

Muslim Collegiate Student-Athletes' Experience With Fasting During Ramadan While Participating in Sport

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Context: As colleges and universities continue to focus on creating diverse, equitable, and inclusive environments, it is important to gain more knowledge on the experiences that Muslim student-athletes have while fasting during the month of Ramadan. Although previous researchers have investigated the physical effects of fasting on the body, little is known about the challenges or support Muslim student-athletes experience while fasting and participating in sport during Ramadan.

Objective: To explore the experiences of Muslim collegiate student-athletes regarding fasting during Ramadan while participating in sports.

Design: Qualitative research study.

Setting: Individual video interviews.

Patients or Other Participants: Twelve Muslim collegiate student-athletes (4 women, 8 men; age = 19.9 ± 1.4 years) from 7 universities across 7 states were interviewed.

Data Collection and Analysis: A semistructured interview guide consisting of questions pertaining to the Muslim student-athletes' beliefs, challenges, experiences, and feelings was developed to gather perceptions of fasting during Ramadan while participating in sport. Data were analyzed by a multianalyst

research team and coded into common themes and categories via a multiphase consensus process.

Results: Four major themes emerged from the interview process: the significance of fasting and Ramadan (familial influence, religious belief, and introspection and spiritual growth), intrinsic challenges (physical challenges, mental and emotional challenges, and time constraints), extrinsic challenges (lack of available resources, knowledge and curiosity of others, and lack of understanding by others), and various types of support (sport-specific support, community support, and desired support) that affected athletes' experiences with fasting during Ramadan while participating in sport.

Conclusions: The athletic community should seek to better support Muslim student-athletes and respect the importance of fasting during Ramadan. Parties interested in the success of these athletes in sport should improve their understanding regarding Ramadan and the desired support of Muslim student-athletes during fasting.

Key Words: faith and spirituality, community support, mental health, qualitative research

Key Points

- Fasting is significant to Muslim student-athletes because it fulfills their religious obligations, provides a sense of pride, and strengthens their relationship with God.
- Muslim student-athletes would benefit from the athletic community having increased knowledge and understanding regarding Ramadan and the implications of fasting while engaged in sport.
- Muslim student-athletes craved a sense of community during Ramadan but found the current support structure to be deficient due to a lack of consideration for the timing of athletic-related events relative to Ramadan requirements, a lack of resources for Muslim student-athletes and the personnel in place to work with them, and a lack of established community support systems.

The Pew Research Center projected Muslims to be the fastest growing religious group in the world.¹ Nearly one-quarter of the world's population is Muslim, including just over 1% of Americans who adhere to the Islamic faith.¹ Muslim representation in sport is growing, with Muslim-majority countries increasing their participation in the Olympic Games, World Cup, and other major sporting events. The exact number of Muslim athletes is difficult to determine, as individuals practicing Islam do not always articulate their religious beliefs or wear garments that indicate their faith. No published data exist on the number of Muslim National Collegiate Athletic Association

(NCAA) intercollegiate athletes, but if the quantity mirrors the percentage of general population Muslim Americans, approximately 5700 Muslim student-athletes are competing in NCAA athletics.²

Ramadan, which is the ninth month of the Islamic lunar calendar, is observed through the voluntary abstention from food and liquid intake from sunup to sundown by healthy Muslim adults.^{3–5} Illness, terminal diagnosis, and pregnancy are exceptions to fasting, as is being an elderly person. Women are not permitted to fast during menstruation and must make-up those fasting times outside of the traditional Ramadan period.^{3–5} The decision to abstain from or alter the fasting

Table 1. Participants' Demographics

Participant Pseudonym	Gender Identity	Age, y	Years in College	Primary Sport	In-Season During Ramadan	National College Athletic Association Division ^a
Aisha	Cisgender woman	19	2	Squash	No	III
Ali	Cisgender man	20	3	Lacrosse	Yes	III
Asiya	Cisgender woman	21	1	Track and field	Yes	I
Ibrahim	Cisgender man	21	2	Track and field	Yes	I
Ismail	Cisgender man	19	1	Track and field	Yes	I
Khadija	Cisgender woman	18	1	Track and field	Yes	I
Maryam	Cisgender woman	23	4	Soccer	No	I
Musa	Cisgender man	19	2	Track and field	Yes	I
Mustafa	Cisgender man	21	3	Track and field	Yes	I
Omar	Cisgender man	19	1	Track and field	Yes	Club sport
Yusuf	Cisgender man	20	3	Track and field	Yes	I
Zacharia	Cisgender man	19	3	Rugby	Yes	I-AA

^a Unless otherwise indicated.

schedule is a deeply personal one and should be made by the individual without outside influence.

The Islamic calendar is based on the lunar, rather than solar, phases and, therefore, its calendar year is 10 or more days shorter than the solar calendar year.⁴ Unlike some Christian holidays (ie, Christmas) that fall on the same date each year, Ramadan may occur at different times of the year, depending on the lunar calendar. Thus, the duration of Ramadan may range from 29 to 30 days, and the length of each day's fasting period depends on the time of the calendar year and the associated length of daylight during which it falls.⁴ The geographic latitude can also affect fasting times.^{3,4} Average daily fasting time is approximately 13 hours but can extend to 18 hours in some locations.⁴ To accommodate the fasting schedule, Muslims observing Ramadan wake before sunrise to eat *suhoor*, the meal before the fast, and then stay awake past sunset to consume *iftar*, the meal that breaks the fast.³ Therefore, fasting not only influences hydration and nutrition but may also result in changes to sleep patterns and quality. In countries where Islam is the primary religion, most activities, including sports, are scheduled to avoid the Ramadan fasting periods. However, this is not the case in the United States, where Christianity is the dominant observed religion.³ Thus, NCAA student-athletes who observe Ramadan must navigate fasting while participating in practices, training sessions, and competitions.

Researchers examining athletic activity during Ramadan have primarily focused on performance measures to determine the effect of fasting on athletic activity. The results of such studies have provided conflicting conclusions. Some findings indicated that Muslim athletes may suffer from impaired physical performance as a result of hypoglycemia and dehydration, sleep disturbances, and mood swings.^{3,6,7} Still, other investigators identified no negative physiological effects on athletic performance that resulted from fasting for Ramadan.^{3,5,8} One group of investigators has examined the subjective perceptions of Malaysian athletes on the effect of fasting on sport performance, sleep patterns, and nutritional intake during the fasting period.⁹ About one-quarter to one-third of participants described an adverse effect on their performance or training, respectively, and just under half felt that they were able to maintain their prefasting caloric intake.⁹

Authors of many studies have focused on the objective measurements of sport performance in athletes who observe Ramadan, but limited data exist on the lived experiences of Muslim athletes during Ramadan. Therefore, the purpose of

our study was to explore the experiences of Muslim student-athletes participating in NCAA sports while fasting during Ramadan with the goal of identifying ways in which athletic trainers (ATs) can better support Muslim patients and patients of other faiths during periods of fasting while participating in athletic activity.

METHODS

Design

The consensual qualitative research (CQR) tradition,^{10,11} a well-established approach in the athletic training literature, was used to guide this research study. We selected the CQR tradition to explore Muslim collegiate student-athletes' experiences with fasting while participating in sport during Ramadan. This study was determined to be exempt research by the A.T. Still University institutional review board.

Participants

We recruited participants for this study through 2 mechanisms. First, we reached out via email to a convenience sample of ATs from our professional networks who were known to provide athletic training services to Muslim student-athletes in the college or university setting. Second, we developed digital recruitment posts highlighting the details of the study and placed them on various social media platforms (ie, Facebook, Instagram, Twitter). Both the recruitment email and social media posts were geared toward ATs in the college or university setting; each provided details of the study, the inclusion criteria for participation, and a request to send the study recruitment information to any Muslim collegiate student-athletes they believed might be interested in participating. To ensure data saturation, we followed the guidelines outlined by Hill et al and aimed to interview 10 to 15 participants.^{10,11}

In total, 12 Muslim collegiate student-athletes (4 women, 8 men; age = 19.9 ± 1.4 years) from 7 universities across 7 states were interviewed before data saturation was achieved. Participant pseudonyms and additional demographics are available in Table 1.

Instrumentation

After an extensive literature search, we could not find an existing instrument to address the study aim. Thus, 3 members of the research team (M.A., N.A.H., C.E.W.B.) developed a

Table 2. Interview Guide^a

1. To begin, please share how being a Muslim influences your identity as a student-athlete.
2. Tell me about the significance of fasting for you.
3. What is your experience with fasting while participating in sport?
4. What challenges, if any, have you faced when fasting while participating in sport?
5. Who, if anyone, has offered you support while participating in sport during the month of Ramadan?
6. What mechanisms of support or accommodations, if any, do you believe would be beneficial for you when participating in sport while fasting during Ramadan?
7. What information, if any, do you believe is important for those around you to know about fasting and Ramadan?
8. Are there any areas or topics pertaining to fasting during Ramadan that I haven't asked about that you would like to discuss?

^a Reproduced in its original format.

semistructured interview guide to capture Muslim collegiate student-athletes' experiences with fasting while participating in sport during Ramadan. After development, the interview guide was reviewed for face and content validity by 3 ATs with content or qualitative research expertise. Two content reviewers were practicing ATs with extensive experience providing athletic training services to Muslim student-athletes and extremely familiar with fasting and Ramadan. The third content reviewer (J.M.C.), who also served as the internal auditor for this study, was an AT with more than 10 years of experience conducting qualitative research and extremely familiar with the CQR tradition. Based on feedback from the content reviewers, we reordered some questions for better flow and clarity but deemed no grammatical or wording edits necessary. Hence, the final semistructured interview guide consisted of 8 main questions with additional probing questions, if necessary, to capture additional detail during the participant interviews (Table 2). Before data collection, the principal investigator (M.A.) conducted pilot testing of the interview guide with 2 former collegiate athletes who identified as Muslim and participated in fasting during Ramadan but did not meet all the study inclusion criteria. No adjustments were made to the interview guide after pilot testing.

Procedures

Participant recruitment for the current study began in February 2023 and concluded after the completion of 12 participant interviews. We intentionally chose to recruit individuals outside of Ramadan to ensure they were able to fully reflect on their overall experiences with fasting over the entire period of religious observance. We sent recruitment materials via email and social media to ATs with a request to forward the information to Muslim collegiate student-athletes who might be interested in the study. If interested, the potential participant was asked to complete a brief demographic questionnaire to confirm they met the inclusion criteria. If all inclusion criteria were satisfied, the principal investigator communicated with the individual to schedule a day and time for the video conference interview via Zoom software (Zoom Video Communications, Inc). All interviews were conducted by the principal investigator and lasted 20 to 30 minutes. Before each interview, the participant provided oral consent for the interview to be digitally recorded.

After each interview, the audio file and raw transcript, provided by Zoom, were downloaded and stored in a secure location. The principal investigator reviewed all transcripts and ensured that all proper names, places, and identifying information were masked to protect participant confidentiality. Once a transcript was finalized, it was sent to the participant for member checking. To enhance the trustworthiness of the data, participants were asked to review transcripts for

accuracy and were given the opportunity to provide additional information or clarification if warranted. However, participants were informed that no information could be deleted or altered during the member-checking process.

Data Analysis

The multiphase data analysis process, as outlined by Hill et al, was used for this study.^{10,11} The data analysis team consisted of 3 athletic training researchers: 1 researcher had extensive experience with CQR and qualitative research, the second researcher had experience with qualitative research but was new to CQR, and the third researcher was a novice to both qualitative research and the CQR approach. Before data collection and analysis, the novice researcher was trained on qualitative research data-collection procedures, and both researchers new to CQR were trained by the experienced researcher on all CQR data analysis processes as outlined by Hill et al.^{10,11} A fourth athletic training researcher (J.M.C.), with extensive experience in CQR, served as the internal auditor for this study.

Data analysis consisted of 4 progressive phases, as detailed by Welch et al: (1) establishing initial code domains, (2) extracting core ideas, (3) cross-analyzing multiple participant interviews via themes and categories, and (4) identifying the frequency of participant cases per category.¹² All 3 data analysis team members completed each phase by first reviewing the transcripts independently and then meeting to discuss coding and reach a consensus before progressing to the next phase.

When the cross-analysis was finished, the frequency of occurrence for each category was tabulated. Frequency counting for CQR offers a sense of representativeness of the entire sample. For this study, a category was considered *general* if it applied to all or all but 1 participant case, *typical* if it applied to more than half of the cases, *variant* if it applied to fewer than half of the cases, or *rare* if it applied to only 1 or 2 of the cases.¹¹ After all 4 phases were completed, the coded transcripts were sent to the internal auditor for review. The use of an internal auditor strengthens the trustworthiness of the data by ensuring multiple perspectives were considered during analysis and that the final results accurately represent the collective participant voice.^{10,11}

RESULTS

Four unique themes emerged during data analysis: (1) significance of fasting and Ramadan, (2) intrinsic challenges, (3) extrinsic challenges, and (4) support. Within each theme, several categories were identified. The frequency count of participant cases per category of each theme is displayed in Table 3.

Table 3. Participant Cases by Theme and Category

Theme	Category	Frequency ^a	Participant Cases, No.
Significance of fasting and Ramadan	Familial influence	Typical	9
	Religious belief	General	11
	Introspection and spiritual growth	General	12
Intrinsic challenges	Physical challenges	General	12
	Mental and emotional challenges	General	12
	Time constraints	General	12
Extrinsic challenges	Available resources	Typical	7
	Knowledge and curiosity of others	General	11
	Understanding by others	Typical	9
Support	Sport-specific support	General	12
	Community support	General	12
	Desired support	General	12

^a Frequency was categorized as *general* if it applied to all or all but 1 participant case, *typical* if it applied to more than half of the cases, *variant* if it applied to fewer than half of the cases, or *rare* if it applied to only 1 or 2 of the cases.

Significance of Fasting and Ramadan

During the individual interviews, our participants discussed the significance of fasting and what Ramadan meant for them. Data related to the significance of fasting and Ramadan were reduced into 3 categories: familial influence, religious belief, and introspection and spiritual growth. Additional participant quotes supporting the categories of the significance of fasting and Ramadan theme are provided in Table 4.

Familial Influence. Several respondents stated they began fasting due to parental or familial influence and continued to fast because of familial traditions and connections. Zacharia explained:

My parents instilled the importance of fasting in me at a young age. I've been fasting since I was little. To my parents, it's extremely important, and by association, it is important to me as well.

Ismail commented:

It's the sense of family during Ramadan that's important to me and matters to me. During Ramadan, you always break your fast with your family. You eat suhoor with your family. These are things that make you grow closer to your family.

Religious Belief. Our participants also conveyed how fasting during Ramadan strengthened their faith and their relationship with God. Maryam remarked, "[F]asting during Ramadan is my way of being close with God, and I know he will help me through it. So it's a mindset like, okay, I'm doing this for God, so he'll help me get through it." Alternatively, some individuals viewed fasting as an obligation to strengthen their faith. Aisha explained, "[Fasting] is 1 of the 5 Pillars, so in my head, it's not really an option." Similarly, Asiya noted:

Being a Muslim means fasting as well. So you can't really follow the rules of your religion if you are not fasting. But I do it not just because it's an obligation of my religion but because it has benefits for myself as well.

Introspection and Spiritual Growth. Beyond religious obligation, all 12 participants discussed prioritizing fasting during Ramadan above other aspects of their daily life and the

feelings of pride fasting brings them during Ramadan. Mustafa detailed:

[Fasting] helps out with discipline a lot. The concept is obviously hard for a lot of people to understand how we abstain from food and water, but it is what it is. [Fasting] makes me feel like I still maintain my identity, so it is really significant to me.

Ali observed:

Fasting is really significant because one of the biggest things is it emphasizes giving to the poor. We have the privilege to voluntarily fast, so hopefully, it brings us awareness that many in this world do not have that privilege, and fasting for them is not by choice. They simply don't have the option to eat, but we do. Fasting during Ramadan reminds me that food is a blessing.

Intrinsic Challenges

During data analysis, intrinsic challenges, those that affect the individual personally, emerged. The intrinsic challenges theme was divided into 3 categories: physical challenges, mental and emotional challenges, and time constraints. Participant quotes to support the categories of the intrinsic challenges theme are displayed in Table 5.

Physical Challenges. Unsurprisingly, all 12 respondents addressed the physical toll fasting during Ramadan while participating in sport takes on their bodies. Aisha said:

I mean, it definitely takes a toll on you. I'm not even going to try to make it look good. When everyone else is done, they go to the bench and drink water, but I have to sit there and remind myself, "I can do this." I'm definitely a lot more fatigued, but I just try to take a nap and push through it.

Several participants also described how they have to reassess fueling their bodies during Ramadan. Yusuf explained:

[Fasting] affects the way that I'm fueling my body, and I'm dealing with everything like that because the average college student or college athlete are [sic] going to treat their bodies differently. If you're following the rules of the religion, even if at the simplest level, for breakfast,

Table 4. Additional Quotes Regarding the Significance of Fasting and the Ramadan Theme

Significance of Fasting and Ramadan	
Familial influence	The biggest lesson my parents always taught me was that one of the things fasting does is it allows you to remind yourself of a couple of different things. First, it forces you to go through the process of self-control. I think, over the course of the year, sometimes it's hard to always be on top of everything, and so fasting is one of those things where you must be able to control everything because there's so many things that can break a fast. And so you have to be on top of your game. And at the same time, the other thing my parents taught me when I was growing up is that it kind of reminds you of what it's like, maybe if you didn't have as much privilege in life. I'm very thankful I did have quite a bit of privilege growing up. And so it reminds me to appreciate that and to be able to take advantage of having those opportunities. (Zacharia) When I first started fasting, it's because my dad used to fast every year. And I used to see him and be like, yeah, that's something I want to try and do. When he passed, it brought me that incentive, like okay, I should really try and do it now. So then, the first year was kind of hard; I didn't finish it because I was just kind of struggling, and last year was a lot easier. (Omar) Even though you have hard days, fasting with family and breaking your fast with family and talking about it with family who relate really motivates you to keep going. And it becomes something that you look forward to doing every day with people who are also doing it with you. (Khadija) My older brother, he is the one in the family that is very religious, so he is always checking up on me, trying to keep me on track and giving me advice. So that is very helpful of him. (Ibrahim)
Religious belief	I have these phases where I really do all my prayers, like all 5 prayers, and I'm reading the Quran and all that stuff, and during Ramadan, I really do that all the whole month, and then I know that, for me personally, sometimes throughout the year, it decreases. Sometimes I don't do all the 5 prayers on time with school going on, and being a student-athlete in general, I don't have too much time that I can dedicate to the religion. But I know that, during Ramadan, it's when really being close to God is at its peak, and I just love it. (Maryam) [Fasting] during Ramadan brings me closer to my religion and God. (Musa) As I've grown older, [fasting] has become strictly a faith and belief thing because, at the end of the day, it's one of the major Pillars, and it is very important to me. (Yusuf)
Introspection and spiritual growth	I feel like it's making me more of a better man that I want to become because I'm not relying on their foods and stuff like that, but also it's not about food, but it's also about what I listen to, what I might say. I just make it important throughout my day. And it's very motivating because I am trying to be closer to my creator. (Ibrahim) Fasting is very important. It helps me become a better person, better athlete, and helps me treat others around me better. (Ismail) I feel like [fasting] is a restart. We're so busy all the time, especially during the [sport] season, that you just do the bare minimum. For me, I would just pray the 5 prayers and try to squeeze it in there between whatever I'm doing. In Ramadan, I can sit and focus more on religious stuff and feel more connected to that part of me than I do throughout the year. (Aisha) I think that moving across the country and being so far away and really having to be by myself for the first time in my life, it came to me almost like a revelation for me that religion is an active choice to believe in what you choose to believe in every day. When you grow up in a Muslim family who all believes in that religion, yes, you have that choice, but also it's all that you've ever known. So when I came here, it was like, wow, if I want to go to the mosque, I actually have to get up and go to the mosque by myself. If I want to read the Quran, I have to pull out the book and read it by myself. So I think it was made clear to me that it was an actual choice, and if I really wanted to stay connected, then I would have to put the work in myself and that no one was really going to be pushing me to do it anymore. So I think that realization made me try a lot harder and really put the time in. And I think I became a lot more devoted because of that. (Khadija)

you want to get a lot of protein, and I'm not eating bacon. I'm not eating ham. I'm not doing any of that stuff, so at the most basic level, like you have to treat your body differently. You have to fuel differently. Then more specifically, during the month of Ramadan, now, I have to wake up really early, and I have to make sure I'm still getting 3000-plus calories, which just feels like you're stuffing your body to the brim of explosion and trying to make sure you're still getting all your work in and making sure you get everything done right.

Musa voiced a similar concern:

I try to find an eating plan that's going to work for me and allow me to have enough energy to get through workouts while also making sure I get the right amount of protein so I'm not losing muscle mass. I'm worried about being able to maintain my weight. Obviously, you're going to lose weight, but you don't want to lose too much weight.

Mental and Emotional Challenges. All 12 individuals also shared the mental and emotional challenges of fasting

during Ramadan while participating in sport. Ali believed that the way he was raised affected what information he was willing to share with others:

I was raised to only share my pain specifically with Allah during prayer. So I don't really share with others how I'm doing while I'm fasting. I'm definitely a more reserved person, and it [takes] a lot to get that information out of me.

Specific to her sport, Asiya noted, "[I]t's really hard to fast while playing sport when your teammates don't share the same religion. This was my first year being away from home and fasting all by myself."

Participants also discussed having feelings of guilt for fasting during Ramadan. Ismail shared the guilt he felt during sport championships:

[W]hen it comes to big championships, what do I do? It's really testing my belief. Do I really want to risk my health and have a win for my team, or do I continue fasting and just hope that I can run well? Sometimes I just don't know what to do, and that is my biggest fear.

Table 5. Additional Quotes Regarding the Intrinsic Challenges Theme

Intrinsic Challenges	
Physical challenges	
Sport can be extremely difficult at times. And you're always exerting yourself. You tend to get tired, as it is completely normal. But when you do it during Ramadan, you don't have the regenerative capabilities. You can't drink a Gatorade. You can't eat a quick snack like everyone else. And so, I think that the most difficult part is trying to stay on the same level of performance, trying to be happy with what you're putting out there while also fasting. Getting a good night's sleep the night before, it becomes extremely important. And making sure you're eating the right food becomes very important. (Zacharia)	
During the month, it's very hard for me to stay engaged, especially if I'm running on a little bit less sleep. It's really just an energy and focus thing when it comes to school and day-to-day life because I feel like it's very difficult to stay focused off no water and no food. It's just like the world is spinning sometimes. (Yusuf)	
For more than half of the season, I'm not running well or running [to] my full potential. I'm fasting, so no matter how much I want to try, the body still has its limits. I can only push my body so far. A lot of times, it's having that patience to know, half the month, I'm running well but not great. I'm running well, the times are good, but not great like the very best of me. The biggest experience is patience because I can't run my best when I'm fasting, even though I've done it as a freshmen or sophomore, but now that I'm racing at a bigger level of Division I, I've already reached my top, so working to get better is a lot more work. So when I don't have energy, I can't reach my top. I am learning that it's okay to accept that I'm not at my best right now, and knowing that's okay for that month, that's my biggest thing. Last year, I pushed myself too much to a point where I ran 3 races 1 time, and I collapsed and passed out, and I don't want to push myself too much like that again. (Ismail)	
Thirst and not being able to drink water because of the heat are the biggest struggles. Not being able to replace your water, you're going to lose every bit. So I think, for me, that was the biggest thing. And then replenishing, not just the water but eating enough so you have energy for the whole day because you probably won't, you'll probably feel tired. (Omar)	
Mental and emotional challenges	
I'm trying to keep my head down and stay in the same environment as everybody else because I feel like it's hard to work the same when you're alone, when you're tired. Frankly, you're not going to be an athlete forever, and you don't want to leave with regrets. Part of me is like, just put your head down, suck it up, we'll get through it. (Yusuf)	
Oh, [fasting] is hard. It's not easy. But doing it, I feel like it makes you realize how strong you are. It makes you realize that you're stronger than what you think you are. It's not easy going out there in the sun, running, working out, or doing all that stuff without having eaten since like early in the morning or the night before. It just makes you mentally stronger. (Musa)	
You get a lot out of [fasting] in terms of like, okay, you fasted throughout this month. And if you fasted this whole month, and you're able to perform at a high level, then imagine what you can do when you can eat and drink and be at your 100% best. It's just one of those things for me. (Omar)	
Time constraints	
I lose a lot of sleep. Once I break my fast, I have 45 minutes to an hour to get to the mosque and pray Taraweeh. And it's long; 20 rakats takes a long time. After that, I come back here around 11:00 AM and go to class. It's hard to stay awake. I practice, and I try to nap and then get up again to eat. I'm a light sleeper, so I go to sleep for an hour and then wake up again. The sleep part is very huge. (Ismail)	
I'll sleep for a brief period of time, eat, drink, do everything for suhoor. And then I'll either go back to sleep for the rest of the night, or I'll go back to sleep for about 2 hours. If we have a really hard workout, I'll hit the workout right before sunrise and then go back to sleep. If I'm 2–3 hours short on sleep, I'll sleep at like 3:00 PM when the guys are practicing and sleep until it's time to eat. (Yusuf)	
Sometimes as an athlete, especially during track and when you are running for so long, sometimes I end up not praying. I practice until 6:00 PM, I come back here, and I'm mad tired, and I am too tired to pray. That's the 1 aspect that affects me a lot: I end [up] being tired and not praying. And sometimes, last Ramadan, I ended up not waking up to eat suhoor because I was so tired. (Ibrahim)	

Ibrahim recalled an injury he sustained right after Ramadan: “[W]hen I got injured, I spoke to a doctor, and she said it could have been because I was fasting.”

Regardless of the challenges, participants cited the importance of a positive mindset change during Ramadan. Zacharia indicated,

I was worried if I could handle it all. But once Ramadan is actually here, it's like my whole mindset completely changed. All the doubt that I had in my mind is gone. I know that I can do it, so why was I even doubting myself?

Time Constraints. In addition to the physical and mental challenges, all our participants acknowledged the time constraints of trying to balance religious, academic, and sport expectations during Ramadan. Asiya described how her daily schedule during Ramadan did not align with campus hours, specifically for the dining hall. She expressed, “Sometimes you have to fast until 8:15 PM to 8:20 PM, but the dining hall closes early at 7:30 PM to 8 PM, so I would have to figure out different options.” Similarly, Zacharia commented on how

practice sometimes interfered with iftar. He said: “Sometimes our practices can be pretty late right when it is iftar. So I have to make adjustments so I can eat, even though it is during practice time.”

Respondents also acknowledged the need to readjust their schedules to try to fit everything in. Ali explained:

I have to go to the mosque for Jum'ah prayer at 1:00 PM on Fridays, and I try to go for iftar and things like that. My practice usually goes until 8:30 PM, but Maghrib prayer is at 7:35 PM. I'm sure, if I asked my coach and went out of my way, then I could get that accommodation. But a lot of the times, I just go with the flow, and I don't speak up and ask for accommodations.

Mustafa agreed:

[T]here's a whole atmosphere where your schedule kinds of changes. You wake up earlier, and you go to bed later. It's just kind of odd because you have to adjust yourself to the schedule on top of class and practice.

Table 6. Additional Quotes Regarding the Extrinsic Challenges Theme

Extrinsic Challenges
Available resources I would say that was probably the biggest challenge is not having a full, huge home-cooked meal to break your fast every night and having to go to the dining hall or do it with friends instead of family. It changes, almost like you realize it's important to appreciate those little things. Last year, when I was breaking my fast with other Muslim friends, it's like, oh, these people are going through it just like me. They're all away from home. We're all going through the same stuff. (Zacharia) When I was home with my family, they were there to support me. My mom was there, so she was waking me up. She was making food when I can't, but this year, I had to make it by myself. So it was really hard at the beginning, especially the first 2 weeks. (Asiya) I'd say [fasting during Ramadan] makes me represent something that's greater than what I'm a part of in my small team because I'm the only Muslim on my team. And honestly, it's not an unfamiliar feeling because I'm even the only Arabic person on the team and the only Black kid even on the team. So you know, having that feeling of being the only kid and having to represent something, when people think about a Black person, when people think about a Muslim, they think of me because that's their only frame of reference. So you know, it's something that, by this time, I've become accustomed to, especially living in an area that's not as diverse. (Ali)
Knowledge and curiosity of others Honestly, I'm always glad to answer people being curious to know more about Ramadan. I never found that offensive in any way; I think the opposite. I'm actually glad people show interest in Ramadan and what it is about. One misconception is that people always feel like they're offending me in some sort of way. I never really understood why they have that perspective—that curiosity doesn't come from anything evil or malicious. It's always from genuine curiosity, like, oh, you're fasting, and you're abstaining from food from dawn to dusk. (Mustafa) Yeah, I mean, a lot of people on my team are always asking, "How do you do it?" I just tell them the significance and the meaning behind it, and they're like, "Oh, okay, I understand why you do and how you do it." (Musa) Because in [northeastern state], I feel like I constantly have to explain. And the people close to me would always try to understand and go the extra mile and do the research on their own. But I do feel like, over time, people here at least have a little bit more of a grasp on the concept. (Khadija)
Understanding by others If your coach isn't really understanding, [it's] like 10 times as hard to have the energy to push through. They expect a lot of out of you, especially for people on the top team, and are set to win tournaments. They want you to be healthy and eat and be ready. If they don't understand, they think you're not doing your best and that you don't care that much about the team. From the teammate side, especially if they're not religious, to them, it might just look like you're following this thing that you don't even know exists or not. And it's affecting the whole team. (Aisha) I've experienced a lot of pity, a lot of comments like, "Don't worry. You can break your fast. I won't tell anyone," or people saying, "If you broke your fast here, your parents wouldn't know." But I think it's more just people not really understanding because, yeah, I could break my fast anywhere, and my parents wouldn't know, but it's just like a vow that you make to yourself and to God that you're going to fast, and you're doing it for Him. So I just think that people won't really understand unless you are Muslim or you're close with people who are Muslim, just how much Ramadan and fasting actually mean. I think a lot of people are just like, "You're starving yourself for 30 days. Wow! That's so much. Why?" And I just don't think that the understanding really comes unless you have a deep understanding of the religion or are close to people who fast every day. But I think the way that I would handle that was just trying to explain that it's my choice, and I really want to fast, that it makes me feel closer with my spirituality and God. I don't know if they heard that and were like, "That makes sense," or if they were like, "That does not make sense at all," but I think that, for me, it is always trying to help them understand that it's really a my-choice thing, and it's not like someone's making me do it. (Khadija)

Extrinsic Challenges

Our participants also discussed external factors that affected their fasting experience during Ramadan. Three categories emerged during data analysis: available resources, knowledge and curiosity of others, and understanding by others. Additional participant quotes to support each category within the extrinsic challenges theme are displayed in Table 6.

Available Resources. Several individuals shared how a lack of available resources, such as campus resources, transportation, or easy access to food and prayer services, made fasting during Ramadan while participating in sport more challenging. Maryam detailed how the lack of a Muslim student-athlete community could make the experience feel isolating:

I live with roommates that don't have the same religion, so it's definitely harder. Sometimes I just want to pray in my room, but they're like out there watching TV really loud or listening to music. And on my whole team, no one is Muslim. I wish I had a community of athletes that were going through it with me, but in college sports, I feel like there's not a lot of Muslims out there, and it is really sad.

Similarly, Ibrahim indicated he doesn't have a support system or resources on campus: "I don't have my family around, and I don't have a car on campus, so I can't drive to the masjid [mosque] for Taraweeh prayer when I want to." Yusuf shared:

[T]here is no information on [fasting during athletics] at all anywhere. I'm searching on how to get proper amounts of macro[nutrient]s and calories in X amount of time, and there's nothing. All I find is, "You just need to eat bacon and get your fats," and I'm like, "Oh, great, that is not helpful."

Knowledge and Curiosity of Others. Almost all our participants recognized that individuals around them were not familiar with or knowledgeable about fasting during Ramadan. Aisha reflected:

I've found that most people are actually very interested to learn more about Islam, but they are always a little nervous to ask questions or don't know how to go about it the right way without offending me or anyone else.

She went on to state that, once they learned more about the fasting experience, they tried to join her for support: “A lot of them, my non-Muslim friends, actually try to do it with me, which is really nice.”

Ismail discussed how he often answers the same questions each year as Ramadan approaches. He remarked,

[E]very year, like half the team always asks me when Ramadan is and how it works. I explain to them how Ramadan works and even how the Islamic calendar and moon sighting work. I tell them it’s not really about going hungry; it’s about growing as a better person for a month and [keeping] it going.

In some instances, our participants expressed frustrations about consistently being asked questions or how others not knowledgeable about fasting during Ramadan spread misinformation. Maryam commented:

I get asked the same question over and over, but I think I have to put myself in their shoes. They don’t know that they’re the 100th person that asked me that right now. So all I can do is respond to their questions and be respectful. I know most of them are asking because they’re impressed or curious about it.

Ibrahim commented:

[L]ast year, a former teammate was telling people that Muslims can’t have intercourse during the 30 days. I just felt like she was telling a lot of people that, and it is wrong. She was giving false information.

Understanding by Others. A lack of understanding was depicted in how others talked about fasting during Ramadan. Our participants shared some of the assumptions people make about fasting during Ramadan or how they have acted toward the participant during that time. Zacharia indicated, “I don’t want support if it feels like pity. I don’t want to be treated differently.” Conversely, Ibrahim detailed:

I feel like people that are not Muslims put emphasis on going on a hunger strike or just not eating. They see it as that, but they don’t know that it’s a different type of struggle and being closer to Allah. They see that as a hunger strike, but it’s not really that.

Yusuf discussed some of his experiences with poorly worded questions that depicted a lack of understanding by others:

Everyone from coaches to athletes, their initial reaction, they almost bash the concept of it. “Why would you do that? That’s so dumb. That’s so bad for you,” whatever. And I try to keep a level head because, obviously, it’s such unexplored territory for everybody.

Maryam expressed similar sentiments:

A lot of my coaches would say something like, “Oh, you know that that’s not healthy, what you’re doing, right? It might be healthy for a normal person. But you are an athlete. You’re a [Division I] student-athlete. You know you

shouldn’t be doing this.” I guess it is hurtful because it’s something private.

Support

Finally, our participants described both the support systems they currently had in place as well as desired support they wished was available. Data from this theme were reduced to 3 categories: sport-specific support, community support, and desired support. Additional participant quotes to support the categories within the support theme are presented in Table 7.

Sport-Specific Support. All our participants shared the support they have received from coaches, teammates, and the health care personnel available at their university. Aisha conveyed,

I’ve been pretty fortunate to have understanding coaches so far, so they obviously know about Ramadan and what that entails. So if I’m not performing at 100%, they understand. They try to make the practice a little lighter, maybe focus on some precise shots, rather than a lot of running around and stuff, a little less load, but you still get that good workout intensity.

Musa shared how beneficial having access to a nutritionist has been during Ramadan. He remarked, “[M]y nutritionist has been helping me get through the whole month. She’s been making a meal plan for me and stuff like that. She’s been a really big help.”

Some participants also addressed the role their ATs played during Ramadan. Ali noted:

My [ATs] understand that I fast. I’ve asked them to help me keep track of the time during games. So if I’m in the middle of the game and I’m ready to go in for the next play, they’ll be like, “Hey, it’s time. You can drink something now,” which I appreciate so much.

Similarly, Ismail said, “[M]y [AT] talked to me about it. She was like, ‘I know Ramadan is coming up. Let me know if you need anything, and if there is no food, just call me any time.’” Her support means a lot.

Community Support. Outside of their role as athletes, our participants also cited the community support they sought from family and friends, Muslim Student Associations (MSAs), local mosques, and other Muslim students on campus. Khadija shared how well supported she felt because of the large Muslim student community at her institution:

I think that the MSA here is really strong, and every night, I would see my Muslim friends, and we would break our fast together. And they’d do catered food every night because the dining hall food here isn’t that great. So that was just really nice, and seeing my friends every day who usually I don’t get to see because they’re on the opposite side of campus, so it’s like I see them every night, and we’d break our fast together and spend time together, and that was really such a happy period for me because it felt very loving. All of us were meeting up every night, and we all had just fasted the day, and we’re breaking our fast together. Sharing food is a very powerful experience, and doing it every day with your friends was a very nice experience.

Table 7. Additional Quotes Regarding the Support Theme

	Support
Sport-specific support	
	My coaches are respectful of it when I do it. So they say, "Tell me when you need rest. Tell me when you need to come off when it's games, or tell me when at practice you really need some rest. You can sit out for a little bit." So I guess, in that way, they are supportive. (Maryam)
	My ATs and my coaches have been very understanding to the point where, last year, as soon as I'd walk into the AT's office every day, they'd say, "What's tight? What do we need to work on?" And they would just do everything in their power to loosen up the muscles that are rock solid. My coaches, on the other hand, are able to come out early in the morning with me, or if they can't come out, they can give me a workout. They'll give me all the times. They'll ask for updates, give me options, like, "This is our workout. I don't know if you want to do it at 3:00 because then you have to struggle for the next 3 hours and go to lift. If you want, you could do it earlier in the morning, or if you want to do it later in the day, after you eat, that's an option, too." They're very accommodating in that sense. (Yusuf)
	What was most surprising to me—so I play rugby. That's my sport, and over a couple of months ago, I mentioned to my coach, just in passing, that I was Muslim after it came up somehow. And last week, he was like, "Hey, I know Ramadan is coming up. If you're fasting, please let us know, and we'll take it easy." And I told him that means a lot. I appreciate the support, but also, I don't know if I want you to take it easy on me. What that goes to say is that I think people are starting to become more cognizant. (Zacharia)
Community support	
	I have 1 teammate who is Muslim, so we pray together and go to Taraweeh. He's very supportive. It's good to have someone that understands what you are going through. We have a masjid about 10 minutes away from us, and I started taking us there, so we are going every night. (Ismail)
	On campus, there are support systems, but it's also just about how comfortable you are using them. My university has done a pretty good job of especially focusing on Muslim support. They just started a Muslim therapy program with specifically Muslim therapists, where it's free sessions and stuff like that. So there's definitely options for whoever wants them. At the end of the day though, everyone is still learning and gaining these experiences. (Zacharia)
	Being at college has helped me to go outside my comfort zone and reach for people with the same religion as me. And then we can share some stuff together. We can go to the masjid together instead of being with student-athletes all the time that maybe have different religions like those on my team. (Asiya)
Desired support	
	On my team, when people ask me about Ramadan, they know the basics already, which I'm already like impressed by. They know that we can't eat from sunrise to sundown, all that stuff we can't. They think we can drink some water, but we can't. So just having people know that we can't take anything, and I would love if people around me would just know that this time isn't just about not eating or not drinking but more. It's way more than that. It's that spiritual connection that you're having with God that's just way stronger. It's way more than just not eating and fasting. I think, if people would know that, I'd be really happy. (Maryam)
	I feel like the whole sports medicine staff should know more about it, especially in college. There are a lot of Muslim athletes here, and it doesn't hurt to know stuff like that, you know. So I definitely feel like staff should know that. (Musa)
	Nutrition is definitely the main thing. I want someone who knows about food because they understand this [is] what you need to get the most out of you. The athletic trainers definitely should be familiar with [fasting during Ramadan] because they kind of understand that, "Okay, because you're not doing this, you're going to have to realize that you might not be able to do this, that, or the other as good as usual." So they can sit down and explain that to you. And then if injuries are occurring, they can help you. So I think those are 2 groups of people who understand sport and then who can explain to you how not eating is going to impact you and help you deal with that. (Omar)

Abbreviation: AT, athletic trainer.

Omar spoke of similar campus-wide support at his school:

Yeah, there was a school-wide thing where they would give you a Ramadan bag, so it'd be like a little bag, and it'd have something to eat for breakfast each day. And for iftar, the dining halls stayed open, so you would be able to get to the dining hall with plenty of time to eat.

Unfortunately, not all participants perceived strong community support during Ramadan, as exemplified by Maryam:

It is very personal to me, but at the same time, it would be just really nice if I had more people around me that fasted, or I don't know, a better community, or I would just love to have that or people are more aware of it, of the whole topic, that would just be really nice.

In rare instances, participants' views regarding academic support from professors conflicted. Yusuf felt that his professors were supportive: "The professors, a lot of the time, they're very understanding. Like, 'I need an extension, do you think this is possible? It's very hard to focus. I have a headache all day,' like stuff like that." Aisha had the opposite experience:

I feel like the people who need to be more understanding are the professors. Not all of them are great. Some of them, you come up with a solution, but they don't want to do that. Ultimately, the decision is up to them, and the school can't really do much about it or enforce anything.

Desired Support. In addition to discussing current support systems or the lack thereof our participants had in place, they also named various components they wished would be available to create a more supportive environment in the future. Most participants discussed a desire for a more flexible schedule during Ramadan so that class times, practices, and campus resources (eg, dining hall hours) could be adjusted around prayer schedules and iftar. Ibrahim specified, "I feel like there should be a better nutrition program at the school [f]or the people that are fasting, but there isn't." Similarly, Yusuf expressed a desire for more mental and emotional health resources:

Another helpful mechanism outside of just physical performance are [sic] like emotional check-ins. The month gets very mentally and emotionally demanding. Sports are very mental, so it would be helpful to have check-ins

Five Pillars of Ramadan



Figure. Explanation of the 5 Pillars of Islam.

in which we could address how we are physically and mentally feeling, especially around practice and competition without me having to set it up every time.

In addition, our respondents highlighted key individuals who should be knowledgeable about fasting during Ramadan. Along with coaches, strength and conditioning coaches, sport psychologists, and nutritionists, several individuals expressed a desire for ATs to be more knowledgeable, as Ismail indicated:

I think the [AT] should do some more research to understand what I'm going through and why it is important for Muslims like me. That way, they can help give us suggestions or explain things, so I don't have to figure it all out myself.

Finally, participants described the aspects they wished people would understand about fasting and Ramadan. Aisha remarked, "I wish people would realize that it's not torture. A lot of people think it's extreme if you're doing this for a whole month. It's hard, but it's not as bad as it looks."

DISCUSSION

Our findings demonstrated that Muslim student-athletes in the United States valued the significance of fasting during Ramadan and prioritized that spiritual experience despite the associated challenges with continued athletic participation. They depicted a variety of difficulties they faced, both intrinsic and extrinsic, but found that support systems helped them to manage those challenges. They also noted areas in which

support systems could be improved to better support Muslim athletes during Ramadan.

Significance of Fasting and Ramadan

Our respondents indicated that the significance and meaning of Ramadan outweighed the potential challenges they faced. Many non-Muslims may not realize the significance and meaning behind the fasting period of Ramadan. Requisite practices of Islam, known as the 5 Pillars (Figure), are essential to its members and were identified by our participants as central reasons that Ramadan took priority over their other needs during this timeframe.¹³ The premise behind the 5 Pillars is to reduce the influence of individual desires and focus on the betterment of the group or community in pursuit of purification of the soul.¹³ These 5 Pillars are essential and obligatory acts of worship for all practicing Muslims to increase God consciousness, achieve community well-being, and build character. Fasting is expected to be conducted with full devotion to demonstrate the faster's strength of character in pursuit of righteousness in the eyes of God.¹⁴ Our participants described their dedication to this process despite the challenges they encountered because of the spiritual growth and significance that fasting brought them.

Our participants also highlighted family and community expectations about fasting that increased the significance of the experience for them. This sentiment has been echoed in other qualitative work, with Muslim women identifying that fasting began early in their household, before they could really even understand the spiritual implications, and now that they're older, they understand the expectation is that they will participate in the fast, although they are not able to recognize the spiritual growth they experience.¹⁵ Our

participants expressed similar points of view, including how they continue to adhere to familial expectations of fasting as they mature and form personal connections with their spirituality.

Challenges

Our participants highlighted intrinsic challenges, including physical, emotional, and mental side effects as well as having to adapt time management to their fasting and prayer schedule. Furthermore, they indicated that the structure of athletics created extrinsic challenges, in that many support staff (eg, coaches, ATs, and performance enhancement staff) lacked a thorough understanding of Ramadan and therefore were not able to support them in the ways they needed. The absence of resources available because of this lack of knowledge was another challenge described by our participants.

As we mentioned earlier, conflicting evidence exists regarding the physiological effects of fasting on sport performance, likely reflecting the individual-specific effects of fasting. Our participants did identify physical challenges associated with fasting, such as feeling fatigued. Researchers have found that an individualized approach of tracking and maintaining total caloric intake, training load, body composition, and sleep hygiene can mitigate the risks of the modest detraining effects that can occur due to fasting during Ramadan.¹⁶

Athletic trainers can help their athletes achieve this approach by communicating needs to all associated staff working with the fasting athlete. One recommendation is to administer a Ramadan Fasting Athlete: Pre-Participation Evaluation Questionnaire to all Muslim athletes.¹⁷ The questionnaire was designed to gather data and promote subsequent collaborative discussions on the following domains: (1) training load during the fasting period, (2) environmental conditions (eg, temperature or humidity during training sessions), (3) changes to the athlete's schedule, (4) specific nutritional or weight requirements, (5) fasting requirements, (6) training aims during Ramadan, (7) past and current medical and drug history, and (8) identification of the person responsible for monitoring performance and training during the fasting period.¹⁷

Adjustments can be made to athletes' schedules and training regimens to support them through Ramadan.¹⁸ An emphasis on sleep hygiene and the use of sleep tracking can assist in the sleep and fatigue challenges faced by many athletes, regardless of sport.^{5,16,18} If possible, training times or locations can be altered for the fasting athlete. Training as early as possible during daylight hours, after the first meal of the day, allows for exercise when blood glucose and glycogen stores are at their highest.^{18,19} Moving training sessions indoors if outdoor temperature or humidity is high will decrease the dehydration effects of training.^{18,20} Lastly, among endurance athletes, Ramadan resulted in a somewhat deleterious effect on the immune system.^{4,14,18} Muslim athletes engaging in endurance events should consider supplementing probiotics, vitamins D and C, and protein during this time.^{4,21}

Our participants indicated they often faced curiosity surrounding their faith, especially during Ramadan. Coaches and teammates frequently asked questions to understand the practices, and while some participants noted that this was an opportunity to educate their peers about an important aspect of their lives, others felt that the onus of researching, learning, and understanding should not fall on their shoulders during this time of spiritual reflection. In some cases, the fear of having

to explain their beliefs to coaches or teammates who might not understand or be supportive initiated anxiety about the whole process. A feature published by the NCAA²² described similar stories to those our participants relayed, in which Muslim athletes were left to educate coaches, teammates, and even referees about Islamic practices and how they affect sport participation. Alternatively, our participants noted comments that appeared to stem not from curiosity but from judgments and assumptions about their choices. In at least 1 instance, our participant described being blamed for their own injury in an accusation against fasting.

All ATs and other stakeholders working with Muslim student-athletes must recognize and work to eliminate biases they may hold. One way these biases could be mitigated, at least in part, is by using the strategy of administering a Ramadan-specific questionnaire, completed well ahead of time, that could be used as a guiding document to inform support staff about fasting and how to best support each person through the process.¹⁷ Establishing a formalized, collaborative process ahead of fasting timeframes could lessen the physical effects on the athlete and offer the added benefit of educating support staff about Ramadan and the plan to help the athlete through it. Moreover, in consultation with Muslim athletes, ATs could compile educational materials for distribution to coaches and teammates to describe Ramadan, its purposes, and its challenges in order to eliminate some of the assumptions that are made about the purpose and intent of fasting during Ramadan.

Support

Above all else, our participants noted that support, in multiple forms, is needed to aid them in navigating athletic participation while observing the Ramadan fast. Together with the previously discussed physiological supports in the form of training adaptations, sleep and nutritional monitoring, and educational support, our participants relied on academic, community, and emotional support mechanisms.

If possible, academic accommodations should be provided to fasting students and student-athletes. Fatigue and mental foggiess due to dehydration, hypoglycemia, and altered sleep patterns can affect cognitive functioning and, subsequently, academic performance. Most colleges and universities send reminders to faculty about religious holiday observances but stop short of requiring accommodations for fasting students during Ramadan.²³ One lecturer at the University of Washington at Bothell has started offering 2 sections for examinations if the examination window falls during Ramadan. One window occurs during the typical daytime class period, and another session is held during the night for Muslim students to allow them to eat before taking the test.²³ Until these types of accommodations are regularly implemented, ATs may need to guide athletes on how to advocate for academic support. Multiple online letter templates can be modified for use in a variety of academic settings. The need for this type of support and advocacy could be identified during the preparticipation screening discussed earlier.

Community and emotional supports were also valuable to our participants. In best-case scenarios, universities have Muslim student groups or even on-campus mosques to foster a sense of community support. However, a supportive community need not be limited to those who share the Islamic faith. When the Islamic campus community is not large

enough to foster a local community support group, ATs can guide Muslim athletes to online resources such as national MSAs, advocacy groups, and platforms that allow anonymous posting or supply question-and-answer blogs to meet their community and emotional support needs.²⁴

In terms of desired resources, our participants described scenarios in which the academic, emotional, community, or physical supports we have already discussed were not present in their current circumstances. Although the desired level of support varied among participants, Muslim athletes generally wanted those around them to be educated about the purpose and importance of fasting, to have access to nutritionists or other health care team members to support their needs during fasting, and academic and sport accommodations to be provided during fasting. Athletic trainers should acknowledge within-group variability and make every effort to speak individually with their Muslim student-athletes and determine their desired level of support, as spiritual and religious knowledge is relevant in providing patient-centered care and potentially influencing health outcomes.^{25,26} By engaging in these crucial conversations, ATs can better coordinate the necessary and desired resources to help ease the intrinsic and extrinsic challenges associated with fasting during sport participation.

Findings from our study focused specifically on the lived experiences of Muslim collegiate student-athletes who fast during Ramadan while participating in sport. While each experience is unique, lessons learned from the present study may help prepare ATs to support members of other religions who also practice fasting. While fasting may be a more well-known practice for Muslims, student-athletes of other faiths may also practice different types of fasting throughout the year. Therefore, ATs should engage in meaningful conversations with all student-athletes who participate in fasting, regardless of faith, to better assist the individual as they participate in sport.

Limitations and Future Research

Due to the nature of this study, participant recruitment involved a nonrandomized convenience sample of athletes who met the inclusion criteria, and thus, the findings may not be applicable to all Muslim student-athletes. For some of our participants, Ramadan fell outside of their primary sport season, which could have influenced their views of fasting while engaging in sport. Future researchers should aim to establish best practices in supporting Muslim athletes during Ramadan and specifically examine the effect of using the described preparticipation questionnaire to prepare for Muslim student-athlete participation during Ramadan.

CONCLUSIONS

Increased representation and an improved focus on diversity, equity, and inclusion necessitate a more comprehensive look at the experiences of Muslim student-athletes in sport. Muslim athletes who fasted during Ramadan adamantly expressed the spiritual significance of the practice, and their family's influence contributed to these feelings. Our participants described challenges during Ramadan, including their own physical, emotional, and mental trials, in addition to difficulties when those around them did not understand or support their fasting practices. Athletes who fast during Ramadan require emotional, nutritional, training, and academic

support throughout the process, and ATs are uniquely positioned to facilitate patient-centered support mechanisms.

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