletes also commonly engage in high-risk behaviors while intoxicated, such as drinking and driving, at rates similar to their non-athlete peers (Bastien et al., 2019).

There has been a notable evolution in patterns of substance abuse among college athletes over the past 20 years. Traditionally common substances of abuse such as alcohol and marijuana have increasingly become paired with designer drugs such as MDMA, and there has been a recent resurgence in cocaine use (NCAA, 2018a). Other drugs have become more widespread as well, including so-called "study drugs" or "ADHD stimulants" such as Adderall and Ritalin, which are used by student-athletes to get high or in an effort to improve academic performance (Buckman et al., 2013; Sepúlveda et al., 2011).

Further, there has been a national epidemic of prescription opioid abuse, leading to a six-fold increase in opioid-related overdose deaths among adults since 1999; these drugs now account for more than two-thirds of all overdose deaths in the United States and disproportionately affect the young adult population (Scholl et al., 2019). Student-athletes are susceptible to orthopedic injuries, which may lead to increased risk of opioid abuse and dependence (Reardon & Creado, 2014). Opioids initially prescribed to manage pain may contribute to increased vulnerability for abuse and addiction (Veliz et al., 2017). One national survey of college-age youth found that 16% had abused pain medication, and this number was significantly greater (23%) among student-athletes (Hazelden Betty Ford Foundation, 2015).

Student-athletes face unique stressors compared to their non-athlete peers, which may be a key contributor to substance use and emotional distress in this population. Many college students must balance academic performance, social demands, adjusting to life away from home, and financial challenges, and collegiate athletes face additional commitments of time and energy for practices, team meetings, travel, and competition (Lopes Dos Santos et al., 2020; Paule & Gilson, 2010).

Emotional distress is less common among student-athletes than their non-athlete peers; however, a multi-year, national survey of 19,733 US student-athletes found high prevalence of self-reported depression (21% male, 28% female) and anxiety (31% male, 48%) in this population. Perceived stress was the single largest predictor of emotional distress among student-athletes in this study (Brown et al., 2014). Ad-

ditionally, student-athletes experiencing emotional distress are less likely than their peers to seek professional support (Bird, Chow, & Yang, 2020; Kern et al., 2017), often due to time constraints and concerns about stigma (Bird, Chow, & Cooper, 2020).

De Grace and colleagues (2017) highlighted the role of athletic participation as a potential risk factor for substance abuse. In their interviews with adults in recovery, participants who had been involved in organized sports frequently cited the overlap between substance use and the social connection of athletic participation as well as the use of substances as a means of coping with the physical and emotional demands of athletics. In recent years, data have become much more readily available on patterns of substance use among college students, including student-athletes; however, relatively few studies have attempted to assess relationships between athletics-related stress and substance use as a form of maladaptive coping. In addition, an individual's perception of their control in managing a situation has been found to be a key factor in coping, and perceptions of behavioral control are central to the science of addiction (Dijkstra & Homan, 2016; National Institute on Drug Abuse, 2020). As such, additional research is needed to examine perceived control among student-athletes.

Furthermore, prior research suggests personal and demographic variables may be associated with substance use and physical activity. For example, gender and age have been shown to moderate the relationship between alcohol use and physical activity (Boyes et al., 2017; Lisha et al., 2011) and grade point average (GPA) has also been correlated with substance use in college students (Ford & Arrastia, 2008).

The purpose of the current study was to gain a clearer understanding of various stressors experienced by student-athletes and their relationship with substance use. To achieve these aims, we surveyed student-athletes in order to describe their patterns of substance use, experiences of physical pain, perceptions of athletics-related stressors in comparison to other forms of stress in their lives, and the association of these with (a) substance use, including alcohol, marijuana, and other substances; and (b) risk behaviors associated with substance use.

Methods

Procedure

We contacted the athletics departments at colleges and universities in five Upper Midwest states (Iowa, Minnesota, North Dakota, South Dakota, Wisconsin) with athletics teams competing throughout the National Collegiate Athletic Association (NCAA; i.e., Division I, II, III), and National Junior College Athletic Association (NJCAA) levels. Emails were sent to athletics departments introducing the research and requesting permission to send an invitation to participate to the institution's full student-athlete listserv. All invitations to participate were sent during the traditional fall and spring semesters and included a link to an online survey examining sources of stress, drinking, and substance use.

Six colleges and universities agreed to participate in the research, representing 55% of those invited, including two public universities competing at the Division

I level, two public universities competing at the Division II level, one private college competing at the Division III level, and one NJCAA community college. Five departments sent email invitations (including a link to the online survey) to their student-athletes via email listservs; one university included the invitation and link in a weekly email newsletter sent to all student-athletes. The invitations included the study inclusion criteria that all participants were required to be 18 years of age or older, attending a college/university, and a member of one or more varsity athletic teams at their university during the current academic year. It is important to note that at the time of the surveys, the use of medical marijuana/cannabis (with a physician's prescription) was legal in two of the states where participating universities were located; however, recreational use was illegal in all participating states and marijuana is considered a banned substance for all athletes by the NCAA, even when used legally or medically prescribed.

Respondents who accessed the survey website completed informed consent prior to participating by checking a box indicating their understanding and agreement. No names or other personally identifying information were collected on the internet survey, which took approximately 15-20 minutes to complete. Informed consent was provided by 225 participants, of whom 197 (87.6%) completed the survey. Three validity check items were included in the survey (e.g., "For this item, please choose Option 2, 'A little bit stressful'") to identify participants who were not appropriately attending to the items. Nine participants (4.6%) were excluded for failing one or more of the validity check items, resulting in a final sample of 188 participants. Five of the six college/universities provided data on the total number of students who received the invitation to participate. Among the 1613 student-athletes at these institutions, we obtained a 9.8% response rate.

At the conclusion of the survey, participants were provided the option to register for a random drawing for three $50 gift cards in accordance with NCAA bylaw 16.11.1.11.2. Those who wished to enter the drawing clicked a link for a separate online form where they provided an email address. Thus, the email address was not linkable to the study data. All data were password-protected and accessible only by the research team. Study procedures received ethical approval from the institutional review board at Gustavus Adolphus College.

Measures

Demographic and Background Data. The study survey began by asking participants to provide relevant demographic information and background data, including their age, gender, race, year in school, grade point average (GPA), sexual orientation, socioeconomic status, and sport(s) as well as the NCAA/NJCAA division of their athletics team(s).

Sources of Stress. A measure of sources of stress specific to university students was adapted from The Graduate Stress Inventory (GSI; Rocha-Singh, 1994). It included two preliminary questions: "Overall, how stressful are you finding university?" and "In general, how have you been coping with your university-related stress?" Students were presented with items listing 12 different sources of stress (e.g., aca-

demics, finances, social relationships, athletics) and asked to rate how stressful each event was in their lives. These 12 items were answered on a scale of 1 ("Not at all stressful") to 5 ("Extremely stressful") and summed for a total score of 12 to 48 (Alpha = .823).

Athletics-Related Anxiety. Thirteen items from the Sport Anxiety Scale (SAS-2; Smith et al., 2006) were used to assess symptoms of anxiety experienced during athletic competition, including feelings of worry, difficulty concentrating, or physical symptoms (e.g., muscle tightness, uneasy stomach). Items were rated on a four-point scale from "not at all" to "very much" for a total score of 13 to 52 (Alpha = .909).

Physical Pain. To assess symptoms of physical pain, we used items from the Short-Form McGill Pain Questionnaire (SF-MPQ; Melzack, 1987). Participants were asked whether they had experienced any pain from an injury sustained in the past month during athletics. If they answered "yes," they were asked to rate both their pain today and their pain on a typical day during the past month on a scale of 0 ("no pain") to 5 ("excruciating").

Perceived Control. We used 4 items from the Perceived Control Questionnaire (PCQ; Kowalski, 2000; Kowalski & Crocker, 2001) to assess self-rated control over stress related to participation in athletics. Items were rated on a scale of 1 ("strongly disagree") to 5 ("strongly agree") with higher ratings indicating more perceived control (Alpha = .767).

Substance use. Participants' use of alcohol and other drugs was assessed using three measures: (1) the CRAFFT Screening Test (Knight et al., 2002), (2) the NIDA-Modified ASSIST V2.0 (National Institute on Drug Abuse, 2012), and (3) the brief form of the Alcohol Use Disorders Identification Test (AUDIT-C; Bush et al. 1998). The CRAFFT consists of 9 yes/no questions examining the use of alcohol and other substances in the past 12 months and the lifetime incidence of risk behaviors associated with alcohol and drug use (e.g., driving or riding in a car with someone who had been using, forgetting things that happened while using alcohol or drugs). Each item was scored 0 ("No") or 1 ("Yes") for a total score of 0 to 9, with a higher score indicating greater risk behavior. The ASSIST was used to assess lifetime illicit or not-prescribed use (yes/no) of various categories of substances: cannabis, cocaine, prescription opioids (e.g., Percocet, Vicodin), prescription stimulants (e.g., Adderall, Ritalin), and hallucinogens (e.g., MDMA/Ecstasy, LSD, mushrooms). The AUDIT-C consists of three questions assessing the frequency of alcohol use, the amount of daily consumption, and the frequency of binge drinking (defined as having six or more drinks on one occasion) on a scale of 1 ("Never") to 5 ("Daily or almost daily") for a total score ranging from 3 to 15.

Data Analysis

We used simple frequencies and descriptive statistics to summarize participant characteristics including frequency of substance use, physical pain, and sources of stress. For multi-item scales, missing items were imputed with the individual mean of completed items when at least 75% of items were completed (Downey & King, 1998; Shrive et al., 2006). Significant intercorrelations were common among the contin-

uous predictor variables but none exceeded pre-identified thresholds for multicollinearity ($r > .80$ or VIF > 5.0) (Kutner et al., 2013).

To examine correlates of alcohol and drug use, we performed four regression models assessing participant gender, age, grade point average, self-rated stress level, athletics-related anxiety, physical pain in the past month, and perceived control of stressors as independent variables associated with the following dependent variables: (1) binge drinking in the past month, (2) cannabis use in the past 12 months, (3) lifetime use of any other substance, and (4) the number of variables endorsed on the CRAFFT, indicating alcohol- and drug-related risk behaviors. The first three models used binary logistic regression, and the fourth model used Poisson regression with robust variance.

Results

Participants

Participants in the study were 188 student-athletes. The majority of participants self-identified as women (n=142, 75.5%), and the mean age was 20 years, with a fairly even distribution among ages 18-22 and a small number of participants aged 23-25 (n=6). The mean grade point average was 3.4 on a 4.0 scale. Participants in the sample were predominantly white (n=165, 87.8%). In total, 66 student-athletes (35.1%) competed at the NCAA Division I level, 48 (25.5%) competed at the NCAA Division II level, 63 (33.5%) competed at the NCAA Division III level, and 11 (5.9%) competed at the NJCAA/Community College level. Additional details and participant characteristics are reported in Table 1.

Table 1
Characteristics of Study Participants

Category	Value (%)
Total Participants	188
Gender	
Women	142 (75.5%)
Men	46 (24.5%)
Mean Age	20 years
Racial Identity (self-identified)	
White	165 (87.8%)
Multiracial/Mixed	8 (4.3%)
Black/African American	4 (2.1%)
Non-White Hispanic/Latino	3 (1.6%)
Asian	2 (1.1%)
Native American	2 (1.1%)

Table 1, continued
Characteristics of Study Participants

Sexual Orientation (self-identified)	
Straight/Heterosexual	181 (96.3%)
Gay or Lesbian	5 (2.7%)
Unsure	2 (1.1%)
Annual Family Income	
Above $200,000	23 (12.2%)
$100,001-200,000	82 (43.6%)
$75,001-100,000	34 (18.1%)
$50,001-75,000	27 (14.4%)
$25,000-50,000	10 (5.3%)
Below $25,000	12 (6.4%)
Year in School	
First Year	59 (31.4%)
Second Year	46 (24.5%)
Third Year	42 (22.3%
Fourth Year	38 (20.2%)
Fifth Year / Other	3 (1.6%)
Sport (Top 7 Most Common)	
Track & Field	50 (26.6%)
Softball	26 (13.8%)
Soccer	18 (9.6%)
Cross Country	18 (9.6%)
Volleyball	16 (8.5%)
Swimming/Diving	15 (8.0%)
Tennis	13 (6.9%)
Level of Competition	
NCAA Division I	66 (35.1%)
NCAA Division II	48 (25.5%)
NCAA Division III	63 (33.5%)
NJCAA/Community College	11 (5.9%)

Table 1, continued
Characteristics of Study Participants

Stress of Attending College	
Not at all	1 (0.5 %)
A little bit	23 (12.2%)
Moderate	102 (54.3%)
Very Stressful	56 (29.8%)
Extremely Stressful	6 (3.2%)
Coping with Stress	
Not well at all	5 (2.7%)
A little	48 (25.5%)
Satisfactorily	71 (37.8%)
Coping well	55 (29.3%)
Coping extremely well	9 (4.8%)

Substance Use

A large majority of participants (86.1%; male 92.3%, female 84.0%) had taken "more than a few sips" of alcohol in the past year, and 15.0% endorsed drinking 2-3 times per week or more (male 15.6%, female 10.7%). In total, 27.8% of participants reported binge drinking at least monthly, including 44.7% of male respondents and 22.5% of female respondents.

More than one-third of participants (38.1%; male 48.7%, female 34.7%) reported having used cannabis at some point in their lifetime, and 22% had used cannabis in the past year (male 30.8%, female 19.2%). Nearly one-quarter of participants (23.4%; male 37.0%, female 19.0%) reported using a substance other than alcohol or cannabis at some point in their lifetime; however, only 2.5% (male 7.7%, female 0.8%) reported using a substance other than alcohol or cannabis "to get high" in the past year. The most common drugs of abuse aside from alcohol and cannabis were prescription opioids (e.g., Percocet, Vicodin, [11.9% lifetime use; male 17.9%, female 9.9%]); prescription stimulants (e.g., Adderall, Ritalin, [11.3% lifetime use; male 15.4%, female 9.9%]); hallucinogens (e.g., MDMA/Ecstasy, LSD, mushrooms, [5.0% lifetime use; male 12.8%, female 2.5%]); and cocaine (4.4% lifetime use; male 12.8%, female 1.7%).

In exploring alcohol- and drug-related risk behaviors, 40.9% (male 51.3%, female 37.5%) of participants had used alcohol or drugs "to relax, feel better about yourself, or fit in"; 28.3% (male 33.3%, female 26.7%) had forgotten things they had done while using alcohol or drugs; 23.3% (male 33.3%, female 20.0%) had driven while using or had ridden in a car with someone who was using; and 23.3% (male 46.2%, female 15.8%) had used alcohol or drugs while alone. Far fewer participants

reported getting into trouble for alcohol or drug use (12.0%; male 15.4%, female 10.9%) or having someone tell them they should cut down on their use (2.5%; male 2.6%, female 2.5%).

Pain

More than half of participants (n=108, 57.4%) reported they had experienced physical pain during the past 30 days from an injury sustained while participating in athletics. When asked to rate their pain on a typical day in the last month, the majority of participants described their pain as "discomforting" (n=71, 39.0%) or "distressing" (n=39, 21.4%), while only 33 participants (18.1%) said they had no pain on a typical day in the last month.

Sources of Stress

On average, participants described their university experience as "moderately stressful" (mean=3.23 out of 5, SD=.721) and rated themselves as coping "satisfactorily" (mean=3.08 out of 5, SD=.919). In examining various sources of stress in their lives, participants rated athletics as the second most stressful aspect of their college experience (mean=3.37), exceeded only by academic stress (mean=3.51) among the 12 items. Time management (mean=3.15), emotional health (mean=3.01), and finances (mean=2.92) were the next most highly rated stressors, while relationships with family (mean=2.18) and college faculty/staff (mean=1.85) were lowest on the list (see Figure 1).

Factors Associated with Binge Drinking, Cannabis Use, and Other Substance Use

In univariable analyses assessing the factors associated with binge drinking in the past month, only male gender and age 21 or older were significantly associated with

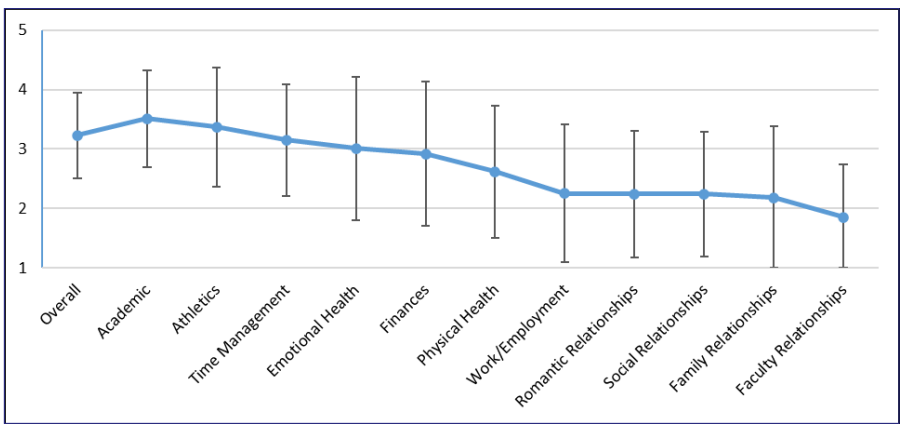

Figure 1
Student-Athlete Ratings of Intensity of Various Sources of Stress (N=188)

binge drinking. In the final multivariable model, pain was also a significant predictor. In the final model, males had 3.22 higher odds of binge drinking than females (95% CI [1.31, 7.90], $p = .011$); participants aged 21 or older had 2.55 higher odds of binge drinking (95% CI [1.12, 5.79], $p = .025$); for each one point increase on the McGill Pain Questionnaire item assessing pain on a typical day in the last month, participants had 1.60 times higher odds of binge drinking (95% CI [1.05, 2.44], $p = .028$). Grade point average, stress, athletics-related anxiety, and perceived control of stressors were not associated with increased prevalence of binge drinking in either model (see Table 2).

Table 2

Factors Associated with Binge Drinking (six or more drinks) at Least Monthly (N=188)

	Binge Drinking, *n* (%)	**No Binge Drinking, *n***	**Univariable Analysis, PrR (95% CI)**	**Multivariable Analysis, PrR (95% CI)**
Gender				
Female	27 (22.5%)	93	REF	REF
Male	17 (44.7%)	21	2.79 (1.29 – 6.02)**	3.22 (1.31 – 7.90)*
Age				
<21 years old	19 (20.2%)	75	REF	REF
21-25 years old	25 (39.7%)	38	2.60 (1.27 – 5.30)**	2.55 (1.12 – 5.79)*
	Binge Drinking, mean (IQR)	**No Binge Drinking, mean (IQR)**	**Univariable Analysis, PrR (95% CI)**	**Multivariable Analysis, PrR (95% CI)**
Grade Point Average	3.43 (3.10 – 3.78)	3.43 (3.20 – 3.79)	.971 (.467 – 2.02)	.909 (.393 – 2.10)
Stress (GSI)	30.63 (25 – 36)	30.84 (26 – 36)	.996 (.948 – 1.05)	.979 (.916 – 1.05)
Athletics-Related Anxiety (SAS-2)	27.19 (21 – 33)	26.48 (21 – 31)	1.01 (.968 – 1.06)	1.04 (.977 – 1.10)
Physical Pain, Past Month (SF-MPQ)	2.95 (2 – 4)	2.59 (2 – 3)	1.39 (.992 – 1.96)	1.60 (1.05 – 2.44)*
Perceived Control of Stressors (PCQ)	13.07 (11 – 15)	12.99 (10 – 15)	1.01 (.905 – 1.12)	1.05 (.921 – 1.20)

Note. *$p < .05$. **$p < .01$. ***$p < .001$. PrR, prevalence ratio. CI, confidence interval. REF, reference category. IQR, interquartile range.

Examining factors associated with cannabis use in the past 12 months revealed no significant predictors in the univariable analyses; however, in the final multivariable model, for each one point increase on the stress measure (GSI) there was a 7% lower likelihood of using cannabis (p = .048), and for each point higher on the athletics-related anxiety measure (SAS) there was a 7% higher likelihood of cannabis use (p = .028). No other variables were significantly associated with cannabis use in either the univariable or multivariable model (see Table 3).

Table 3

Factors Associated with Cannabis Use in the Past 12 Months (N=188)

	Used Cannabis, *n* (%)	**No Cannabis Use, *n***	**Univariable Analysis, PrR (95% CI)**	**Multivariable Analysis, PrR (95% CI)**
Gender				
Female	23 (19.2%)	97	REF	REF
Male	12 (30.8%)	27	1.87 (.827 – 4.25)	2.02 (.801 – 5.09)
Age				
<21 years old	16 (16.8%)	79	REF	REF
21-25 years old	19 (30.2%)	44	2.13 (.997 – 4.56)	2.19 (.933 – 5.12)
	Used Cannabis, mean (IQR)	**No Cannabis Use, mean (IQR)**	**Univariable Analysis, PrR (95% CI)**	**Multivariable Analysis, PrR (95% CI)**
Grade Point Average	3.36 (3.00 – 3.61)	3.45 (3.20 – 3.80)	.732 (.351 – 1.52)	.725 (.328 – 1.60)
Stress (GSI)	29.80 (23 – 36)	31.17 (26 – 36)	.974 (.923 – 1.03)	.931 (.867 – 1.00)*
Athletics-Related Anxiety (SAS-2)	28.43 (22 – 34)	26.16 (21 – 31)	1.04 (.989 – 1.09)	1.07 (1.01 – 1.13)*
Physical Pain, Past Month (SF-MPQ)	2.74 (2 – 4)	2.70 (2 – 3)	1.04 (.730 – 1.47)	1.07 (.702 – 1.62)
Perceived Control of Stressors (PCQ)	12.97 (11 – 15)	12.98 (11 – 15)	.999 (.890 – 1.12)	.977 (.855 – 1.12)

Note. *p < .05. **p < .01. ***p < .001. PrR, prevalence ratio. CI, confidence interval. REF, reference category. IQR, interquartile range.

For the univariable analysis assessing lifetime use of other substances aside from alcohol or cannabis, male gender and age 21 or older were significantly associated with substance use. In the final multivariable model, age was the only significant predictor, as participants 21 or older had 2.23 times higher odds of using a substance other than alcohol or cannabis (95% CI [1.01, 4.91], p = .048). Grade point average, stress, athletics-related anxiety, physical pain, and perceived control of stressors were not associated with increased prevalence of substance use in either model (see Table 4).

Table 4

Factors Associated with Lifetime Use of Substance other than Alcohol or Cannabis (N=188)

	Used Substances, *n* (%)	No Substances, *n*	Univariable Analysis, PrR (95% CI)	Multivariable Analysis, PrR (95% CI)
Gender				
Female	27 (23.3%)	89	REF	REF
Male	17 (43.6%)	22	2.55 (1.19 – 5.48)*	2.11 (.900 – 4.95)
Age				
<21 years old	20 (21.3%)	74	REF	REF
21-25 years old	24 (40.0%)	36	2.47 (1.21 – 5.04)*	2.23 (1.01 – 4.91)*
	Used Substances, mean (IQR)	**No Substances, mean (IQR)**	**Univariable Analysis, PrR (95% CI)**	**Multivariable Analysis, PrR (95% CI)**
Grade Point Average	3.30 (3.00 – 3.60)	3.47 (3.28 – 3.80)	.491 (.227 – 1.06)	.458 (.203 – 1.04)
Stress (GSI)	30.36 (25 – 36)	31.22 (26 – 36)	.984 (.937 – 1.03)	1.00 (.943 – 1.06)
Athletics-Related Anxiety (SAS-2)	25.59 (19 – 30)	27.11 (21 – 33)	.974 (.930 – 1.02)	.992 (.937 – 1.05)
Physical Pain, Past Month (SF-MPQ)	2.75 (2 – 3)	2.68 (2 – 3)	1.06 (.764 – 1.47)	1.05 (.713 – 1.55)
Perceived Control of Stressors (PCQ)	13.70 (11 – 16)	12.75 (10 – 15)	1.10 (.984 – 1.23)	.1.06 (.936 – 1.21)

Note. *$p < .05$. **$p < .01$. ***$p < .001$. PrR, prevalence ratio. CI, confidence interval. REF, reference category. IQR, interquartile range.

In the Poisson regression model assessing alcohol- and drug-related risk behaviors, male gender, older age, and athletics-related anxiety were the three significant predictors in both the univariable and multivariable models (see Table 2). Grade point average was significant in the multivariable model only. In the final multivariable model, male gender accounted for a .368 log count increase in CRAFFT score ($p = .002$), older age accounted for a .318 log count increase ($p = .008$), each point on the SAS-2 accounted for a .018 log count increase ($p = .036$), and each full-point increase in grade point average accounted for a .176 log count decrease in CRAFFT score ($p = .044$). Stress, physical pain, and perceived control of stressors were not associated with alcohol- and drug-related risk in either model (see Table 5).

Table 5

Factors Associated with Number of Items Endorsed on the CRAFFT, Indicating Alcohol- and Drug-Related Risk Behaviors (N=188)

	# CRAFFT Items Endorsed, mean	Univariable Analysis, PrR (95% CI)	Multivariable Analysis, PrR (95% CI)
Gender			
Women	2.17	REF	REF
Men	3.13	.362 (.116 – .608)**	.368 (.135 – .601)**
Age			
<21 years old	2.05	REF	REF
21-25 years old	2.91	.363 (.134 – .592)**	.318 (.084 – .553)**
		Univariable Analysis, PrR (95% CI)	**Multivariable Analysis, PrR (95% CI)**
Grade Point Average		-.109 (-.297 – .079)	-.176 (-.348 – -.005)*
Stress (GSI)		.010 (-.007 – .026)	-.004 (-.022 – .014)
Athletics-Related Anxiety (SAS-2)		.018 (.003 – .034)*	.018 (.001 – .036)*
Physical Pain, Past Month (SF-MPQ)		.075 (-.009 – .040)	.073 (-.039 – .186)
Perceived Control of Stressors (PCQ)		-.019 (-.052 – .014)	-.014 (-.046 – .018)

Note. *$p < .05$. **$p < .01$. ***$p < .001$. PrR, prevalence ratio. CI, confidence interval. REF, reference category.

Discussion

The purpose of our study was to examine the role of athletics-related stress and other factors that may be associated with alcohol and substance use among student-athletes. In this sample of student-athletes in five Upper Midwest states, rates of binge drinking and cannabis use were similar to national samples of student-athletes (NCAA, 2018a; NIAAA, 2020). Lifetime misuse of prescription opioids in our study was disconcertingly high at 12% (compared to 9% in a nationwide study), and misuse of stimulants was 11% (compared to 16% nationwide) (Phillips & McDaniel, 2018). Similar to prior studies of college-aged adults and student-athletes, rates of binge drinking and substance use were substantially higher among males and older student-athletes (NCAA, 2018a; NIDA, 2019).

Being over 21, male gender, lower GPA, increased pain, higher perceived stress, and higher athletics-related anxiety were associated with increased alcohol and drug use and associated risk behaviors, although some factors (i.e., pain, stress, GPA) were only associated with outcomes in multivariable models. These findings are congruent with prior research on sociodemographic risk factors for substance use among student-athletes (Boyes et al., 2017; Denham, 2014; Lisha et al., 2011). It may be beneficial for future substance use interventions to target sociocultural factors such as stressors, peer behavior, and norms related to masculinity among student-athletes (Druckman et al., 2015; Iwamoto et al., 2014; Loughran, 2018). The relationship

between substance use and grade point average may be bidirectional, and thus important to examine as it relates to academic-related stress, which was the highest rated source of stress in this sample.

The high rate of prescription drug abuse in this sample is particularly striking in the context of our national opioid epidemic; opioids contributed to 46,802 overdose deaths in 2018 (CDC, 2018). More than half of our sample of student-athletes had experienced physical pain in the past 30 days from an injury sustained while participating in athletics, and nearly two-thirds had experienced more than mild pain on a typical day in the last month. Given the high rates of physical pain, overall substance use, and prescription drug misuse among student-athletes, it is critical for medical providers to reassess their prescribing patterns for athletes experiencing physical pain in order to prevent addiction and its long-term consequences.

The American College Health Association recommends avoiding opioid prescription to college-aged patients whenever possible and provides guidance on prescribing practices, including non-opioid medications and pain management strategies, clearly communicating opioid risks to patients, and monitoring signs of abuse or dependence (ACHA, 2016). In July of 2018, the NCAA held a two-day Summit on Pain Management in College Athletes to review the state of the evidence and serve as a "springboard for subsequent peer-reviewed publications and educational documents" (NCAA, 2018b, p. 114); however, few actionable items or policies resulted from the summit, and the NCAA has not incorporated monitoring of opioid prescribing practices as a part of its drug testing program (Benavides, 2019).

In addition, research is needed to explore methods to intervene on the relationship between athletics-related anxiety and substance use. It is possible that athletics-related anxiety increases substance use. Athletics was rated as the second greatest source of stress in the lives of student-athletes in this sample, trailing only academic stress and exceeding stress related to emotional health, finances, and relationships. Among risk behaviors, the most common was using alcohol or drugs as a way to relax or feel better about oneself. It appears that student-athletes may engage in substance use as a form of maladaptive coping for athletics-related anxiety, and future studies should assess student-athlete coping styles to examine this relationship more directly. It is also possible that negative consequences of substance use on health and performance may increase athletics-related anxiety, and longitudinal and qualitative research is needed to explore this possibility (McDuff & Baron, 2005).

Additional risk behaviors were also extremely common, including forgetting things that had happened while using alcohol or drugs, driving or riding in a vehicle with someone who was using alcohol or drugs, and drinking or using drugs alone. Each of these behaviors can serve as a warning sign of potential addiction, and driving or riding in a car while using substances is a well-documented public health and safety concern. College athletics departments, universities, and the NCAA/NJCAA would all benefit from a review of the existing evidence for the prevention, identification, and treatment of substance use disorders among young adults. Promising intervention models could be adapted to meet the unique characteristics and needs of student-athletes.

Limitations

This study was conducted with student-athletes from six colleges and universities from five Upper Midwest states. We received a near-equal number of responses from athletes at the NCAA DI, DII, and DIII levels. Although we made an effort to recruit a similar number of students from NJCAA community colleges, we had a much lower response rate from these programs. Future studies may seek to reach out specifically to these schools with alternative recruitment strategies

Our sample was quite homogenous with regard to race and sexual orientation, with 88% of participants self-identifying as white and 96% self-identifying as heterosexual. As a result, it was not advisable to include these characteristics in our regression models due to concern about generalizing group-level risk based on a small number of cases. Our sample was also predominantly female. Some of these patterns reflect the actual demographics of student-athletes at the colleges we sampled but could also represent self-selection bias, as students who did not identify with these groups may have been less likely to choose to participate in the study. It will be critical for future studies to assess whether similar patterns of risk are present in a larger sample of student-athletes who are male, non-white, and non-heterosexual.

Similar to many studies using Internet recruitment, our response rate among invited students was fairly low. Additionally, all measures on the study relied on self-report, which can lead to social desirability bias. To minimize this challenge, we did not collect personally identifying information (e.g., names, email addresses) as part of the survey and reassured participants that their responses would remain anonymous; however, measures of illicit or socially stigmatized behaviors, and substance use in particular, may be susceptible to underreporting (Johnson, 2014).

Conclusions

The college years are a critical period during which experiences with substance use can contribute to the emergence of alcohol and substance use disorders. The social culture of college athletics may reinforce use patterns, and our study observed high levels of binge drinking, marijuana use, and other substance use in this sample of student-athletes. College student-athletes are highly susceptible to orthopedic injuries and associated pain, which often leads to early exposure to opioid pain medications with high potential for abuse. A strikingly high number of student-athletes in our sample endorsed abusing prescription opioids, and athletics departments must acknowledge and embrace their role in stemming harmful patterns of opioid use and addiction. Additionally, the pressures and anxieties of participating in college athletics, and the use of substances as a form of maladaptive coping, has been an understudied area. Athletes, coaches, and parents should continue to attend to emotional wellness among student-athletes to facilitate positive coping. Future interventions should continue to target the social contributors of substance use among student-athletes, particularly among men and those over 21, the pathway to opioid use disorders, and untreated anxiety as a potential contributor to substance use.

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