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Original Research

Experiences of Current National Collegiate Athletic Association Division I Collegiate Student-Athletes With Mental Health Resources

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Context: Collegiate student-athletes (SAs) experience psychological stressors due to rigid schedules, team conflict, and injury. These factors can result in symptoms of mental health conditions, decreased daily functioning, and suicidality.

Objective: To explore National Collegiate Athletic Association Division I SAs' experiences with mental health and access to and experiences with mental health resources at their university.

Design: Consensual qualitative research study.

Setting: One-on-one interviews.

Patients or Other Participants: Twenty-three Division I SAs (18 women, 5 men; mean age = 20 ± 2 years).

Main Outcome Measure(s): Participants completed a semi-structured interview that focused on their experiences with mental health. The interviews were audio recorded and transcribed verbatim via Zoom. Credibility and trustworthiness were established via member checking, triangulation, and peer discussion among a 3-person coding team.

Results: Two domains, increased expectations and resources and management, were identified. The participants shared how they balanced life as a college student, academic stressors, performance expectations, and a sport-first mindset they perceived from coaches and support staff. They discussed their experience with the internal support network of coaches, the athletic department, and sport psychology. Participants remarked on their external support network, which included their family, friends, and psychological services. The resources available at their institutions and their accessibility were perceived both positively and negatively. Some collegiate SAs described resources as helpful, whereas others portrayed a lack of timeliness for appointments, lack of advertisement, incomprehension by counselors of athlete demands, and no sport-specific counseling as barriers.

Conclusions: Collegiate SAs expressed mental health concerns due to stress and the demands of sport participation. Self-regulated coping strategies and support networks continue to be powerful and helpful resources for mental health, with or without a diagnosed condition. Barriers to mental health service use were a lack of sport specificity and lack of access. Institutions need to focus on creating athlete-centered mental health resources with annual advertisements to increase use.

Key Words: behavioral health, psychology, stress

Key Points

- With the prevalence of mental health conditions and stressors faced by National Collegiate Athletic Association Division I student-athletes, mental health resources are underused because of student-athletes' perceptions of lack of access, lack of advertisement, and scrutiny from others.
- The biggest stressor student-athletes faced was time management. Rigid scheduling was an added stressor that can affect student-athletes' academics and time for self-care, which can lead to mental and physical exhaustion.
- Increasing awareness of mental health resources at National Collegiate Athletic Association Division I institutions can help reduce stigma, eliminate a sport-first mindset, and increase mental health service use.

Regular physical activity can reduce the severity of symptoms related to mental health disorders[1]; therefore, athletes are believed to be less likely to experience mental health conditions than the general population.[2] However, the psychological benefits of being an athlete may not be counterbalanced by the stressors associated with collegiate athletics.[3] Collegiate student-athletes (SAs) have been conditioned to be mentally tough, and the capability for SAs to excel under harsh conditions is either praised or dismissed by coaches, parents, and teammates with phrases such as "suck it up" and "rub some dirt on it" when SAs experience the challenges of injury or illness.[3] We must remember that SAs are more than competitors; they have dual roles as college students navigating the complexities of life, the transition to higher education, and the pressures of athletic performance.[4] The stressors that SAs face include rigid schedules, academic responsibilities, expectations of coaches, overtraining,

injuries, burnout, and team conflict.[5] Collegiate SAs experience physical and psychological stress in balancing these demands with athletic performance.[6] For SAs, the prospect of failure arising from these expectations can cause mental instability and tension that impairs their self-identity and self-worth.[6] These internal and external factors result in symptoms of mental health conditions, sleep impairment, decreased daily functioning, and suicidality.[6]

Among incoming National Collegiate Athletic Association (NCAA) Division I SAs, 14% had a mental health condition and faced challenges when placed in a rigorous athletic environment.[7] The most prevalent mental health conditions encountered by adolescents and young adults are anxiety disorders, followed by behavior, mood, and substance abuse disorders.[8] Forty-five percent of SAs developed stress-related symptoms.[3] Untreated mental health conditions cause unwarranted suffering, diminished positivity, and life-balance conflicts.[3] An SA's risk of depression and suicidality is increased by competitive sport, a higher risk of injury, and high-risk behaviors.[9] The SA status can be a protective measure against suicidality because of the strong sense of belonging and accomplishment.[10] However, this does not mean that the mental health concerns of SAs can be disregarded, nor does it justify disinvestment in the mental health services offered.[10] Increasing age increases the likelihood of SAs engaging in risky behaviors such as alcohol misuse, which is associated with depressive symptoms and suicidality among college students.[11] Suicidality has been linked to sleep impairment, which makes an SA 4 times more likely to experience suicidal ideation.[6] In the NCAA, suicide is the fourth leading cause of death for athletes, with the highest incidence of death by suicide recorded in football players.[12] Therefore, the importance of mental health in collegiate athletics should be emphasized in the same manner as physical health and game readiness.[3]

The NCAA has acknowledged the mental health concerns of SAs and provided recommendations for mental health conditions, necessary resources, and means of educating athletic staff on identifying the signs and symptoms of mental health conditions.[4] These recommendations encourage universities to develop policy statements and procedures to identify and refer SAs with mental health concerns to appropriately qualified health care professionals and counselors.[13] Previous data[14] identified that nearly two-thirds of athletic trainers (ATs) with clinical responsibilities at NCAA member institutions had a routine or emergency mental health policy. Of these policies, 100% required a formal evaluation of the patient or treatment, yet only 33% had a procedure for where a symptomatic or an at-risk SA would be referred, and 64% did not have a written procedure for managing suicidal ideation.[14] Despite the best-practice recommendations from the NCAA[3] and the National Athletic Trainers' Association,[13] stigma persists about mental health and the use of resources that are available to SAs.[3,14,15] Collegiate SAs' mental health is a major concern, and few authors have examined the perception of mental health resources and SAs' lived experiences with mental health conditions.[16,17] Our research also aligns with the athletic training research agenda of health care competency: recognizing and referring patients with behavioral health conditions. In addition, several of us have experience in treating patients and providing resources while working in collegiate athletic health care. Therefore, the purpose of our study was to allow SAs to describe their experiences with mental health and the mental health resources available to them.

METHODS

Research Design

Our investigation was guided by the consensual qualitative research tradition. The research team comprised 5 ATs with various levels of experience (1–18 years certified) and mental health teaching or research. Three members of the research team (R.D.Y., E.R.N., T.A.A.) had previous suicide-prevention training certificates. All 5 members of the coding team had experience managing patients with mental health challenges and providing health care to collegiate SAs. The experiences of these ATs may have informed the data analysis and coding process of this research study.

Participants and Sampling

Before recruitment, we obtained ethics approval from the University of South Carolina Institutional Review Board. We used social media, specifically Twitter and Instagram, combined with snowball sampling to identify potential participants who were current NCAA Division I SAs. We excluded collegiate SAs from all other sport associations and NCAA divisions. To recruit participants on social media, we posted messages on our professional and personal social media pages (Twitter and Instagram) explaining the purpose of the study with a link to a Qualtrics survey. In addition to the public messages, the primary investigator (R.D.Y.) directly invited participants from Instagram who self-identified as an NCAA Division I SA in their public biography on social media. Each message contained the same link to the Qualtrics survey, where the potential participants provided their preferred email address and pseudonym that they wished to use for scheduling and the interview process. Fifty-one individuals expressed interest in the study via the link, and none were excluded for not meeting inclusion criteria. In total, 23 participants (women = 18, men = 5; average age = 20 ± 2 years) engaged in the interviews. The pseudonyms and demographics of the participants are provided in Table 1.

Data Collection

Interview Protocol. To explore the experiences of SAs, 2 members of the research team (R.D.Y., Z.K.W.) developed an interview protocol that consisted of 7 demographic questions and 6 mental health questions, with follow-up questions about their specific experiences. These authors conducted multiple revisions of the interview protocol (Table 2). The interview protocol was then sent to the other 3 members of the research team to obtain feedback. This process occurred multiple times, with feedback provided on each revision until all 5 members of the research team came to consensus. The interview questions were modified for wording, phrasing, and elaborating.

Procedures. The primary investigator (R.D.Y.) contacted all potential participants who met the inclusion criteria via email to inform them of the study's purpose and ask for their involvement. A consent form was sent to each person, and an audio-only interview was scheduled and conducted using video

Table 1. Participant Information

Pseudonym	Age, y	Sex	Race	Year	Sport	School Type	Scholarship
Amanda	20	Female	White	Sophomore	Tennis	Private	Yes
Anne	19	Female	White	Sophomore	Volleyball	Private	Yes
Blasé	20	Male	White	Junior	Swimming	Public	Yes
Caroline	20	Female	White	Junior	Volleyball	Public	Yes
Carter	19	Male	White	Sophomore	Swimming	Public	No
Cheryl	17	Female	White	Freshman	Swimming	Public	Yes
Chloe	21	Female	White	Senior	Gymnastics	Public	No
Debbie	22	Female	White	Junior	Swimming	Private	No
Elizabeth	21	Female	Black and White	Senior	Swimming	Private	No
Emily	22	Female	White	Senior	Volleyball	Public	Yes
Gracie	20	Female	White	Sophomore	Track	Private	No
Hayden	20	Female	White	Sophomore	Volleyball	Public	Yes
Hope	21	Female	White	Senior	Soccer	Public	Yes
Jane	20	Female	White	Junior	Cross-country	Public	Yes
Jeff	19	Male	White	Sophomore	Swimming	Public	No
Jimmy	22	Male	White	Junior	Track	Public	Yes
Kate	20	Female	White	Junior	Volleyball	Public	Yes
Maggie	21	Female	White	Senior	Track	Public	Yes
Megan	21	Female	White	Senior	Swimming	Public	Yes
Q	20	Male	Black	Senior	Track	Public	Yes
Sandreezy	19	Female	Black	Sophomore	Track	Public	Yes
Sarah	21	Female	White	Senior	Gymnastics	Public	Partial
Zeph	18	Female	Black	Freshman	Track	Public	No

conferencing software (Zoom Video Communications, Inc). Each interview lasted approximately 15 to 20 minutes. Audio recordings of the interviews were transcribed verbatim using the automatic audio transcription provided by Zoom. Afterward, the primary investigator confirmed the transcription by listening to the audio file and checking the text for accuracy. Next, we performed member checking, in which each transcript was sent back to the participant to confirm the validity of the responses. Data collection began in July 2021 and continued until data saturation and common themes emerged from participant responses.

Data Analysis and Trustworthiness

Consensual qualitative research was the research design of this study to capture the lived experiences of SAs with mental health and the resources available to them.[18] This method of data collection allowed us to document the personal experiences of SAs, analyze the data, and agree on a common interpretation of findings. The 3 members of the data analysis team (R.D.Y., E.R.N., T.A.A.) received the same 4 transcripts to review and identify preliminary domains. Core ideas were constructed from each domain and accumulated to

Table 2. Interview Protocol[a]

1. Can you tell me about the main reasons you are a collegiate athlete?
2. Can you tell me about some of the stressors, if any, that you experience or have experienced as a student-athlete?
3. Describe, if any, the cultural stigma related to mental health at your university.
4. Describe the resources that your campus has for mental health.
   a. How does the campus advertise these mental health resources?
   b. How often are mental health resources advertised?
5. Have you used any of these campus resources?
   If yes:
   1. Could you please tell me more about your experience using these resources?
   2. Did you choose to seek out these resources yourself or did someone else refer you?
   If no:
   1. Why did you decide to not use the campus resources for mental health?
   2. What resources, if any, have you used to help you with your mental health?
6. Have you ever been diagnosed or self-diagnosed with a mental health condition? Examples include anxiety, depression, eating disorder, etc.
   a. If yes, who was it diagnosed by? (self, specific provider)
      i. Describe your experience as a collegiate athlete with a mental health condition.
      ii. Can you describe how your athletic trainer, coaches, and/or teammates reacted to your mental health condition?
      iii. What are some of the factors that cause your mental health to get worse?
      iv. What, if any, coping strategies or supportive factors do you use to feel safer or better?
      v. Are there any aspects of your mental health condition that are related to you being a student-athlete? Please explain.
      vi. What advice would you give your athletic trainer, coaches, and/or teammates when interacting with student-athletes with a mental health condition?
   b. If no:
      i. How do you maintain your mental wellness as a student-athlete?
      ii. Can you tell me about your support system as a student-athlete?
      iii. In what ways, if any, do you feel you are at risk for developing a mental health condition in the future? Please explain.
7. Is there anything else you feel I should know about either your mental health or student-athlete experiences that we have not covered?

[a] Reproduced in its original format.

Table 3. Summary of Domains, Categories, and Frequencies

Domain	Categories	Frequency	Frequency Count (N = 23 participants)
Expectations of the student-athlete	Balancing sport and life	Typical	21
	Academic stressors	Typical	13
	Performance	Typical	20
	Sport-first mindset	Variant	11
Resources and management	Network	General	23
	Perception	General	23
	Accessibility	General	22
	Self-regulation strategies	General	23

establish a codebook for data analysis. Next, 2 of the initial transcripts and 2 new transcripts were analyzed. The data analysis team met to come to a consensus, and peer discussion preceded any changes to the codebook. Six transcripts were analyzed by each member and then rotated among the data analysis team for triangulation, and a two-thirds vote resolved any disagreement. For cross-analysis, the quotes were grouped based on categories, and then the frequency of each category was classified into general, typical, variant, and rare.[19] The *general* frequency count applied when the category appeared for all or all but 1 of the cases.[19] The *typical* frequency count applied when the category appeared for more than half of the cases and up to the cutoff for the general category.[19] The *variant* frequency count applied when the category appeared for more than 2 cases and up to the cutoff for the typical category.[19] The *rare* frequency count applied when the category appeared for only 1 or 2 cases.[19]

The final codebook, frequency table, and transcripts were sent to the external auditor (Z.K.W.) for review. The external auditor proposed changes in the terminology of domains and categories, which were implemented. To ensure trustworthiness and reduce bias, we conducted member checking, triangulation, and peer discussion in the data analysis.[20]

RESULTS

Two domains emerged from the experiences of current collegiate SAs: (1) expectations of the SA and (2) resources and management (Table 3). Each domain was subdivided into 4 categories. A table of quotes (Table 4) captured further representation of domains and categories.

Domain 1: Expectations of the SA

This domain represented the challenge of balancing sport and life as a college student, academic stressors, performance expectations, and a sport-first mindset the SAs perceived coaches and teammates as embodying.

Balancing Sport and Life. The participants reported having various stressors in balancing their dual roles as students and athletes, with most citing time management as the biggest challenge. A few individuals commented on their experiences as an SA with a mental health condition, such as anxiety, depression, or eating disorder. Some respondents shared how injury was a stressor and its negative effect on their mental health. In contrast, 1 participant stated that being an SA brought structure to their life and was helpful as a coping mechanism. Zeph, a track athlete, said:

> Stressors include being able to keep up with all of your practices, meetings, class[es], homework, and due dates. Other stressors that I deal with are constant thoughts of possibly being injured before the season starts and conflict with teammates. There is a lot that you have to juggle outside of school when you decide to be a college athlete.

Academic Stressors. Multiple people expressed the challenge of time management in balancing their academics. A few mentioned team grade point average requirements, increased course loads, and absences due to athletic responsibilities as stressors. The mental health aspect of the SA role was also noted with respect to academic stressors. Maggie remarked:

> One of the most challenging times is definitely competition season for track and field. Every spring semester, it is very common for me to miss every Friday lecture in all of my classes, so that can be stressful. Just making sure you are on top of your time management is important.

Performance. The SAs spoke about the struggle they faced trying to meet expectations, including performance anxiety, making rosters and starting lineups, pressure to compete and to achieve scholarships, and body image. Coaches, fellow teammates, the SAs themselves, or a combination of these set expectations, which generated a fear of underperformance. Some participants commented on a mental health toll from these expectations. Anne explained:

> I feel my anxiety has heightened and skyrocketed since being a student-athlete. Whether it is me worrying about how to get to the gym at least 45 minutes to an hour early because I am scared of the punishment. We all live in fear as student-athletes of being late or not being good enough.

Sport-First Mindset. The SAs discussed both positive and negative experiences in which coaches and staff supported mental health initiatives and encouraged mental health service use. Some coaches and teammates embraced an outdated sport-first mindset in which SAs' mental health concerns were not considered. A few SAs conveyed their experiences of coaches encouraging mental health, whereas other SAs, such as Emily, shared frustration that coaches did not understand the struggle they faced. In addition, some SAs themselves would embrace the sport-first mindset in order to hide their mental health struggles, or they had experienced teammates discouraging discussions of mental health. Jeff offered his opinion of the stigma he noticed regarding SAs' mental health:

Table 4. Supplemental Quotes by Domain and Category Continued on Next Page

Domain	Category	Quote
Expectations of the student-athlete	Balancing sport and life	Definitely being overloaded with just a lot of information, such as classes, homework, practices, lifting, and the schedule. Being scared that I am not going to have enough time throughout the day, as well as not being successful. That is always in the back of my mind, like the what-ifs tend to pop up. So that definitely makes it a lot more forced with the mental health side.—Hayden
		It is very tough. It is one thing to be struggling with mental health issues just as a normal person. It is really hard adding in the athletic and performance part that amplifies it a lot. I had surgery back in January and I was not able to play volleyball for 6 months, which heightened my self-diagnosis of depression and anxiety some too. It was just a really rough experience to have to go through, going to physical therapy every day and doing the same 4 exercises over and over and over again, was just really mentally exhausting and upsetting.—Anne
	Academic stressors	The biggest stressor is time management. Being able to balance all your classes, along with practicing and trying to be a good student, while also trying to do your best in your sport. I would just say learning how to balance everything. I mean, you got to get your work done, then you also got to go to practice. Just being able to know what you are going to do, when you go to do it. And also giving yourself enough time to relax.—Carter
		A lot of academic stress. I have a lot of trouble finding time to study and prepare for my classes and exams.—Jane
		I think it can take a big mental toll on whether you are an athlete or just studying, and I think for being an athlete, you have that added on pressure and stress. Then you are taking a bunch of hard classes and trying to do good, because your grade point average goes into the team grade point average, so you are stressing about that. All adds up and there can be little points where it is just so much.—Elizabeth
	Performance	Since I have been back swimming, it has been difficult to navigate all these symptoms that I have because I have experienced an increased amount of performance anxiety. I have had some body image issues, especially surrounding swimming and being in a bathing suit.—Debbie
		A mental health condition is already straining. Then, an athlete already has enough stressors and just general pressure because the whole part of your life is centered around competing and being under pressure. So, when you combine those, it weighs down even more. Especially when you have to represent your school, performing well in your sport is a big stressor. With track, it is so easy to see where you stand, because everything is measured in numbers, not measured in wins, or losses, so it is super easy to compare yourself to other athletes.—Gracie
		I always put pressure on myself, especially performing during practice, games, as well as in school. So, if I do not do well one day, my mental health will just go downhill, which is not good, but I try and lift myself back up.—Hayden
	Sport-first mindset	I think as athletes, we are programmed to just "go-go-go" and push through pain and not feeling good and all that. It really inhibits a lot of people from reaching out and getting answers or getting the help that they need in that moment, because they do not want to be seen by their teammates or a coach or whoever as not strong or not a team player.—Elizabeth
		They (coaches) do not understand exactly the stress that us students go through, and we might need help. Because we are on scholarship, we are very privileged that they give us everything, but I do not think they necessarily realize that we are treated like soldiers sometimes.—Amanda
		If I have bad days mentally, if I am just not really there, I essentially "fake it" and show up to practice to still perform at a high level and try not to show that I am struggling.—Anne
		The coach called one of the girls on my team a crybaby for hurting her elbow, to the point where it almost got dislocated. I think the coaching staff needs a better understanding that mental health is something real, something that a lot of people struggle with and that they should stop breathing the stigma and try to stop the stigma as much as possible. Also, create a safe space for their own athletes to come to them and talk to them, and they should not be afraid of their own coaches. I think some fear is good, to look at them as your coach, but the amount of fear that our team has for our coaches is not healthy. So, creating a healthy, safe environment in practice and outside of practice.—Emily

Table 4. Continued From Previous Page

Domain	Category	Quote
Resources and management	Network	There has been a focus on mental health awareness just around campus. There was a big push from the athletics department specifically within the last year, where they have started bringing awareness to it and having mental awareness weeks and events to help people understand that if they are experiencing mental health issues, that they are not alone and that what they are going through is not something that is uncommon.—Jimmy
		I think that my university has done a good job with it. Every year, we have a meeting about the mental health resources in our area. Then my soccer team, specifically, we started a thing called "Conversations for Change" last year, where every week we touch [on] or talk about or give presentations on a specific topic. We focused on mental health for a while and our team all talked about our experiences with it. Then my sophomore year here, I had struggled a lot with mental health, and so my coaches and academic advisors were the ones who set up appointments with me and got me resources when I needed it.—Hope
		My coach, she was no help. Instead of her trying to help me, she was trying to break me down.—Sandreezy
		The only thing I have experienced student-athlete–wise is coaching changes and maybe the new coach does not understand how to communicate with us. It makes our team frustrated with him, which makes us not really want to talk to him about anything.—Q
		Through the university, there is a student health center, and they have mental health counselors. Through athletics, we have a mental health coordinator who we can reach out to, and she connects us with providers in the community for counseling or therapy.—Kate
	Perception	Here it is actually a pretty positive experience. A lot of our coaches and [athletic] trainers, they want you to reach out for help if you need it, and it is not looked down upon, it is very positive. I think it is really healthy for everyone to get the help they need. I personally know my [athletic] trainer highly suggested it for everyone, even if you do not feel like you are struggling because it is always helpful to take care of your mental health, especially when you are under so much pressure and stress all the time.—Chloe
		I do not think that there are enough resources or maybe there are, but they are not said, and we are not informed enough of them.—Caroline
		I have never seen anyone advertise CAPS [mental health program], or any mental health resources for regular students ever.—Emily
		I think, just in the last couple of years, I have even seen a shift of people on my team openly talking like "Oh yeah, I am going to talk to someone." They are going to get help for mental health, whereas I feel when maybe a couple years ago, when I was a freshman, that was not as talked about.—Sarah
	Accessibility	It is becoming less and less common, the stigma. I think that in high school, it was definitely present, just "suck it up," adversity makes you better, to the point where it is either you face the adversity, or you are just not on the team anymore. I think that in college, there has been a lot more resources and they have been readily available, and people talk about them a lot more. I do not really see it as much, I am sure that if I were having more issues with mental health and might be seen differently, just because it is tough to mentally battle and physically battle every day.—Blasé
		I do not know about my university specifically, but I feel like there are resources available. I know that a lot of my professors have spoken in the lecture settings and said if anybody is feeling anxious or worried about anything, especially during this past year, feel free to go to them.—Maggie
		They are constantly giving us resources to reach out if you need help, we have had meetings about it. Especially for the athletes, they know how important it is to talk about mental health. So, they definitely do a pretty good job with that.—Cheryl
		They do not advertise it that much, but I know if I do need anything it is open-door policy, which is very nice.—Amanda
		My coaches probably talk about it when it becomes an issue, I guess, they do not really talk about [it] as much. Athletic trainers, they definitely address it a little bit more. On campus, I know we get quite a few emails through our student email. Even the president of the university probably at least once a month, probably more like once a week, honestly.—Blasé
		It took a while to get an appointment. My academic advisor kept saying, "Can you go to counseling, I think you will benefit." I went, it took a long time to get an appointment, and then my one here at college ended up being on Zoom, even though they said they were in person.—Gracie

Table 4. Continued From Previous Page

Domain	Category	Quote
	Self-regulation strategies	One of the biggest things that I started doing in the past year was meditating, journaling, and just trying to create a space of at least 10 minutes each day, where it is just me and my own thoughts. I like to do a list of all the stuff I had to do and then check it off to give me a sense of completion. If I wrote it down and completed it, that often felt better than to go through the day stressing about things I had to complete.—Jeff
		I do not really have a lot of time myself, but if I do have any time, I really make sure I utilize that time for self-care and time to unwind. It helps me a lot to relax and focus on myself.—Anne
		One thing that I have definitely learned is that you cannot always do what you need to do for the team. Sometimes self-care is more important, probably the biggest one. Whether it is a day out of the week, every so often just take the time for yourself. That is definitely one thing that has helped maintain my mental health.—Amanda
		Over time, I have learned to just deal with my anxieties and how to put myself out there more and be more open to people.—Cheryl
		I struggled a lot my freshman and sophomore year. Some things that have helped me are I used to hold in what I was thinking a lot, instead of literally just sitting down and having someone listen to me. They do not even have to give advice back, just talking about it. So that is something that has helped me a lot. Whether it is my parents, my boyfriend, my friend, it does not matter, just sitting down and talking to someone.—Caroline

> My coaches are very open to the idea of if you are struggling, overwhelmed, and need to take a mental health day, they were open to that idea. There is still a stigma around mental health, in the sense that people view it as weak or that person was not able to manage their time. I do not think people really feel comfortable with it because they are worried about judgment from teammates. It is a vulnerability issue in college sports that you have to be super tough and willing to push yourself to get through hard workouts. You have to be strong physically and mentally, and there is a fear that you are showing vulnerability in yourself.

Domain 2: Resources and Management

The SAs described their support from internal and external networks, their perceptions of mental health resources, accessibility of resources, and self-regulation strategies that had helped them cope with mental health conditions.

Network. The SAs' internal network of support was identified as coaches, ATs, athletic departments, advisors, nutritionists, dietitians, counselors, and sports psychologists, whereas the external support network consisted of their family, friends, organizations, and personal psychology services. Support and encouragement from coaches were appreciated by the SAs. In contrast, some SAs were frustrated with the lack of support from their internal networks. Participants reported mental health resource education and referrals from ATs, team meetings, and coaches. Debbie, a swimmer, recollected:

> I remember there was 1 time that my athletic trainer was doing soft tissue work on my shoulder, saw some of my scars, and asked if I was okay. She asked if I needed anything and did not draw that much attention to it but still checked in with me, which I appreciated. Same with my coaches and teammates, if they notice I am acting different, they check in with me to see if there is anything they can do.

Perception. The mental health resources available at the participants' institutions were perceived both positively and negatively. Many SAs found resources helpful, but a few related negative perceptions of therapists and counselors who did not understand their role as an SA. Many participants benefited from mental health resources; for example, Megan observed, "I found counseling to be very, very useful, and I would definitely go back and do it again if I ever find that I need to."

In contrast, Emily shared her experience with counseling and coaching staff:

> Therapy definitely did help in ways, but there is a lot of ways [in which] it lacked in the sense of the therapist not fully understanding my eating disorder. I would have to repeat a lot of things to her, so it was really hard to go and want to get better. I felt like I did not have the support from my coaching staff or the mental health understanding. I think it has gotten better this past year, and it is hard to say, but I do not fully trust our coaching staff.

The participants described their perception of a reduced stigma regarding mental health and more openness to a conversation about it. However, some commented that asking for help was still negatively perceived within the athletic culture.

Accessibility. The internal network supplied information on resources via emails, pamphlets, posters, social media, workshops, and team meetings. Many SAs explained that their universities offered free counseling sessions, sport psychology services, emergency hotlines, and referrals via their coaches or ATs. Many SAs also obtained access and referral to a mental health care provider via a call or text to their AT. Some participants acknowledged not being aware of all of the resources that were available to them, with

reasons being (1) lack of advertisement and (2) their AT or coaches would have to inform them of accessible resources. The highest frequency of advertisements for mental health resources was during midterms and finals week. Variability was present in both virtual and in-person counseling services. Some SAs, such as Gracie, stated that it took a long time to schedule an appointment, whereas Sarah spoke positively about her institution:

> My university does a really good job of making resources known, especially within our athletics department. In our locker room, there are posters of places that you can text, call, or go if you need help, and all students can get free mental health services.

Self-Regulation Strategies. Some SAs who disclosed health conditions depicted coping by using self-regulation strategies, yet other SAs with mental health conditions desired knowledge of coping mechanisms. Strategies included music, therapy, exercising, journaling, breathing techniques, prioritizing sleep, self-care, and maintaining a routine. Self-care was repeatedly identified as a helpful strategy. Emily found value in using strategies she learned:

> My therapist has taught me if I need to write a letter, just to write down what I am feeling. If someone specifically triggers me, write a letter to them, and it is over. I do not actually send it to them; if it is still bothering me within 3 days, I should have a conversation with them and let them know why they triggered me and educate them on my specific triggers and eating disorder.

DISCUSSION

The purpose of our study was to qualitatively explore the lived mental health experiences of NCAA Division I SAs and the mental health resources available to them. From participant responses, we identified 2 domains, each containing 4 categories that emerged.

Domain 1: Expectations of the SA

Participants identified time management as the biggest stressor, which supports previous authors'[21] findings that SAs dedicate a concerning amount of time to their sport. Time constraints for this population have been shown to affect SAs' sleep, nutrition, and academic pursuits,[21] causing mental and physical exhaustion.[3] Academically, we determined that SAs struggled with meeting team grade point average requirements, increased course loads, and absences for athletic responsibilities. Time demands and rigid scheduling often left SAs tired and overwhelmed, which not only affected their academic and athletic performance but could take a significant toll on their mental health and well-being.[21] Consistent with previous research,[21] our participants cited injury as a stressor. When injured, SAs are psychosocially concerned about disconnectedness and anxiety caused by the unpredictable and unfamiliar recovery process.[21] These emotions can trigger more serious mental health concerns, including depression, eating disorders, and substance use disorders.[22]

Collegiate SAs comprise a unique population vulnerable to mental health conditions.[17] Some participants in this study disclosed their diagnosis of a mental health condition and commented on their struggles in addition to performance anxiety and body image concerns. Drew and Matthews[2] found that 31% of their SA participants reported moderate to severe symptoms of depression, anxiety, or both. These experiences described by SAs and the prevalence of mental health conditions in this population are concerning because depression and anxiety are predictors of a lower grade point average and poor athletic performance and are correlated with risky behaviors and suicide.[3]

Interactions, programs, and cultural attitudes in athletic environments have the potential to reduce stressors and help SAs cope effectively.[3] Collegiate SAs are more willing to seek help for personal concerns with support from coaches, friends, and family.[15] Stigma is the most common factor influencing an SA's entry into or follow-up with counseling and seeking resources.[3,15] Outdated coaching philosophies use exercise as punishment to increase SA motivation and team cohesion and modify behavior; other problematic coaching characteristics are untrustworthiness, disrespect, unrealistic expectations, lack of knowledge about the SA, and inability to support injured SAs.[23,24] This sport-first mindset values mental toughness and perseverance so highly that SAs may be less likely or even unwilling to seek help for mental health conditions.[25] The sport-first mindset perpetuates a fear of being viewed as weak, deficient, or psychologically unfit by coaches and teammates, which leads to less self-reassurance and increased self-criticism, anxiety, and depressive symptoms.[17,26]

It is interesting to note that this category was classified as variant, with only 11 of the 23 participants identifying a sport-first mindset throughout their SA experience. We hypothesize that this reflects a shift in the culture of collegiate athletics and a step toward reducing mental health stigma. Based on the experiences and expectations reported by SAs in this study and previous research, we suggest that it may be helpful to strengthen athletic programs by addressing the behavioral concerns of team culture. Coaches can shape an environment in which both physical and mental injuries are taken seriously and addressed early.[27] Sixty-five percent of our respondents discussed positive experiences in which coaches and support staff encouraged use of mental health services and supported mental health initiatives. In contrast, 17% described coaches and teammates as embracing an outdated, sport-first mindset in which mental health concerns were disregarded.

Domain 2: Resources and Management

Our results indicated that SAs' internal support networks included coaches, ATs, and various staff within athletic departments. Outside of the university and athletic department, their external support networks included their family, friends, organizations, and personal psychology services. Educating SAs on mental skills to cope with stressors and educating coaches and teammates about social support decreased the anxiety SAs experienced.[28] Our SAs described helpful self-regulation strategies that benefited them. However, a conflict exists between time management and self-care, the latter of which was reported to be beneficial to participants. We believe that SAs should be educated on time

management strategies and healthy coping mechanisms and mental health discussions among teams encouraged to ensure that SAs are better equipped to handle stressors. Social support from the aforementioned networks can also be a coping mechanism, and higher levels of social support have been correlated with fewer depressive symptoms.[29] Respondents in our study voiced feelings of support when mental health was addressed by coaches and discussed among teammates. In a recent study of minority SAs,[21] the authors determined that mental health was not a topic of discussion in the locker room, it was rarely addressed by coaches, and the SAs had to "wear" their mental health condition in order to receive help. Vocalizing stressors is still considered a weakness in collegiate athletics, but it can aid in reducing the debilitating stigma associated with SAs' stress, anxiety, and mental health concerns.[16] Participants in this study perceived a reduced stigma to mental health through shared experiences and the willingness of SAs to talk about mental health. We believe this to be an advancement and a positive step toward improving mental health in collegiate athletics. However, not all participants shared this experience, and the stigma against mental health remains a challenging barrier to increasing mental health service use.[30]

Our participants expressed both positive and negative perceptions from their experiences using mental health resources. Earlier researchers[30] noted a lack of understanding of the SA role by practitioners as a top response for reduced use of mental health care by SAs. In a systematic review, barriers to service use were identified as the attitudes of athletic stakeholders, gender bias, and lack of mental health resources, time for SAs, mental health knowledge, and proper institutional protocols.[17] We believe that these barriers can be eliminated by well-developed and updated policies and procedures as outlined by the NCAA best practices[3] and the National Athletic Trainers' Association's recommendations for effectively referring SAs with mental health concerns.[13]

Mental health services were promoted to SAs through emails, pamphlets, posters, social media, workshops, and team meetings. Despite various mechanisms for informing SAs of resources, not all respondents were aware of the mental health resources at their universities. Use of mental health services at NCAA Division I institutions has been more widely researched compared with other divisions, and the resources available at NCAA institutions are not uniform.[17,31–33] The NCAA's best-practice recommendations[3] for understanding and supporting SA mental wellness are designed for athletic departments regardless of their size and resources, which can create health and health care disparities in a one-size-fits-all approach. The continued narrative of seeking equality in best-practice implementation must be altered to address equity in mental health care among the NCAA divisions. We hypothesize that SAs attending NCAA Division I institutions with mental health services housed in their athletic departments were more aware and informed of the mental health services available. Yet a conflict of interest may occur due to a lack of promotion of independent medical care when services are housed within the athletic department. In comparison, SAs who use the university's mental health resources are not as informed, and the frequency of advertisement to which they are exposed is that of typical college students. This aligns with previous studies of SAs perceiving that mental health services were hidden[21] and not knowing how or where to access mental health treatment at their university.[34] Accessibility to resources was improved through ATs facilitating help-seeking behaviors with referrals and access to free counseling services. Recent authors[16] observed that SAs were more likely to seek help from nonteam support staff rather than coaches. Therefore, we suggest promoting mental health services through increased advertisement of and SA education about these resources through support staff.

Clinical Bottom Line

From the data collected in the interviews, we suggest that ATs and the interprofessional care team for NCAA Division I SAs create a holistic culture focused on both physical and mental health. To do so, ATs need to empower SAs to speak with them and their coaching staff regarding their mental health. This could create a climate in which a "mental health day" is seen as a positive manifestation and SAs are not punished for missing athletic activities. The words we use to describe mental health must continue to change, and ATs should be stewards of these best practices to create teams of inclusive thought relative to mental health. In addition, the health care facilities must regularly advertise resources specific to mental health and promote opportunities on campus and in the community to seek help. We believe that the narrative that "it is okay to not be okay" must stop and instead encourage a help-seeking narrative focused on "it is okay to get help."

The stigma associated with mental health must be addressed from a top-down approach by the administration, leadership, coaching staff, health care professionals, and the athletes themselves. To do so, we recommend that annual preparticipation examinations include mental health screenings. Next, ATs need to create partnerships with mental health care professionals, even if these are not sport specific. The partnerships should be created before an emergency or crisis occurs in order for the SAs to see the clinicians as focused on risk reduction and wellness and not merely reactive in a mental health emergency. Finally, we suggest that these providers be integrated into the athletic training facility, engage in group dialogues at practice, and lead sessions on stress relief and mindfulness as avenues to promote mental well-being.

Limitations and Future Research

Our study offered insight into the lived experiences of collegiate SAs regarding mental health and the resources available to them at their universities, but a few limitations must be acknowledged. Eighty-three percent of the participants in this study were White. All were NCAA Division I SAs, and the mental health resources available are substantially higher in this division than in Division II, Division III, or National Association of Intercollegiate Athletics member schools. Five participants attended private Division I institutions; therefore, we cannot assume that the academic requirements and expectations of sport participation are standard across all university settings. In addition, some universities may provide only minimum resources, whereas others may have expansive sport psychology services housed in their athletic departments. Recall bias is another limitation to consider. The time

between mental health resource interactions and this study's interview varied for each respondent, and the experiences described may have been limited by memory. Given the recent COVID-19 pandemic, future research should reassess the prevalence of mental health conditions in NCAA SAs because of new stressors and challenging life experiences that have emerged since these factors were last identified in the literature.[12]

CONCLUSIONS

We explored the experiences of NCAA Division I SAs with respect to mental health and mental health resources. As we expected, SAs faced challenges with balancing sport and life as college students. Despite increased stressors, SAs were not very aware of the resources available to them. Their perception of these resources is influenced by accessibility, advertisement, and scrutiny from others who support a sport-first mindset and perpetuate the stigma of mental health. The SAs indicated that using the resources was helpful, but the focus needs to be on increasing awareness of them at NCAA institutions in hopes of reducing stigma, eliminating a sport-first mindset, and increasing mental health service use.

REFERENCES

1. Matta Mello Portugal E, Cevada T, Sobral Monteiro-Junior R, et al. Neuroscience of exercise: from neurobiology mechanisms to mental health. *Neuropsychobiology*. 2013;68(1):1–14. doi:10.1159/000350946
2. Drew B, Matthews J. The prevalence of depressive and anxiety symptoms in student-athletes and the relationship with resilience and help-seeking behavior. *J Clin Sport Psychol*. 2019;13(3):421–439. doi:10.1123/jcsp.2017-0043
3. Chew K, Thompson R. Potential barriers to accessing mental health services. In: Brown GT, Hainline B, Kroshus E, Wilfert M, eds. *Mind, Body and Sport: Understanding and Supporting Student-Athlete Mental Wellness*. National Collegiate Athletic Association; 2014:96–99.
4. Thompson R, Sherman R. *Managing Student-Athletes' Mental Health Issues*. National Collegiate Athletic Association; 2007.
5. Sudano L, Collins G, Miles CM. Reducing barriers to mental health care for student-athletes: an integrated care model. *Fam Syst Health*. 2017;35(1):77–84. doi:10.1037/fsh0000242
6. Khader WS, Tubbs AS, Haghighi A, et al. Onset insomnia and insufficient sleep duration are associated with suicide ideation in university students and athletes. *J Affect Disord*. 2020;274:1161–1164. doi:10.1016/j.jad.2020.05.102
7. Sarac N, Sarac B, Pedroza A, Borchers J. Epidemiology of mental health conditions in incoming Division I collegiate athletes. *Phys Sportsmed*. 2018;46(2):242–248. doi:10.1080/00913847.2018.1427412
8. Merikangas KR, He JP, Burstein M, et al. Lifetime prevalence of mental disorders in U.S. adolescents: results from the National Comorbidity Survey Replication–Adolescent Supplement. *J Am Acad Child Adolesc Psychiatry*. 2010;49(10):980–989. doi:10.1016/j.jaac.2010.05.017
9. Bauman NJ. The stigma of mental health in athletes: are mental toughness and mental health seen as contradictory in elite sport? *Br J Sports Med*. 2016;50(3):135–136. doi:10.1136/bjsports-2015-095570
10. Anchuri K, Davoren AK, Shanahan A, Torres M, Wilcox HC. Nonsuicidal self-injury, suicidal ideation, and suicide attempt among collegiate athletes: findings from the National College Health Assessment. *J Am Coll Health*. 2020;68(8):815–823. doi:10.1080/07448481.2019.1616743
11. Dvorak RD, Lamis DA, Malone PS. Alcohol use, depressive symptoms, and impulsivity as risk factors for suicide proneness among college students. *J Affect Disord*. 2013;149(1–3):326–334. doi:10.1016/j.jad.2013.01.046
12. Rao AL, Asif IM, Drezner JA, Toresdahl BG, Harmon KG. Suicide in National Collegiate Athletic Association (NCAA) athletes: a 9-year analysis of the NCAA Resolutions database. *Sports Health*. 2015;7(5):452–457. doi:10.1177/1941738115587675
13. Neal TL, Diamond AB, Goldman S, et al. Inter-association recommendations for developing a plan to recognize and refer student-athletes with psychological concerns at the collegiate level: an executive summary of a consensus statement. *J Athl Train*. 2013;48(5):716–720. doi:10.4085/1062-6050-48.4.13
14. Young J, Neil ER, Granger K, Walker SE, Chadburn JL, Eberman LE. Preparedness, confidence, and best practices in preventing, recognizing, managing mental health cases in NCAA institutions. *J Athl Train*. 2020;58(2):156–162. doi:10.4085/129-20
15. Hilliard RC, Watson JC II, Zizzi SJ. Stigma, attitudes, and intentions to seek mental health services in college student-athletes. *J Am Coll Health*. 2022;70(5):1476–1485. doi:10.1080/07448481.2020.1806851
16. Cutler BA, Dwyer B. Student-athlete perceptions of stress, support, and seeking mental health services. *J Issues Intercoll Athl*. 2020;23:206–226.
17. Moreland JJ, Coxe KA, Yang J. Collegiate athletes' mental health services utilization: a systematic review of conceptualizations, operationalizations, facilitators, and barriers. *J Sport Health Sci*. 2018;7(1):58–69. doi:10.1016/j.jshs.2017.04.009
18. Hill CE Thompson BJ, Williams EN. A guide to conducting consensual qualitative research. *Couns Psychol*. 1997;25(4):517–572. doi:10.1177/0011000097254001
19. Hill CE, Knox S, Thompson BJ, Williams EN, Hess SA, Ladany N. Consensual qualitative research: an update. *J Couns Psychol*. 2005;52(2):196–205. doi:10.1037/0022-0167.52.2.196
20. Hill CE. *Consensual Qualitative Research: A Practical Resource for Investigating Social Science Phenomena*. American Psychological Association; 2012.
21. Wilkerson TA, Stokowski S, Fridley A, Dittmore SW, Bell CA. Black football student-athletes' perceived barriers to seeking mental health services. *J Issues Intercoll Athl*. Winter 2020:55–81.
22. Putukian M. The psychological response to injury in student athletes: a narrative review with a focus on mental health. *Br J Sports Med*. 2016;50(3):145–148. doi:10.1136/bjsports-2015-095586
23. Cerully JL, Acosta JD, Sloan J. Mental health stigma and its effects on treatment-related outcomes: a narrative review. *Mil Med*. 2018;183(11–12):e427–e437. doi:10.1093/milmed/usx219
24. Gilbert WD, Trudel P. Analysis of coaching science research published from 1970–2001. *Res Q Exerc Sport*. 2004;75(4):388–399. doi:10.1080/02701367.2004.10609172
25. Gucciardi DF, Hanton S, Fleming S. Are mental toughness and mental health contradictory concepts in elite sport? A narrative review of theory and evidence. *J Sci Med Sport*. 2017;20(3):307–311. doi:10.1016/j.jsams.2016.08.006
26. Siekanska M, Blecharz J, Wojtowicz A. The athlete's perception of coaches' behavior towards competitors with a different sports level. *J Hum Kinet*. 2013;39(1):231–242. doi:10.2478/hukin-2013-0086
27. Kroshus E, Chrisman SPD, Coppel D, Herring S. Coach support of high school student-athletes struggling with anxiety or depression. *J Clin Sport Psychol*. 2019;13(3):390–404. doi:10.1123/jcsp.2018-0004
28. Fogaca JL. Combining mental health and performance interventions: coping and social support for student-athletes. *J Appl Sport Psychol*. 2021;33(1):4–19. doi:10.1080/10413200.2019.1648326
29. Sullivan M, Moore M, Blom LC, Slater G. Relationship between social support and depressive symptoms in collegiate student athletes. *J Stud Sport Athl Educ*. 2020;14(3):192–209. doi:10.1080/19357397.2020.1768034
30. Ryan H, Gayles JG, Bell L. Student-athletes and mental health experiences. *New Dir Stud Serv*. 2018;2018(163):67–79. doi:10.1002/ss.20271

31. Sudano LE, Miles CM. Mental health services in NCAA Division I athletics: a survey of head ATCs. *Sports Health*. 2017;9(3):262–267. doi:10.1177/1941738116679127
32. Zakrajsek RA, Martin SB, Wrisberg CA. National Collegiate Athletic Association Division I certified athletic trainers' perceptions of the benefits of sport psychology services. *J Athl Train*. 2016;51(5):398–405. doi:10.4085/1062-6050-51.5.13
33. Way WC, Coker-Cranney AM, Watson JC. "So many mental health issues go unsaid": implications for best practice guidelines from student-athletes' perspectives about service availability. *J Clin Sport Psychol*. 2020;14(3):305–324. doi:10.1123/jcsp.2019-0051
34. Cox CE, Ross-Stewart L, Foltz BD. Investigating the prevalence and risk-factors of depression symptoms among NCAA Division I collegiate athletes. *J Sports Sci*. 2017;5:14–28. doi:10.17265/2332-7839/2017.01.002
35. Drapeau CW, McIntosh JL. American Association of Suicidology. U.S.A. suicide: 2019 official final data. American Association of Suicidology. Published 2020. Accessed May 26, 2022. https://suicidology.org/wp-content/uploads/2021/01/2019datapgsv2b.pdf

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