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Using Mindfulness and Meditation Techniques During Their  
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Exploration of the Experiences and Perceptions of Club Athletes Using Mindfulness and  
Meditation Techniques During Their Basketball Season.

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### **Abstract**

Literature reveals that there is a direct effect of mindfulness and meditation on athletes at various levels in their career. The present study aims to explore the experience and perceptions of mindfulness and meditation on female collegiate club basketball players. A sample of 8 undergraduates at Assumption University completed daily guided mindfulness and meditation sessions via the Smiling Mind application. Simultaneously, they wrote journal entries expressing their thoughts. Participants were interviewed at the conclusion of the study. Thematic analysis was used to analyze the data from the interviews and the journal entries finding two major themes, (1) mindful expressions and (2) barriers to engagement. For future research, a larger sample size with athletes playing at the collegiate varsity level should be used to ensure that the present study is representative of the population.

### **Introduction**

In the field of Sport Psychology, Mental Skills Training (MST) has long been researched to foster an understanding of the impact of mental preparedness on performance outcomes in athletes. The nature of athletic competition has been linked to negative mental health outcomes like stress and performance anxiety, which can then hinder an athlete's ability to perform (Blecharz et al., 2014; Dehghani et al., 2018; Moen et al., 2015). Mindfulness and meditation exercises have been identified as two forms of treatment, used individually or simultaneously, to help decrease athlete stress and anxiety, to therefore enhance athlete performance. Mindfulness has been found to be effective at centering an athlete's attention on the present moment (Baltzell & Akhtar, 2014; Blecharz et al., 2014; Kabat-Zinn, 2001; Rooks et al., 2017) and meditation helps lower an athlete's heart rate and alleviate anxiety (Solberg et al., 1996). In my Honors

Thesis, I will explore the effects of mindfulness and meditation training on female collegiate club basketball athletes.

Research has found that club athletes are more intrinsically motivated in comparison to varsity athletes because their commitment to their sport is not because of scholarships or other financial reasons (Karoblis & Czech, 2016). Club athletes also reported that their sport felt therapeutic to them because practice served as an outlet for them to escape life stressors (Karoblis & Czech, 2016). First, I will introduce the history of MST, followed by examples of mindfulness and meditation working together and separately to emphasize the effectiveness of both methods. Finally, I will explain the methodology and the results of the current study.

### **History of Mental Skills Training**

MST officially emerged in the United States (US) in the 1980s. In 1983, the United States Olympic Committee (USOC) set up the first available sports psychology services and hired a full-time sports psychologist for the US Olympic athletes in 1984. By 1985, the Association for the Advancement of Applied Sport Psychology was developed, and in 1986 the American Psychological Association (APA) added the Exercise and Sport Psychology division (Morse, 2015). This jump-started the evolving growth of the field (Vealey, 2007). MST was first used in the US by Coleman Griffith who is considered to be the father of American Sports Psychology. Coleman Griffith pursued this field because of his belief that the athlete was more than just a physical specimen. In his writing, Griffith (1925) stated “the athlete who goes into a contest is a mind-body organism and not merely a physiological machine” (p. 193). Griffith wanted to expand the field of sport psychology based on his understanding of the connection between an athlete’s mental state and performance. In 1925 Coleman Griffith opened the first lab that focused on research in sport psychology. He was then hired in 1938 by the Chicago Cubs to

improve team performance using skills like goal setting, leadership development, and confidence building (Green, 2003). It is from this start that MST within the field of sport psychology developed into what it is today. Throughout this development of the field, mindfulness and meditation practices started to become more well-known.

Mindfulness and meditation are branches of treatment found within MST. While widespread MST is an incorporated into many types of psychological practice, including sports psychology, meditation is a practice that is also used outside of therapy. The main goal of meditation is to relax people and calm any tension, anxiety, or nervousness that they may be feeling (Colzato & Kibele, 2017). Meditation is also used to focus attention and awareness on the present moment by allowing the individual the opportunity to focus completely on their breathing and their body (Kabat-Zinn, 2001). In sports, meditation is used to calm feelings, nervousness, and anxiety that result from performance pressure, and as a result enhance athlete performance through the reduction of those feelings (Colzato & Kibele, 2017).

Similar to meditation, mindfulness consists of attending directly on the present moment, intentionally and non-judgmentally (Kabat-Zinn, 2001). This direct attention provides the individual the ability to be present and embrace the current moment (Kabat-Zinn, 2001). The goal of mindfulness is to allow athletes to recognize the fear and worries that they have and to accept them without judgement, instead of suppressing them (Baltzell & Akhtar, 2014). Furthermore, athletes who follow both mindful and meditation therapies have reports that distractions or doubts have a minimal impact on the quality of their performance (Kee & Wang, 2008). Mindful athletes embrace the performance at hand, instead of anticipating what may happen, which can create stress and worry. Research demonstrates that mindfulness and meditation lead to more positive and accepting thoughts, as well as better breath and body

awareness, which can then improve performance (Baltzell & Akhtar, 2014; Colzato & Kibele, 2017; Frewen et al., 2007; Kabat-Zinn, 2001; Kee & Wang, 2008) making this an important area to study in collegiate club athletes who are performing in games during their season.

### **Mindfulness and Meditation and the Improvements of Sports Performance**

Mindfulness and meditation therapy can be very appealing to athletes because they provide athletes with an opportunity to relax and ease their minds and to prepare for the demands of an athletic performance. Coleman Griffith (1925) described athletic competition as being “purposeful, clever, intelligent, emotional, and skillful, and not merely mechanical” (p. 193). The demands placed on an athlete during competition extend beyond just physicality and include mental pressures as well, which makes athletic competition so rigorous for an athlete. As a result, techniques like mindfulness and meditation are useful in helping an athlete balance the mental demands placed on them during competition. Although there is a large overlap between mindfulness and meditation, and they are often applied together, there are distinct differences between the two. On the one hand, mindfulness is the act of centering one’s focus and attention to the present moment and nothing else (Baltzell & Akhtar, 2014; Blecharz et al., 2014; Kabat-Zinn, 2001; Rooks et al., 2017). This is beneficial to sports performance because it eliminates outside pressures and distractions that interfere with the athlete’s focus and ability to perform. On the other hand, meditation is used as a way to lower an individual’s heart rate and alleviate any built-up tension and anxiety (Solberg et al., 1996).

A study conducted by Baltzell and Akhtar (2014), is a compelling example of mindfulness and meditation coinciding with one another. Baltzell and Akhtar (2014) asked 42 Division I college female athletes from the Northeast area of the US to participate in their study. Participants consisted of soccer players, who were the intervention group, and competitive

rowers, who were the control group. The soccer players endured half-hour sessions of Mindfulness Meditation Training for Sport (MMTS). The researchers found that meditation training increased mindfulness in the soccer players by reducing the levels of negative emotions. On the contrary, the control group experienced increases in negative emotions. Baltzell and Akhtar (2014) purported that the reason for this difference was that the meditation training reduced the levels of negative emotion in the soccer team, compared to the rowing team who received no techniques to handle negative emotions. This supports that idea that the use of mindfulness meditation, can help an athlete can focus their thoughts on the task at hand, and work on controlling negative thoughts which can improve their mindset in the athletic field.

Research conducted by Rooks and colleagues (2017) looked at the effects of Mindfulness-Based Stress Reduction (MBSR) programs for Mindfulness Training (MT) and Relaxation Training (RT) programs on Division I football players. The MT consisted of breathing, body awareness, and eliminating distractors by centering the athlete's attention on football (Rooks et al., 2017). Participants also completed yoga and meditation exercises. The RT program used Cognitive Behavioral Therapy (CBT) on the athletes. Both the MT and the RT groups completed loving-kindness meditation exercises together. The training sessions occurred during the pre-season when participants were fulfilling all of the athletic demands being placed on them to prepare for the season, while also attending classes. Researchers found that MT and RT enhanced the emotional well-being of the athletes. MT also improved the cognitive functioning of the athletes and decreased stress levels in participants. The benefits of MT led to stronger performance success from the participants because of the improvement in their mental well-being from MT (Rooks et al., 2017).

### **Mindfulness and the Effects on Performance Anxiety**

A strong example of the use of mindfulness training alone is found in a study completed by Dehghani and colleagues (2018), which tested the effects of mindfulness training on sports performance and sports performance anxiety. This study focused on mindfulness-acceptance-commitment (MAC) training with 31 female basketball players performing at the university level in Iran (Dehghani et al., 2018). The experimental group went through eight sessions of MAC, with two training sessions a week. Their results showed that MAC intervention improved athletic performance and reduced sport performance anxiety and avoidant behaviors in athletes. Dehghani and colleagues (2018) also found that the 31 participants displayed a decrease in negative thoughts and emotions regarding their sports performance. Researchers concluded that mindfulness was important in preventing the athletes from believing the negative thoughts in their mind. These findings are important because they highlight the effectiveness of mindfulness for female basketball players, which is the sample of the present study.

Additionally, Blecharz and colleagues (2014) conducted three studies that looked at the effectiveness of mindfulness on athletic performance in athletes ages 16-21. The first study tested mindfulness on athletes who faced pressures from coaches, peers, and their teammates. The second study tested the effects on athletes who focused more on the quality of their performance and the standards they set for themselves. The third examined the impact of mindfulness training on sports performance seven-months later. Results showed that mindfulness training enhanced performance and decreased the level of pressure felt from outside sources (Blecharz et al., 2014). The researchers found that it also improved performance in athletes who apply the greatest amount of pressure on themselves, instead of experiencing pressure from others (Blecharz et al., 2014). At the seven-month follow up, results reported that mindfulness treatment had improved athlete's performance quality by 33% (Blecharz et al., 2014),



highlighting both the connection between mental state and performance and the benefits of mindfulness practice.

Research performed by Moen and colleagues (2015), investigated the relationship between mindfulness and athlete and student burnout. Questionnaires about burnout, mindfulness, and stress were completed by 382 participants. The mindfulness scale that was used was the Mindful Attention Awareness Scale (MAAS), which consisted of 15 items that were being rated on a 6-point Likert scale ranging from “I almost never [do]” to “I almost always [do]”. Results revealed that there was a positive correlation between athlete performance and mindfulness. Similarly, there was a negative correlation between burnout and athlete performance (Moen et al., 2015).

The research question explored in the present study was what is the experience of collegiate club basketball players using mindfulness and meditation practices during their basketball season? The study employed mindfulness techniques practiced daily and journaling sessions completed by participants on a daily basis. The interviews were transcribed verbatim, and both the interviews and journal entries were analyzed using thematic analysis to explore the athlete’s experience using mindfulness and meditation exercises during their athletic season.

## **Methods**

The purpose of this qualitative research study was to explore the experiences and perceptions of club athletes using mindfulness and meditation techniques through interviews and open-ended journal entries.

### *Role of the Researcher*

My role as the researcher was to oversee all aspects of the study from the conceptualization and design of the study, the review of the literature to frame and guide the study, through the collection and interpretation of the data and reporting of the results. This included the development of the interview questions (Appendix A), identification of participants, as well as conducting the interviews, and analyzing the data. I am not a participant in the study and used participant interviews for data collection.

I am a member of the Assumption University Women's Club Basketball team, and I was captain for the 2021-2022 season. Our team did not have a coach, however volunteers from the Assumption University Men's Club Basketball team led practices and assisted with games. I was a competitive basketball player for the majority of my life and transitioned to club basketball to enjoy the sport in a more relaxed setting. I managed any preconceptions and focused solely on the participants' experiences by engaging in ongoing self-reflection to ensure that my previous athletic experiences were not influencing the process.

### *Participants*

The study consisted of 8 female undergraduate students who are members of the women's club basketball team at Assumption University. Club sports are not as competitive as the varsity level sports, meaning that practices and games are held less frequently, there are less demands to be met by the athlete, and the focus for the club basketball team is just to play and have fun while doing so. There were 16 members on the club basketball team, 8 volunteered to participate in the study. Participants consisted of four sophomores, two juniors, and two seniors at Assumption University.

## *Methodology*

### *Participant Selection*

The participants in the study were recruited because they were members of the women's club basketball team at Assumption University. Assumption University is a small private Catholic liberal arts university in Worcester Massachusetts. This study utilized a convenience sampling approach to recruit student athletes to engage in mindfulness meditation and reflect on their experiences. In order to recruit participants for the study, I spoke with all of the members of the club basketball team, explained to them the nature of the study, and asked for volunteers for participation. I explained to them the time commitment, the use of the app to engage in the mindfulness exercises, and the request for journal entries and an interview at the conclusion of the study. Once they indicated that they were interested in participation, I provided participants with informed consent forms, reviewed it with them, and obtained their consent. While interview questions were not provided directly to the participants prior to the beginning of the study, I informed them of the topic of the interview; to explore their experience engaging in the mindfulness meditation exercises and with the reflective journal.

### *Materials*

Once participants agreed to engage in the study, the Smiling Mind application was downloaded on an electronic device by all participants. This application was chosen because it was free of charge and easily accessible for all participants. The only required section was the "Sports" section of the application, however, participants were free to engage in any additional sections should they choose. Furthermore, participants needed paper and a writing utensil to complete the journal entries that accompanied the guided mindfulness sessions. Participants were

instructed to write freely about their experiences, so no prompt was provided. To analyze the data collected from the journal entries and the interviews, thematic analysis was used. A semi-structured interview guide was created with interview questions developed from the key concepts that were identified in the literature review as well as concepts central to the research question.

## **Procedures**

### *Data Collection*

After obtaining IRB approval from Assumption University, I began the process of recruitment of participants described above. Once the individuals identified themselves as being interested in participating, informed consent was explained to them, and they provided written consent. Data was collected and analyzed anonymously through both handwritten, unprompted, journal entries and semi-structured interviews. To complete the mindfulness exercises, participants were asked to download the Smiling Mind application on an electronic device. Upon downloading the application, and completion of an account, participants provided demographic information to the application to personalize their experience. Participants were required to complete the guided mindfulness and meditation sessions on the “Sports” portion of the application. These sessions were completed on a daily, or frequent basis by participants. Participants were asked to complete them daily, however, in their interviews some participants reported that they missed a few days. Use of the “Sports” portion, and daily completion of exercises, was not tracked and was instead based on an honor system with the participants. In addition to the mindfulness sessions, participants were asked to journal on a regular basis. The participants were instructed to write freely about their experiences in their journal entries. The participants engaged in this study from November 2021 to February 1, 2022.

Participants then partook in 15–20-minute recorded interviews that used a semi-structured interview guide to capture their experiences related to using the app and writing journal entries. I stored all recordings on my password protected laptop computer and transferred any recordings from my cell phone to my laptop at the conclusion of the interviews. All interviews were transcribed verbatim and then I read the transcription while listening to the audio to ensure accuracy. The transcription files were password protected and stored on my password protected laptop. No print copies were made at any time. All identifiable information was removed from the transcription, and participant names were substituted with numerical coding (P1-P8), based on the order in which they were recorded. Journal entries were written on paper and were collected at practices, where participants folded them and placed them in an isolated pile. No names were written on the journal entries, and I collected the pile at the end of practice to ensure anonymity. Journal entries were given identifiers in the order they were submitted from J1-J29 to assist in the data analysis process. Thematic analysis was then used to analyze the journal entries and interviews to identify themes across the experiences of the participants in the use of the mindfulness exercises and journaling during their basketball season.

### *Data Analysis*

Thematic analysis was used to analyze the data from the interviews and the journal entries. Thematic analysis involves identifying common themes within the data from participants responses. A theme is defined as a pattern or shared idea among multiple participants within the sample (Braun & Clarke, 2018). I analyzed the transcriptions of the interviews, as well as the journal entries, to identify the main themes from the current study. The overarching themes identified in the present data set were mindful expressions and barriers to engagement after completion of the study. I utilized a 6-phase thematic analysis process as recommended by Braun

and Clarke (2018) to analyze the data from the interview transcripts and journal entries. This method was chosen as it allows for a reflexive and recursive approach through which the peer support workers' meaning of their experience can be captured and utilized to identify themes across the data (Braun & Clarke, 2018).

Data analysis began in the first phase, familiarizing with the data, which involved a careful review of each verbatim transcript several times while listening to the audio recordings (Clarke & Braun, 2013). This allowed for both immersion in the data but also further reviewing the transcripts for accuracy. The second phase of data analysis, generating initial codes, included taking the data from each transcript and creating an initial code to identify patterns in the data and establish preliminary categories that I found pertinent to the present study. I began by hand coding each transcript, line by line, until all codes were generated. I gave equal attention to all of the interview transcripts to ensure that repeated patterns could be identified and that as many codes as possible were developed (Clarke & Braun, 2013). Overall, 40 codes were established during this phase of analysis.

The third phase of data analysis, searching for themes, consisted of analyzing the codes that were found and compiling similar codes into five themes. The five themes initially created were breath control, body awareness, benefits off the basketball court, burdensome, and lack of focus. The fourth phase of data analysis, reviewing themes, involved reviewing the themes to see if there was enough data to support the themes found, and if they needed to be broken into sub-themes (Clarke & Braun, 2013). In this phase sufficient data was found for each theme but the themes established in phase three became sub-themes and three themes were developed. Those themes were initially identified as positive outcomes, negative outcomes, and ambivalence. After further analysis, it was realized that the participants did not have negative experiences, but there were things that they found

created barriers for them when completing the activities, therefore, the theme names were renamed in step five.

The fifth phase of data analysis, defining and naming themes, is where each theme was clearly labeled and described, along with every sub-theme within it (Clarke & Braun, 2013). After careful analysis and description, the final two themes became (1) mindful expressions and (2) barriers to engagement. Within these themes the seven sub-themes of (1) enhancement of body and mind, (2) creative freedom, (3) stress management off the court, (4) reduction of anxiety off the court, (5) grappling with expectations, (6) absence of focus, and (7) momentary impact, were developed.

The sixth phase of data analysis, producing the report, consisted of finalizing the quotes that best fit the themes, and properly analyzing them. The final write-up told the story created by the data itself and reflected the experiences shared by the participants (Clarke & Braun, 2013).

### *Discrepancy in Experiences*

While analyzing the data, P3 said that while it is not diagnosed, she thinks she may have ADHD, so that serves as an explanation for why the exercises in the study were not effective for her, but she still saw the value in how they could be effective for other people. Similarly, J29 wrote that she has difficulty concentrating, so the mindfulness was not beneficial for her, but she does see how it could benefit someone who can focus on it. P8 stood out because she did not feel benefits from the guided Sport section but did feel benefits from the guided Sleep section that she voluntarily chose to listen to.

## **Results**

The present study explored how students experienced the use of mindfulness techniques while playing club basketball. All participants journaled about their experiences and then were interviewed, where they responded to questions about their experiences with the mindfulness exercises and the journal entries. The two major themes that were developed through data analysis were (1) mindful expressions and (2) barriers to engagement.

In the presentation of the data, participant interviews are identified as P with the number corresponding to the interview being quoted (P3), and participant journal entries are identified as J with the number corresponding to the journal entry being quoted (J2). Each individual participant was not given a participant number that accounted for both their interview and their journal entries because of the anonymity of both the journal entries and the interviews.

### **Mindful Expressions**

*Enhancement of Body and Mind.* At the conclusion of the interviews, participants were asked if they felt positive or negative effects from the study, or if they were indifferent towards the impact of the study. Five of the participants (62.5%) reported that they felt positive results from the study. One of the most consistent impacts that the study had on participants was the influence of steady breathing and body awareness. In J12, the participant expressed that deep breathing went beyond just breathing, and instead was a full body experience. She wrote “In this exercise, I learned how to appropriately handle my emotions. I learned to fully listen to my body, but take deep breaths to calm my emotions” (J12). Instead of ignoring what her body is telling her, she learned to listen and to respond to what her body needed to help calm herself. In another journal entry (J15), one participant also explored the knowledge she gained about body awareness from the exercises used when she wrote “this session made me more aware of my



bodies actions and sensations. I realized how much our bodies can be an useful tool, in order for us to connect with the world” (J15). Mindfulness is not just a mental experience; it challenges the user to relax their entire being from head to toe in order to achieve the mindfulness that they are aiming for. The participant also explained how she has become aware of how important our bodies are (J15). Another journal entry described the effects the participant felt while playing on the court: “it taught me how to calm my body down when I am feeling tense on the basketball court” (J23). The techniques she learned aided her in calming her body and her emotions when she was feeling nervous or frustrated on the court. The same five participants who reported feeling positive results from the study, stated that they found the mindfulness and meditation to be helpful. In J24, a participant explains how she found focusing on deep breathing to be very relaxing for her. She wrote:

Breathing slowly and focusing on breathing is so relaxing and it’s so nice to be away from everything and actually just focusing on one thing at a time. I feel like doing this for like 30 minutes or even 5 minutes before any game or stressful situation can make people feel relaxed and less anxious about things. I wish I had to always do this because I actually really like it and think it’s beneficial. (J24)

This participant identified an understanding of how deep breathing exercises made people feel relaxed and she found it to be very beneficial for her.

*Stress Management off the Court.* Participants who reported finding the mindfulness to be useful, shared that it helped them with stress management, both on and off the basketball court. Participants stated that benefits from the mindfulness were visible during exams or during stressful times in their personal life. The first interview was conducted during finals week, where the participant (P1) was experiencing many additional stressors in her life. She explained that she

was able to use what she learned from the mindfulness application to recenter and calm herself during the chaos of exam week sharing “school, especially during finals week just like if I’m stressed take a few minutes just close my eyes, breathe, and just realize it’ll all be okay, and I’ll get through it” (P1). The mindfulness sessions had a direct carry-over effect into her life, outside of the basketball court. Similarly, P4 found the mindfulness to be extremely beneficial to her daily life as well. P4 explained how she would complete the guided mindfulness sessions in the morning, and how those sessions set the tone for the rest of her day:

Just like the way like it like makes me feel in the morning like that I’m doing something to like better myself is really like a good feeling so I would say that just like feeling good at the beginning of every day. (P4) `

It put her in a more positive and optimistic mood as she started her day off. Furthermore, she also found that the mindfulness exercises helped her balance the stressors that come with school and exams:

I did find that it makes me less stressed out like I feel a lot of relief afterwards and I feel really calm like um a couple, well my first week that I started it I was really stressed out with school and everything and after doing like three sessions in a week I was like, I had a better grasp on kind of what I was doing and I was more calm... it helped me understand that like I can get stuff done and that I had time cuz that’s something I struggle with, thinking I have no time to get anything done, but it helped me realize that like I have time and I can get it done and it put me in a really good mindset. (P4)

The mindfulness exercises opened her eyes to the realization that she can accomplish different tasks when she calms her mind and only focuses on the task at hand.

P8 shared that while she did not feel any impact on her play from the guided sports sessions, but she did notice positive outcomes on her sleep from the guided sleep sessions, that were optional in completion of the study sharing

When I was presently listening to [the mindfulness] I think I felt really good and actually like got in touch with myself...I did some sleeping [sessions], which I liked the sleeping ones...for sleeping, I actually would do that again. I like the mindfulness stuff. (P8)

She felt that when she was actively listening to the mindfulness sessions, she was able to connect with her mind and body and see results from it.

*Reduction of Anxiety off the Court.* In addition to stating the benefits of the mindfulness exercises over the journal entries in their interviews, participants described in their journal entries the impact that the exercises had on their experience of anxiety outside of the basketball court. One journal (J4) identified how the mindfulness taught her how to control her anxiety off of the court through her breathing, instead of relying on an outside video or gif to calm her down.

I do struggle with anxiety and this app has helped me with my breathing. I usually watch a gif to help with my breathing but now hearing how I can do it in my head is really useful. I now can actually feel my breathing in my whole body and not just depend on the video/gif in front of me. (J4)

Another journal (J6) reflected on the stress and pressure that was felt from school to maintain certain grades and keep up with her work.

I completed a meditation that had me release all my stresses in the moment. I untensed my body and took deep breaths. As a student, I am constantly working hard to keep my grades up. This meditation reminded me to take breaks once in a while. (J6)

The meditation taught her how to control her breathing and handle the additional stress she puts on herself in her everyday life. In another journal entry, J11 had similar feelings after completing the meditation.

In general, my body is tense. I have also been emotionally stressed from balancing school and basketball (as well as physically stressed). I enjoyed how this meditation helped me relax. Daily 4 had the same effect but through breathwork. (J11)

She shared that it helped calm her mental and physical stress that she has been experiencing as a result of school stress, in addition to the stress from basketball.

*Creative Freedom.* Participants who felt a positive impact from the journaling found that it was more beneficial because it provided more freedom. There was a split in the study of participants who preferred the mindfulness and participants who preferred the journaling. Participants elaborated on why they felt more positive impacts from the journaling. P3 preferred the creative freedom that came with the journaling: “I like the journaling because it’s less like authoritative in a way. Ya know, like I’m not pressured to follow someone, ya know its more of like a me thing” (P3). She continued to explain that journaling is limitless, unlike the mindfulness that has a time limit for each session. P6 explained when she journals, and why she does so sharing, “I think there’s a really big benefit to journaling. I think journaling’s something that I started more recently, and I do it when I feel stressed or anxious and after I write it all down, I do feel a lot better” (P6). Journaling is a form of stress relief for her to help her handle and process her emotions when she is stressed out or anxious. P7 described how she journaled before this study and would continue to do so after the conclusion of the study sharing “it helps with everything really, I just write it all down...I liked doing the journal entry more because I feel like you have to like actually put thought into it and like ya know the mindfulness thing is

like sometimes you just listen to it and you don't really like process it" (P7). Writing her thoughts on paper was more beneficial for her because she can clear her head by pouring her thoughts into the journal. P7 also described that sometimes when listening to the mindfulness, she was hearing what was being said, but not actually listening to it, so she was not grasping or retaining the meaning behind what the speaker was saying. What the guided mindfulness session is saying is not always being processed while listening to it, therefore it is less beneficial than the journaling for this participant.

### **Barriers to Engagement**

The remaining three participants (37.5%) that did not feel positive results from the study, in fact they reported feeling indifferent to the effects from the study. Meaning, they felt no major benefits from it, but did not feel that it had any negative effects on them either. These participants felt that having to sit still and listen to the mindfulness sessions for an allotted amount of time was rather difficult for them and shared many of the challenges that they experienced during the course of the study.

*Grappling with Expectations.* When asked if they felt positive or negative results from the study, none of the participants reported feeling a negative impact from the study. Some participants reported that the journaling or the mindfulness exercises eventually became work for them, becoming something they were obligated to do, thereby making it more difficult for them to complete the task, instead of being beneficial. A common theme among all participants, whether it was the journaling or the mindfulness that they did not like, was that whatever one they did not prefer felt burdensome or like a "chore" to them. P2 reported that she completed the journal entries because she had to for completion of this study.

I mean I feel like it depends on the person but for me personally when it comes to this stuff I prefer to just remember it cuz that way I just use it better cuz I worry about like “oh I want to write this down the right way” um I want to make sure I get everything so it just adds like stress onto a non-stressful activity so it’s easier to just remember it, I think, than to write it down. (P2)

This obligation to do journal entries made the exercise feel more burdensome for her and added extra stress to an activity that is meant to be stress-reducing. P3 reported that she preferred the journal entries over the mindfulness exercises, sharing that the mindfulness exercises felt like a chore to her.

I feel like the meditation is like a chore, that’s rude I’m sorry, but yeah but like I can there’s not a time limit ya know cuz sometimes like I see they’re like 8 minutes long and I’m like ugh. (P3)

She shared that even before engaging in the exercise itself, that the time length became a deterrent from her wanting to sit through the session and presently listen. P6 reported similar feelings from both the mindfulness and the journal entry exercises. When asked if she felt any benefit from either exercise, she shared

I don’t think [they helped] because I usually would do journaling or mindfulness kind of when I felt that I need it and I think doing it when I felt like I didn’t need it kinda put more stress on me in a way um I remember I started to do it when I was getting ready for one of the games and I just felt so stressed out cuz I was like I was just in a rush and then I was like I didn’t feel like I really needed it so I think it helps me when it’s kinda, it’s one of those things like I can’t stick to a routine it’s kinda a do it when you need it type thing. (P6)

Doing them for the purpose of the present study made them feel like more work and created pressure because she did not want to forget to complete them.

*Absence of focus.* Some participants reported that completing the mindfulness exercises or the journal entries were challenging for them because of the focus that they required. Participants reported that sitting still and concentrating directly on the timed meditation activities was very hard for them. In particular, when P3 was asked if she felt any benefits from the mindfulness exercises she shared,

I struggle a lot with it because I feel like I am borderline ADHD and its like it says in the meditations its like you will like get distracted but reign it in, it says that, and I'm like "it's so hard to reign it in!" um but yeah...I feel like the meditation is more of like a chore...sometimes I see that they're like eight minutes long and I'm like ugh. (P3)

For P3, she has a hard time sitting still and keeping her attention focused on one task for an extended period of time, which therefore made the mindfulness sessions more challenging for her to complete. The time length of the exercises and the restriction to focusing on one task at a time made the mindfulness sessions feel like more effort for her and create discomfort. P5 felt similarly to P3, sharing that both the journal entries and the mindfulness exercises were more challenging for her because she has a hard time sitting still and forcing herself to focus on something. She said, "I just can't like sit there and like let myself absorb. I can't just like sit down and tell myself to calm down" (P5). When she could focus, she did feel some effects from the journaling in the moment, but after she completed the journal entry, there was no carry-over into her daily life. One Participant wrote that the pace of the meditation sessions, and the act of having to sit still and listen fully made the sessions ineffective for her because it was more challenging for her to sit and absorb what was being said (J7).

While listening this week I've noticed that the idea of meditation for performance, isn't a benefit for me. Meditations tend to come off as too slow & calm for me to really pay attention & try to absorb the ideas & benefits. (J7)

Staying present and focusing on the task, as well as the feeling of the task being an obligation were the two main barriers to engagement from the present findings. In J29 one participant reported that it was not specifically trying to concentrate on the mindfulness exercises but trying to concentrate on tasks in general is very challenging for her.

Trying to sharpen concentration is really hard I think. I tried in practice but I feel like I just zone out and am actually concentrating less. I feel like this would really help people who can concentrate but I'm just so bad at it. I wish I could because it would probably help in stressful situations. (J29)

Further, she found that when trying to focus on concentrating in practice, she just caught herself spacing out instead.

*Momentary Impact.* Some participants felt that doing the mindfulness or the journaling was helpful in the moment but reported that there was no carry over onto the basketball court or in their daily life once they completed it. In the moment, they did report feeling calm and relaxed. Results varied for each participant, but many felt that one portion of the study was more effective over the other. Additionally, participants who experienced barriers to engagement recognized that they could see the benefits that these types of activities could have for others. P2 stated in her interview that, writing her thoughts out in a journal entry was not beneficial, but that did not mean that it is not beneficial for someone else.



Personally, I'm not a big journaling person so I honestly didn't notice a big difference when I would write it down but that doesn't mean the sessions itself weren't helpful, but I don't really think that writing down how I feel really changes anything. (P2)

P2 further elaborated that even though she did not enjoy the journaling, that did not mean that the mindfulness sessions were not helping her. Unlike the journal entries, she felt that the mindfulness helped her manage her stress by focusing on her breathing. P5 stated that both the journal entries and the mindfulness sessions did not really have a long-term impact for her, "no kinda same with like with the actual meditations like I just can't like, it maybe like helps me feel something for a minute but then after that it doesn't really have any long-term effects" (P5). While she was completing them, and for a little bit of time directly after, she felt a calming effect from them, but she did not see any carry-over into her daily life or her basketball play. Similarly, P8 reported similar feelings as P5 about the journal entries sharing "um I guess I just would quickly write stuff down after and it's good to have out what I was feeling but then again like it felt good in the moment but not like whatever after" (P8). P8 was one who enjoyed the mindfulness and felt benefits from the mindfulness but did not have any strong feelings about the journal entries highlighting how preferences differed among participants. Overall, the results indicate that mindfulness meditation exercises and reflective journaling have the potential to be beneficial to club athletes with the present study highlighting some of the benefits, preferences, and barriers to engagement.

## **Discussion**

The present study aimed to research the experience of collegiate club female basketball players using mindfulness and meditation techniques. Thematic analysis was used to analyze the

data from the interviews and the journal entries (Braun & Clarke, 2018). The two main themes from the findings were (1) mindful expressions and (2) barriers to engagement. Within each theme, the sub themes of (1) enhancement of body and mind, (2) creative freedom, (3) stress management off the court, (4) reduction of anxiety off the court, (5) grappling with expectations, (6) absence of focus, and (7) momentary impact, were gathered from the data. As the researcher, the frequency of use of the mindfulness app was prescribed by me, as well as the frequency of the completion of journal entries. Participants were asked to complete the exercises on a daily basis, but this was not statistically measured, and instead was monitored by individual accountability.

Previous literature revealed the success of mindfulness and meditation on an athlete's mental state including openness to positive and accepting thoughts, as well as better breath and body awareness (Baltzell & Akhtar, 2014; Blecharz et al., 2014; Colzato & Kibele, 2017; Frewen et al., 2007; Kee & Wang, 2008; Rooks et al., 2017). Athletes in the present study reported feeling a greater sense of control and understanding of their body and their actions, as well as control over their breathing, supporting the results in the previous literature (Rooks et al., 2017). The study performed by Rooks and colleagues (2017) found that MT that included breathing exercises and a focus on body connection were successful in improving the mental well-being of the athlete. The exercises completed in the current study closely aligned with those used by Rooks and colleagues (2017) with some participants reporting that the exercises helped them manage their stress by focusing on the present moment and centering their attention on it. These results also align with those from Baltzell and Akhtar (2014), who found that mindfulness-meditation exercises can teach an athlete how to center their thoughts on the task at hand, and this focus does improve the athlete's mindset. These findings were supported by the present study in participants who saw improvements in their mindset from the exercises they engaged in.

There were no participants who reported negative impacts from the present study, but they did report not liking certain activities. More specifically, participants felt that completing the exercises felt like a burden for them because of the time commitment it required, and others found it to be challenging to sit down and focus on completing the exercises. Meditation and mindfulness demand the attention of the individual using it, which can be challenging for some individuals. In the present study, a participant mentioned having undiagnosed attention deficit hyperactivity disorder (ADHD), which interfered with her ability to concentrate on the mindfulness exercises. Research conducted by Rooks and colleagues (2017) looked at sustained attention levels during high demand athletic season and found that attention levels do decrease when an athlete is in their athletic season. They found that participants who did not voluntarily complete MT on their own, had a more challenging time completing the exercises during the study. Similar conclusions emerged from the present study because participants who did not use mindfulness and meditation prior to the study found it more difficult to focus on it during the study, since it was not something they voluntarily chose to do. While some participants felt ambivalent towards the study at the conclusion of it, overall, participants found the mindfulness and meditation exercises to have a positive impact on them.

The findings of the current study are important because athletes, in particular student-athletes, navigate significant pressure and stress from their sport, academics, and their everyday life. Finding solutions and coping strategies that can help control and regulate the impact that those stressors on their well-being is important to improve their performance abilities both on and off of the basketball court (Dehghani et al., 2018; Kabat-Zinn, 2001). The results of this study revealed that mindfulness and meditation served as a very successful strategy for some participants, while journaling was very successful for others. The present study shows that it is

important to find what works best for each individual. Mindfulness and meditation as well as journal entries are successful techniques to help with performance and stress, but it is important to note that the same technique is not going to be helpful for every person since everyone is different and may find benefit in different strategies. Participants who preferred the journaling over the mindfulness appreciated the creative freedom that journaling gave them. There were no time restraints or guidelines to follow, instead they were able to freely write how and what they were feeling. This may have been due to the unstructured nature of the journal directions and may have been different if they were given structured journaling activities. Those who preferred the mindfulness enjoyed connecting to all parts of their body and their mind and learning how to center their breathing and steady their thoughts.

Participants were required to complete the guided Sports section on the Smiling Mind application and were told that completing any other sections available on the application was optional for them. One participant reported that while the Sport section was not beneficial to her, she did find the guided Sleep section to have a very positive impact on her. It is important to note that although the present study analyzed participant experiences with the Sports section, different types of mindfulness can be more beneficial depending on the persons interests and what they want to attend to in their life. These preferences may account for some of the barriers to engagement that the participants experienced as well as their lack of positive experiences with the exercises. Similarly, participants were asked in their interview if they had previous experience with mindfulness meditation or journaling. Some participants reported having used the practices before completion of the study, but with how common mindfulness practices are, most likely all participants had some understanding of the practices prior to the study. As a

result, participants may have had preconceived notions or opinions about the effectiveness of the exercises going into the study.

One limitation to the present study was the size of the sample. Participants consisted of eight members from the Assumption Women's Club Basketball team. This sample was used for convenience purposes due to their availability and proximity to the researcher. A larger sample size may have allowed for further exploration of the experiences and the results of the study would be more generalizable to other populations. Another limitation to the current study was the inconsistency of games and practices. Due to challenges at the university with obtaining gym time, resulting from the remodeling of the courts in the campus recreation center, practices were held only once a week at most. There were some weeks where practices were not allowed to be held at all. Similarly, games were challenging to schedule through the official league, and as a result only five games were held over the course of the study. In a typical season, there are two games held almost every weekend from November through December, so the team would normally play around 10 games a semester. The lack of games and practices influenced the data collected because participants had less opportunities to apply the skills than they would have during a normal year, which may account for those who did not find the exercises to be significantly beneficial to them. The results may have varied had there been more opportunity to see the direct impact on the court.

Another limitation to the present study was the commitment to the completion of the journal entries. As some participants discussed, completing the journal entries or the mindfulness exercises was not always easy for them. Participants not being fully invested in the study could skew the data because they may have felt different impacts from the exercises if they gave them

their full commitment for the entirety of the study. All participants completed an interview and turned in journal entries, but 29 journal entries for 8 people is about 3 journal entries per person. Some participants handed in more journal entries than others, which could lead to their perspectives having greater representation in the data analysis and not account for the voices of those who experienced barriers while completing the journals.

Future research should consider using intercollegiate level teams that have a more rigorous schedule that demands more from the athletes who are balancing academics, practices, games, and other extracurriculars. More demands create additional stressors for the individual, so the tasks in this study may be more beneficial to those athletes who are under greater stress from their sport. Another variable that would be interesting to account for is whether participants have an attention deficit disorder (ADD) or ADHD. This variable was a factor in this study, directly expressed by a participant who stated that she had undiagnosed ADHD. She felt that her ADHD directly interfered with the success of the mindfulness exercises because she understood how they could be useful but could not focus enough to feel the benefits. In future research, participants should be screened for any preexisting mental health conditions, such as ADHD, to account for any variables that may impact the effectiveness of the treatments. In addition to the participant who felt she has undiagnosed ADHD, multiple participants reported that they have a hard time sitting still or focusing on one task for extended time intervals. This impacts the success of the study because the mindfulness exercises and journal entries require that extended attention is given. If the attention variable was accounted for, researchers would have a better understanding of how effective exercises like guided mindfulness sessions would impact participants.

The present study aimed to explore the experience of collegiate club female basketball players using mindfulness and meditation techniques. Participants reported feeling many benefits from the study like understanding their breathing and body awareness. For some, meditation exercises were more helpful, and for others journal entries were more beneficial, and for a couple of participants no impact was seen from either exercise. The results of the study reveal the importance of finding an effective relaxation technique for each individual, and the success of mindfulness exercises on relieving stress and pressure both on and off the athletic stage.

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## Appendix A: Interview Guide

1. What is your mentality going into practice and games?
2. Does your opponent influence your mentality going into a game or a practice before a big game?
3. Do you put pressure on yourself while playing?
4. Have you ever felt pressure from coaches/teammates/parents/audience members?  
If so, has it ever impacted how you play?
5. Are there any techniques you have used to calm yourself in high pressure situations?
6. Have you ever used mindfulness or meditation before this study?
  - a. If yes, did it benefit you?
7. Have you ever journaled before this study?
  - a. If yes, did it benefit you?
8. What was your experience with the journal entries in this study?
9. What was your experience with the mindfulness and meditation exercises in this study?
10. Is there one (mindfulness or journal entries) that you found to be more beneficial over the other?
  - a. Did you feel that they were more beneficial together?
11. Have you tried any of the other sections of the mindfulness app besides the sport one?
12. Would you continue to journal or use mindfulness exercises after this study?

13. Have you noticed any direct impact on your play as a result of the exercises in the study?
14. When and how often would you complete the exercises?
15. Overall, would you say that you saw positive or negative results from the study, or were you indifferent to the outcomes?