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How do college student-athletes' understanding and expectations of mindfulness and self-compassion change through an intervention?

Blake Costalupes

West Virginia University, bc0104@mix.wvu.edu

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How do college student-athletes' understanding and expectations of mindfulness and self-compassion change through an intervention?

Blake Costalupes, M.A.

Dissertation submitted
to the College of Applied Human Sciences
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School of Sport Sciences

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Doctor of Philosophy in
Sport, Exercise, and Performance Psychology

Sam Zizzi, Ed.D., Chair
Dana K. Voelker, Ph.D.
Monica Leppma, Ph.D.
Melissa Sherfinski, Ph.D.

School of Sport Sciences

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Abstract

How do college student-athletes' understanding and expectations of mindfulness and self-compassion change through an intervention?

Blake Costalupes

In the last two decades, mindfulness has permeated sport, exercise, and performance psychology (SEPP). Mindfulness research in SEPP primarily focuses on the efficacy of manualized protocols on various outcomes related to performance and wellbeing; how athletes understand this complex construct, though, is largely unexplored in the literature. Additionally, some researchers suggest that the potentially paradoxical adoption of mindfulness in Western psychology may be contributing to limited outcomes, low engagement in, and poor adherence to mindfulness-based interventions (MBIs). In addition, the exploration of self-compassion as a mechanism for change through mindfulness practice has increased in recent years, making it an important component to consider. The purpose of the present study was to investigate what college student-athletes (SAs) expect to gain from participating in a MBI, how they understand the concepts of mindfulness and self-compassion, and how these expectations and understandings change from beginning to end of an intervention. Intervention supported shifts in understanding were viewed through a constructivist-interpretivist lens. Individual interviews ($n = 42$) were conducted with all SAs on an NCAA DII swim team at the beginning and end of a 7-week MBI. Reflexive thematic analysis revealed multiple levels of change across members of the team, indicating that expectations may be tied to outcomes, and understanding may be a limiting factor for perceived outcomes. Results provide some evidence that SA expectations and understanding of mindfulness and self-compassion may be related to ambiguity caused by the blending of traditional Eastern mindfulness with Western psychological interventions.

Keywords mindfulness, self-compassion, qualitative research, understanding, expectations, intervention

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How do college student-athletes' understanding and expectations of mindfulness and self-compassion change through an intervention?

In recent decades, the concept of mindfulness has been increasingly adopted by Western psychology. As a concept and practice, mindfulness dates back thousands of years and is rooted in Eastern (e.g., Hindu and Buddhist) philosophical teachings. This migration of mindfulness from east to west is due, in part, to Jon Kabat-Zinn and Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1982), which was designed to mitigate human suffering through an eight-week manualized training. MBSR demonstrates efficacy in improving wellbeing in a variety of settings with diverse populations (Haller et. al., 2021; Kabat-Zinn et. al., 1985; Zhang et al., 2019; Zou et al., 2020;). Researchers in the field of sport and exercise psychology (SEP) have similarly adopted mindfulness for use in enhancing wellbeing and performance among sport participants. For example, Noetel et al. (2019) conducted a systematic review of mindfulness-based interventions (MBIs) in SEP and found that such approaches can promote flow states and anxiety reduction. Moreover, Wang and colleagues (2023) meta-analyzed existing randomized trials including MBIs, with the most compelling evidence suggesting that MBIs can promote aspects of mindfulness, flow states, and psychological flexibility—though only 32 studies were included and little research exists suggesting practicing mindfulness directly improves sport performance.

Although promising results have been found regarding MBIs in sport, some critiques should be noted. Current reviews and commentaries have questioned the rigor of MBI research in SEP (McAlarnen & Longshore, 2017). Specifically, much of the mindfulness literature in SEP, and in general psychology, consists of small sample sizes with varied effects, inconsistent outcomes, few randomized controlled trials, lack of replicability, and ambiguous language

surrounding terms like mindfulness and meditation (Noetel et al., 2019; Van Dam et al., 2018). Additionally, some authors suggest that engaging in mindfulness practices can lead to adverse effects (AEs) for some individuals (Farias et al., 2020). Additionally, some studies show that athletes completing an MBI report difficulties with lack of immediate results and feeling uncomfortable during meditation practices (Cote et al., 2019), or show decreases in performance (Zadkhosh et al., 2018). and a more realistic, less dogmatic interpretation of potential benefits of the practice is needed particularly given what extant literature communicates (Britton et al., 2019; Van Dam et al., 2018).

In addition to inconsistent research quality, possible AEs, and lack of research suggesting MBIs directly increase performance, some have suggested that the very nature of mindfulness in SEP may be “paradoxical” in that it is being integrated into a cultural paradigm that is focused on controlling specific outcomes—like sport performance (Andersen, 2020). Further, Roychowdhury et al. (2021, p. 2) discussed the “transnational migration” of mindfulness from ancient Indian Hinduism and Buddhism to the modern Western view. The authors suggested that traditional aspects of mindfulness teachings that may result in greater benefits could have been lost as a result of the reappropriation of mindfulness in the modern, outcome-focused conceptualization. These traditional teachings of mindfulness include letting go of ego, embracing impermanence, practicing nonjudgement of thoughts and feelings, and acceptance and compassion towards self and others, which may contrast with how mindfulness may be marketed in the West (Andersen, 2020). Although both Eastern and Western conceptualizations of mindfulness are aimed at easing human suffering, the mechanisms for achieving this may be distinctly different and perhaps even conflicting. Further, current framing of mindfulness in Western-based interventions may limit the benefits participants could gain from a fuller

understanding of traditional mindfulness (Andersen, 2020; Khong 2009, 2021; Roychowdhury et al., 2021; Segall, 2021). To fully discern the effects of these two distinct conceptualizations of mindfulness, it may first be important to assess what concepts are most salient to those practicing with little to no formal experience or understanding. Becoming aware of ones' baseline conceptual understanding, and how it changes through practice, may be foundational in determining how mindfulness 'gains' are realized and implemented in various life domains.

Although experts in SEP and related fields are integrating mindfulness consistently, little research has investigated what conceptual components of the practice actually mediate or moderate changes related to wellbeing and performance. Some promising descriptive research, however, may provide insights into how mindfulness connects with outcomes related to performance and wellbeing. For example, self-compassion has been noted in the literature as one of the core concepts of, not separate from, mindfulness (Khong, 2021). Mosewich et al. (2013) observed significant improvements, with moderate-to-strong effects, in rumination, concern with mistakes, and self-criticism among female athletes who engaged in a self-compassion intervention compared to controls. Additionally, Lyon and Plisco (2020) explored cross-sectional associations between self-compassion, mindfulness, dispositional flow, and sport anxiety among elite athletes. Results indicated that self-compassion significantly predicted athletes' levels of flow beyond the predictive value of mindfulness. The combined effect of mindfulness and self-compassion accounted for 27% of the variance in participants' flow state experience. These studies indicate that self-compassion may play a role in enhancing the sport experience by decreasing disruptors of performance and wellbeing. Specifically, self-compassion may interrupt negative thinking by helping individuals to practice mindful awareness and self-kindness rather than self-criticism or mechanisms for stopping or controlling thoughts. Of note, MBI research in

SEP with prominent programs such as Mindfulness, Acceptance, and Commitment (MAC; Gardner & Moore, 2004) and Mindfulness Sport Performance Enhancement (MSPE; Kaufman et al., 2009) have not explored self-compassion as a moderator of MBI effectiveness (with the exception of Pineau, 2014). Although self-compassion may be a crucial element of Eastern mindfulness, it is often excluded from MBI research in sport and treated as a distinct construct.

However, the research investigating the relationship between mindfulness and self-compassion in SEP is emerging, and it presents an argument for its important role in wellbeing and performance outcomes. The construct of self-compassion has been defined in Western psychology by Neff (2003) as, “being touched by and open to one’s own suffering, not avoiding or disconnected from it, generating the desire to alleviate one’s suffering and to heal oneself with kindness” (p. 87). Further, Neff’s conceptualization of self-compassion includes three main components, namely, self-kindness (employing a warm and nonjudgmental nature to self), common humanity (normalizing adversity and perceived failures as part of the human condition), and mindful awareness (being open and accepting to thoughts and feelings that arise). Further, this conceptualization of self-compassion has been investigated as an attitude that can be developed over time (Ingstrup et al., 2017; Doorely et al., 2022; Mosewich et al., 2013; Reis et al., 2015; Voelker et al., 2019).

Although some interventions outside of sport exist to teach self-compassion (Neff & Germer, 2013), there is only one sport MBI that highlights compassion as a key theme. The Mindfulness Meditation Training for Sport 2.0 program (MMTS; Baltzell & Summers, 2018) was developed to promote mindfulness and self-compassion among sport participants. Most research investigating this program has been qualitative in nature, and explored experiences of student-athletes (SAs) after having completed the MMTS 2.0 program—with a specific focus on

self-compassion (e.g., Cote et al., 2019; Baltzell et al., 2014; Baltzell, 2015). Overall, participants across MMTS 2.0 studies noted that the program was enjoyable and helped them learn emotion regulation strategies. However, the results also showed that the athletes struggled with meditation at times, had low fidelity to engagement outside of sessions, and felt confused about the application of meditation to sport performance (Cote et al., 2019; Baltzell et al., 2014). One study investigating coaches' experience in the intervention noted that they viewed the program as a useful means of mental training but were unable to attribute any positive changes in their athletes directly to the intervention (Baltzell et al., 2015). No qualitative research has explored the changing conceptual understanding, and how perceptions differ from pre- to post-intervention.

Although investigating the experience of athletes completing MBIs is important, mindfulness literature in sport has been focused predominantly on outcomes and program evaluations. Although important, this focus on outcome studies may be limiting the full understanding of for whom, and why, mindfulness is effective or ineffective. A few recent studies, however, have investigated participants' expectations and understanding of mindfulness. For example, Mistretta et al. (2017) asked 45 college SAs to state their top three expectations before completing the MSPE program. The athletes indicated that they expected to gain benefits related to mental toughness, self-regulation of mood, stress, and anxiety, and overall increases in sport performance. Similarly, Tiffet et al. 2022 conducted a cross-sectional study with college students ($n = 98$) and gathered information related to their expectations for mindfulness practice. Although outside of sport, they found that those who were interested in outcomes related to self-regulation and control, such as getting rid of or reducing anxiety, achieved less effective results and reported greater negative affect, depression, and anxiety than those seeking to learn about

things like acceptance and nonjudgment (Tiffet et al., 2022). These studies highlight that expectations among participants for mindfulness practice may affect outcomes. Specifically, it is possible that expectations about control over thoughts and feelings may conflict with mechanisms of change in mindfulness practice surrounding acceptance and letting go. It may be important for practitioners, then, to seek to assess for participants' understanding of mindfulness and the mechanisms that may be involved in positive change through practice. Although few studies exist investigating participant understanding of mindfulness, Goisbault et al. (2022) conducted a study with 40 elite French female basketball players ($M = 16.33$ years old) after completing a 15-week MBI. Post-MBI participant interviews revealed that the athletes' understanding of concepts like acceptance, stress, and satisfaction were related to positive improvements in those areas and changed during the intervention. Additional research that explores the connection between athletes' understanding of mindfulness and intervention outcomes is necessary to document these potential moderating effects.

In sum, the post-intervention experiences of athletes participating in MBIs has been studied with some frequency. What is missing from the literature is an understanding of how participants' understanding of mindfulness changes over time; specifically, no studies have jointly explored what athletes expect to gain from MBIs, how athletes understand mindfulness and self-compassion conceptually, and how these connect to their changing understanding of these concepts. The connection between expectations and understanding of mindfulness and self-compassion may be foundational to understanding how and why MBIs are effective or ineffective. It may also help practitioners learn how to best frame and implement mindfulness and self-compassion practices with athletes relative to the outcomes they are looking to achieve.

To address these gaps, the primary purpose of the present study was to investigate college SAs' expectations and understandings of mindfulness and self-compassion before and after a MBI. The MBI, adapted from MMTS 2.0 and combined with other MBI protocols in sport, was implemented as part of a larger study investigating the connection between mindfulness and thriving. The research questions in the present study were: (1) What do SAs expect to gain from completing a mindfulness and self-compassion intervention? (2) How do SAs understand mindfulness and self-compassion? (3) How do expectations and understandings of mindfulness and self-compassion change as a result of participating in a MBI, if at all?

Methods

Design

This study was conceptualized as a qualitative examination of an intervention supporting shifts in participants' expectations and understandings of mindfulness and self-compassion. Grossman and Van Dam (2011) discuss the significance of using individual interviews to understand the complexities of mindfulness that may not be gathered in brief self-report measures, which have garnered criticism (Van Dam et al., 2018). Semi-structured interviews were thus the primary source of data collection. This approach to interviewing allowed for enough structure to make comparisons in themes across time, while creating the flexibility to ask probing and follow-up questions to capture participants' unique understandings. Further, this approach allowed results to be grounded in participant explanations, rather than coming to any objective "truth" about their experiences.

Paradigm

Ontologically, this study was viewed through the lens of relativism, such that multiple meanings can be made from the same observable phenomenon, and none are more or less valid

(Harper, 2011). For example, the research team remained open to the notion that participants would most likely experience change from the intervention on a spectrum. This spectrum may range from no change at all to some change, to significant. Further, a constructivism-interpretivism epistemology framed the qualitative inquiry in this study. Ponterotto (2005) posits that in constructivism, the nature of reality is created cognitively through participants' own experience rather than a single truth that is produced outside the individual's perception. This position also asserts the idea that reflection by the participant is essential to uncover the lived reality of their experience. Further, this reflection can be sparked by the interaction between the researcher and the participant. This framework guided the research team by keeping the focus on the participants and their subjective experiences with the intervention, without a focus on uncovering any objective reality that is the same for each individual. Patterns of data were created through analysis solely to highlight changes that occurred for each individual from beginning to end of the intervention. Because this inquiry was focused on each participant's unique expectations and understandings of the intervention across time, a constructivist paradigm was most appropriate. Constructivism stems from the original idea of Kant (1966), in that the perceptions of humans are characterized by both the senses, and cognitions and perceptions of those senses. Therefore, claims about reality can only be understood through the cognitions of others. The intervention protocol was the same for each participant; however, the complexities of their understanding of the concepts taught through this program was unique to the individual. Additionally, it should be noted that the participants' experience of the intervention, and meanings derived, were impacted, in part, by the levels of society in which they operate. The application of constructivism in this study, therefore, also includes interpretivism, or the idea that the reality of each individual's understanding is situated historically, at one moment in time, and

culturally. Specifically, the experiences for each individual were shaped by their sport culture, university, family structure, and the ideals inherent within Western society and/or that of which they have experienced personally. Although the present study did not analyze the data solely as a derivative of social construction, contextual realities of each participant were noted, and it is important to highlight that these influences were likely in effect to some degree for each participant, respectively.

Research Team Positionality

The current study was conducted by a research team consisting of the primary author, four faculty members, a doctoral candidate engaging in data analysis coding, two additional doctoral students conducting interviews, and an undergraduate research assistant (for a full positionality statement for the primary author and research team, see Appendix D). In conducting a qualitative study such as this, it is important to fully situate the research team, as they are positioned within the study, including the subject to be investigated, the research participants, and the methods used. It is important to understand that each member of the research team carries with them their own identities, world views, and preconceived notions towards the current study, its participants, and the methods of data collection and analysis. For example, the primary author and additional doctoral candidate engaged in data analysis have a prior affinity towards mindfulness and self-compassion in their work, including past research projects, SEP consulting, and psychotherapy. In addition, both researchers were engaged in the world of sport culture through athletics participation and coaching. Researcher reflexivity was important through the process of this project to mitigate potential influences of these experiences in the data analysis process. For example, each researcher kept their own written notes on potential biases and pre-conceived notions throughout their exposure to the data. When the researchers

met to discuss progress through the analysis process, collaborative dialogue on reflexivity was present.

Participants and Recruitment

Braun and Clarke (2019) suggest that meaning through qualitative exploration, specifically Thematic Analysis (TA), is created through interpretation rather than extracted from the data, and therefore knowing when enough data is collected before the analysis process can prove difficult. Therefore, in determining the appropriate sample size for a study using TA, it may be most appropriate to use the information power concept (Malterud et al., 2016). Information power suggests that the more information the sample contains, the lower the amount of participants necessary. In this approach, appropriate sample size is determined by the scope or purpose of the study, theoretical framework, specificity, quality and depth of data, and implementation methods for analysis (Malterud et al., 2016). Because the present study included one college athletic team, the methods used for this study was aimed at capturing all voices of its members. This study attempted to gain insight into the understanding of concepts that may have been new to participants, and included interviews at both at the beginning and post-intervention. Therefore, the research team expected the depth of responses in the first interview related to understanding of mindfulness and self-compassion and the role it currently plays in their life, to be quite low in power. For this reason, it became important to ensure that the data reflected the majority of voices on the team. To ensure most voices were captured, the interviews were framed as part of the intervention itself. At post-intervention, it was hypothesized that participants would have more to say having gone through the MBI, and therefore typical attrition that may occur in this kind of study could still yield high information power due to increase depth of responses. Additionally, many previous qualitative studies of MBI's (Baltzell et al., 2014, 2015; Worthen &

Luiselli, 2016) have primarily included individuals who volunteered to complete interviews. This method may have led to biased results, missing accounts from others that had neutral or negative experiences. The intention in the present study was to advertise the interviews to participants as a reflective activity embedded in the program to garner a more diverse set of experiences and the greatest number of responses. However, participants did have the choice whether to engage in interviews, and completion, or lack thereof did not exclude them from participation in the intervention itself.

Convenience and purposive sampling were used to recruit one mixed-sex NCAA Division II college varsity athletic team in the Mid-Atlantic region of the United States. This team was chosen based on availability of schedule and proximity to the research team. Larger teams, including those with both male and female members were given primary consideration due to more diversity in the sample and potential for generalizability of the data. Although the entire team participated in the intervention, each individual on the team was considered a distinct case in the present study and asked to complete both interviews. Of the total sample that completed the intervention ($n = 31$), 28 completed at least one interview and were included in the study. A total of 26 completed the *T1* pre-intervention interviews (83.8% completion rate), and 16 completed the *T2* post-intervention interviews (51.6%). The total number of participants that completed both interviews was 14. The total sample ($n = 28$) was composed of 16 females and 12 males, age ranged between 17 and 22 ($M_{age} = 19.75 \pm 1.32$), with athletes identifying as Caucasian or White ($n = 19$), Hispanic/Latine ($n = 5$), Asian or Pacific Islander ($n = 3$), and African American or Black ($n = 1$).

Data Collection Instruments

Demographics and Expectations

The demographic survey (see Appendix A) asked participants to voluntarily provide information about their age, gender identity, racial or ethnic background, primary sport and current level, years of primary sport experience, year in school, previous exposure to mental skills training, and to indicate whether they had been previously exposed to mindfulness. If the participant had been exposed to mindfulness training in any capacity, they were also asked to explain the nature of their experiences.

As part of the demographic background questionnaire—to gain insight into initial expectations for the MBI,—participants were asked the open-ended prompt, "What are the top three things that you expect to change from completing this program?" These expectations were used to guide *T1* interviews. For example, the interviewer asked, "On the demographics questionnaire, you indicated you most hoped [expectation 1] to change through participation in the program, can you tell me more about what you meant by [expectation 1]?" This query was repeated for each participant for expectations two and three. In addition, to assess preliminary understanding of mindfulness, participants were asked, "What three words would you use to describe what it means to be mindful as a student-athlete?". In the interviews, participants were then asked, "On the demographics questionnaire, you listed three words to describe what it means to be mindful, can you tell me more about what you meant by [meaning word 1]?" This was repeated for each participant with meaning words two and three. At *T2*, participants were again asked to list three words that describe what it means to be mindful, in addition to whether their expectations were realized or had changed.

Interviews

Individual semi-structured interviews with participants were the primary method of data collection. The current study followed the seven stages for design and implementation of effective interviews as outlined by Brinkman and Kvale (2015). These stages consist of thematizing, the design itself, the interview process, transcription, methods of analysis, verification, and reporting the data. According to Brinkman and Kvale (2015) semi-structured interviews entail keeping the same framework of the interview protocol for each participant for comparison, while using probes when necessary to allow for novel descriptions of individual experiences. This flexible interviewing technique allowed for co-construction of knowledge between interviewer and participant, while allowing for fidelity to the research questions through the stages of analysis, and reporting of the data. Participants were given autonomy through scheduling interviews at a time most convenient for them, and through Zoom. This more informal procedure was used in the hopes of promoting rapport and comfortability in the interviewing environment. In addition, the interviewers also avoided the use of research ‘jargon’ and demonstrated age and experience-appropriate language to better develop rapport. The interviewers consisted of the primary author, a doctoral candidate, and two additional doctoral students. These additional doctoral students had no prior relationship to the participants or the study itself. For both interviews, participants signed up with one of these interviewers randomly based on their available time slot. A description of the purpose of the interview was described to participants, and informed consent and confidentiality were discussed.

Individual interviews were conducted at two distinct time points: at the beginning of the intervention following the initial session (*T1*), and at the end of the program (*T2*) following the last session. The interview scripts for *T1* and *T2* were constructed around each research question,

specifically, (a) expectations of participant involvement in the intervention, (b) understanding of mindfulness and self-compassion, and (c) any perceived changes that occurred as a result of the program. See Appendices B and C for full *T1* and *T2* interview guides.

Mindfulness Intervention

This research project was part of a larger study investigating the potential connection between mindfulness and thriving. As such, the intervention protocol included concepts from the MAC approach (Gardner & Moore, 2007), MSPE program (Kaufman et al., 2018), and the Mindful Meditation Training for Sport 2.0 (MMTS 2.0; Baltzell & Summers, 2017) program that have been previously connected to thriving. In particular, the self-compassion components and exercises utilized by the MMTS 2.0 program were included to investigate the nature of SA's understanding of these concepts in the present study.

The adapted intervention included seven sessions, once per week, with each lasting between 45-60 minutes. Aligned with MMTS 2.0, participants were also prompted to complete between five and ten minutes of mindfulness practice per day between each session via an audio file that was provided to them. Participants were asked to reflect on frequency of their practice at the start of each session. The seven-week MBI was broken into four total modules that included psychoeducation and instruction, discussions, and practical application activities. Module one included topics related to an introduction to mindfulness, values-driven behaviors, and present-moment awareness and attention. Module two entailed learning and practicing concepts of acceptance, self-compassion, defusion from thoughts and feelings, and sport training integration. Module three consisted of topics related to commitment to the present moment and values, and performance routines and anchors. Finally, Module four focused on poise and skill consolidation,

in addition to learning how to apply skills to life domains and integrating skills into future practice after the intervention (for full protocol overview see Appendix D).

Pilot Intervention

An adapted version (6-sessions) of the intervention protocol was pilot tested before the present study took place. This pilot intervention included the demographics and preliminary expectations and understanding assessment questions as well as both interview time points. Participants of the pilot protocol included male and female NCAA DII swimmers ($n = 6$) at a different Mid-Atlantic institution during their off-season training period. The purpose of pilot testing was to gain insight into the overall suitability of the interview protocol in answering the research questions, including, but not limited to, appropriateness of questions, order of inquiry, and language used. Overall implementation of the intervention protocol and data collection procedures were also tested. Following the pilot intervention, the primary investigator brought discussion points back to the research team for consideration. For example, the initial session took ~80 minutes to overview the program, collect demographic information, schedule *TI* interviews, and deliver the first lesson of the intervention. The research team deliberated on the timing of baseline assessment (i.e. whether there should be a separate preliminary meeting, session 0, to overview the program, collect data, and schedule interviews before delivering lesson 1?) for the purpose of decreasing the total time of the first session. The research team decided that an initial session would be ideal to mitigate burden on participants. However, after speaking with the coach in the intervention group, the longer combined session was more appropriate to the team's schedule.

Procedure

Following Institutional Review Board (IRB) approval, the primary researcher contacted NCAA varsity sport coaches through personal and professional connections. Due to proximity and convenience, four teams were contacted via emails to head coaches of one local NCAA Division II university and one local NCAA Division III university. The research team randomly selected one of the teams that agreed to participate in the intervention, a Division II men's and women's swim team. Other teams from the Division III university agreed to serve as a waitlist control group for the larger study. Once an intervention group was identified, the primary researcher and coach worked to identify a schedule in the Fall of 2022 that was most appropriate and feasible for intervention delivery. The timing of the intervention was selected because the team would be in its off-season training schedule with more available time.

To protect conflicts of interest and to enhance credibility of the data, the MBI was led by a separate co-investigator. This co-investigator was also a doctoral candidate in SEP and has prior experience providing mental skills consultation, including the use of mindfulness concepts, to student-athletes in group and individual settings. At the initial meeting, participants were asked to complete consent forms prior to completing questionnaires. Consent forms explained the voluntary nature of research participation. Consent forms included contact information for local mental health resources and the referral process should the need ever arise. The demographics survey (see Appendix A) was administered in person via hard copy. Upon completion of the brief program overview and the demographics survey, the primary investigator passed around a hard copy sign-up sheet for scheduling the *TI* interview. This sign-up sheet included available time slots for all three interviewers and participants were allowed to sign up for a day and time most convenient for them.

T1 interviews took place after the first session. The rationale for conducting *T1* interviews after the first session was due to the potential of participants not having enough experience with mindfulness and self-compassion to fully discuss, possibly leading to social desirability bias. With these procedures, pre-intervention expectations and understanding were captured via the demographics survey and expanded upon in the *T1* interviews. All *T1* interviews ($n = 26$) were transcribed verbatim by an undergraduate research assistant with previous research experience, and then reviewed by all researchers involved in data analysis to ensure accuracy. Interviews combined for a total of 392 minutes, lasted approximately 15 minutes on average, and ranged between 6 - 33 minutes. Average time of interview varied relative to individual's experiences with the intervention and the questions themselves.

Following the last session of the intervention, participants were again asked to sign up via paper and pen to complete post-intervention individual interviews. *T2* interviews followed a similar semi-structured script as *T1*, however, questions were added relating to whether their preliminary expectations were met, not met, or changed throughout the intervention. Participants were also asked about their understanding of mindfulness and self-compassion, respectively, and if or how that changed over the course of the intervention. Additionally, each participant was asked about any perceived change in their life or sport performance, and the role, if any, that mindfulness or self-compassion played in those changes. Finally, each participant was asked to give any insight they wished relating to their future intentions towards personal mindfulness and/or self-compassion practice (see Appendix C for full interview script). Total interviews completed at *T2* ($n = 16$) combined for a total of 398.5 minutes, lasted approximately 23 minutes on average, and ranged between 15.5 – 41 minutes. Longer interviews at *T2* may be due, in part, by participants having more to say about these concepts after having completed the intervention.

In addition, participants may have developed more trusting relationships with the interviewers leading to more depth of responses than were given at *T1*. All data collected to inform the results of this study are available upon request from the primary author. Although T2 interview scripts included questions about participants' attitudes toward the intervention and future intentions for mindfulness and self-compassion practice, this data was omitted from results of the present study due to the volume of data and relevance to the research questions.

Data Analysis

Interview data were analyzed consistent with the constructivism-interpretivism lens (Ponterotto, 2005), and through a means of TA. Through this lens, it was clear that participants' experience of the intervention were conceptualized through their own personal experiences and context as well as co-constructed with the interviewer, intervention leader, and teammates. Through this lens, the six phases of TA were used, including familiarization, coding, theme development, refinement, naming, and writing.

All interviews were transcribed verbatim by an undergraduate research assistant with prior qualitative research experience. Next, the primary investigator read all 26 interviews at *T1* and recorded initial reactions to each, including trends in the data, questions for the research team, and preliminary analytic decisions. Then, a blend of inductive and deductive coding was used throughout the process of analysis. For example, the higher-order theme, "Mindfulness means..." was largely created deductively by participants' responses to the interview statement, "Please describe, in as much detail as possible, your current understanding of mindfulness." However, in participants' descriptions of mindfulness, the primary researcher tagged meaning units with a word or phrase that represented the essence of the participant's response. Through this inductive coding, subthemes arose, such as "Self-regulation", "Awareness", and

“Acceptance and Flexibility”, that represented each participant’s interpretation of the intervention experience. In addition, a blend of semantic and latent coding was used (Braun et al., 2016). For example, semantic coding (verbatim) was used from the participant’s response, such as, “...loving yourself for who you are.”, was included in the subtheme “Self-love and Acceptance.” Latent coding was used to identify more covert meanings when participants were less obvious in their response. For example, when describing what self-compassion means to them, “Knowing you can do right and you can do wrong, and that both of those things are okay...it just shapes who you are and your human experience.”, was also coded as “Self-love and Acceptance”. Multiple iterations of codes were constructed, with feedback from a critical friend, before it was decided that participant voices were sufficiently represented. Finally, data were aggregated to form themes and subthemes.

The process for data analysis at *T1* was kept the same, but separate for *T2*. Specifically, researchers again went through the six phases of thematic analysis to organize the data into patterns of meaning for all participants that completed *T2* interviews ($n = 16$). Next, although there was some attrition between *T1* and *T2*, the research team kept all data from *T1* to embody the full story of expectations and understanding at the beginning of the intervention. This data was then used in comparison of themes for individuals at *T2*. Individual examples of change were then demonstrated using exemplary quotes from those individuals that completed both interviews ($n = 16$). These examples are given in the combined results and discussion section. In addition, levels of change for both expectations (None-Low and Moderate-High) and understanding (Low, Moderate, and High) arose inductively through the collaboration of researcher and participant, researcher positionality to the data, and in conjunction with the

theoretical understanding of mindfulness and self-compassion (Bishop et. al., 2004; Khong, 2021; Neff, 2003; Zizzi & Andersen, 2017).

Trustworthiness

Creswell and Poth (2018) suggest that of the nine strategies for trustworthiness they propose, researchers should strive to engage in at least two. First, coding at each stage in the analytic process was performed by the primary investigator, and another doctoral candidate trained in qualitative analysis served as a critical friend. This critical friend was not part of delivering the intervention, and was unfamiliar with the data prior to their involvement in analysis. The purpose of this critical friend was to open up the interpretations of the data by the primary investigator. To stay consistent with an interpretivist-constructivist paradigm, the integration of the iterative dialogue with the critical friend helped in the process of constructing a narrative that best suited the essence of participants' words from two perspectives. Both individuals engaged in consistent discourse, through regular face-to-face and virtual meetings, on what codes and themes most accurately captured the voices of the participants, why their stories were the same or different, and what factors may have been contributing to their present expectations and understanding. Second, to enhance reflexivity and promote self-awareness of biases, each investigator also kept a written log of analytic memos. This log also served as an audit trail regarding analytic decisions and rationales made throughout the process. In addition, one faculty member of the research team acted as an auditor to ensure fidelity to the paradigm, and appropriateness of the data analysis process.

Results and Discussion

The purpose of the present study was to gather insight into (1) what SAs expect to gain from a MBI, (2) how SAs understand the concepts of mindfulness and self-compassion, and (3)

how, if at all, those expectations and understandings change after completing the program. Data analysis at *T1* yielded many codes that were organized into three higher-order themes for self-compassion and 14 sub-themes; three higher-order themes for mindfulness and 16 sub-themes; four higher-order themes for expectations with 15 sub-themes. At *T2*, four higher-order themes were identified for self-compassion with 22 sub-themes; four higher-order themes for mindfulness with 26 sub-themes; for expectations, two higher-order themes with eight sub-themes. Due to the breadth of data collected, this section will focus primarily on illustrating the change that did, or did not, occur as it relates to the purpose of this study. Full results including all themes and subthemes at *T1* and *T2* can be found in the extended results, Appendix F.

Before the intervention, participants were asked to respond to open-ended items about their initial expectations for the intervention, (i.e. list three things you most hope to gain from participating in this program) in addition to stating three words about what being mindful meant to them. In each of the interviews, participants were asked to expand upon those answers. In the following section, only participants that completed both interviews and, therefore, could be compared to examine change from *T1* to *T2*, were given pseudonyms. These participants are illustrated in Table 1.

Change in Expectations

Researchers in SEPP have sparsely utilized qualitative methods to investigate experiences of SAs participating in MBIs. Further, few studies have been conducted by researchers specifically investigating what SAs expect to gain from participation. One study by Mistretta and colleagues (2017), however, reported that SAs preparing to engage in MSPE indicated they hoped to improve in overall self-regulation ability, increase in mental toughness, and attain performance enhancement. Those athletes that hoped to learn self-regulation strategies from

MSPE improved on a measure of sport anxiety (Mistretta et al., 2017). In the present study, at *T1*, themes emerged through SAs similarly suggesting that they most expected change to occur in the areas of inner peace and positivity, coping with stress and difficult emotions, increases in mindfulness, and performance mindset (e.g., confidence, self-regulation, resilience). Most participants indicated that their expectations were realized, to some degree. Table 2 illustrates some examples of the levels of change that were made in expectations from *T1* to *T2*. Two levels of change were made apparent through participants' experiences, moderate-high and low-none. Levels of change were organized by the research team in consideration of each participants' lived experience relative to *T1* and *T2*, as well as through the lens of the research team relative to operational definitions of mindfulness and self-compassion (Bishop et al., 2004; Zizzi & Andersen, 2017; Khong, 2021; Neff, 2003), and the various components of each concept (i.e. common humanity, self-kindness, non-judgement, etc.).

In the present study, Arturo's experience suggested that he experienced a low amount of change in his expectations toward self-critical feelings. Before the program he most hoped, "unsatisfactory feelings with unsatisfactory results" would change, and that he would find some kind of peace in his effort in competition. After the program he said, "I am still nowhere I would want to be. I broke a school record but I still wanted to go faster...". Others on the team shared this self-critical mindset, however, like Jessica experienced moderate-high change. For example she stated that, "I've been a lot less hard on myself. I overwork myself constantly...it's one of my fatal flaws, but I'm just learning to love myself and the work that I do..." These results indicate that some SAs in this group had a realization, even before the MBI, that they were exceedingly hard on themselves, and that this caused distress in their lives. In a recent review of self-compassion studies in competitive sport populations, evidence was presented in support of

adopting self-compassion rather than self-criticism, and further, that this change in perspective led to adaptive coping and outcomes in a variety of populations (Cormier et al., 2022). In addition, after the intervention in the present study, Lacey mentioned that her expectation of “caring more about my wellbeing” was met. She expanded on this by stating:

I think because of how much more I am aware of like mindfulness and self-compassion, I think I care a lot more about my feelings and my emotions. Whether that's stress over an exam, or whether that's me stressing about a practice, I'm able to sit down and really think about why I may feel that way versus shutting it out.

It seemed that for Lacey, moderate-high change meant engaging in the MBI helped her to prioritize and accept her inner experiences rather than ruminating on self-critical thoughts or trying to change her inner experience. In a similar study, researchers have demonstrated that integrating self-compassion to promote healthy body image in female collegiate athletes can help athletes realize the significant effects of their self-criticism, while teaching them love, kindness, and acceptance toward their body (Voelker et al., 2021). These changes in perspective and awareness, in turn, bolstered feelings of wellbeing and self-satisfaction.

Additionally, dialogue with Ben revealed that he felt his preliminary expectation of, “feeling better when I enter the water” was not realized. At *T1*, Ben expanded on this expectation by stating, “Some days I feel heavy in the water, some days I feel light...I just want to get to a point where I feel okay...I’m going to have a good day of swimming.” Although few studies exist in sport connecting expectations toward mindfulness with outcome measures, Tiffet et al. (2022) explored this phenomena with a non-athlete student population. In their cross-sectional design study of college-student meditators, they found that those with intentions related to controlling or avoiding negative internal states had worse outcomes than those expecting to learn about acceptance and nonjudgmental openness to experience. It may be that Ben’s expectation of

control was at odds with the more traditional concepts of mindfulness, such as acceptance of life as is, non-striving, being open and curious, focus on the present, and being compassionate to yourself and others (Zizzi & Andersen, 2017). As a result, he felt his potential ‘gains’ from the program were limited. However, after the intervention, his response to whether he gained this ability of control was:

I would say no...as soon as I dive in, I feel like crap, my body hurts, that's just how swimming goes. But I've learned throughout this training that I can control how my body feels if I sit in the water and keep swimming and say like, Oh man, I hurt. This sucks", my body is going to continue to hurt. But drowning out that negative energy...I don't think it's changed, but I can control it better.

Through conversation with Ben, it seemed as though he was actively working through how this process changed for him. He may not have gained the ability to control how his body feels, as suggested, but his language exhibited the acceptance of suffering that is consistent with the modern definition of self-compassion, "...openness to one's own suffering, not avoiding or disconnected from it..." (Neff, 2003, p. 87). Ben may have been demonstrating an awareness of the ‘suffering’ involved in his sport, and rather than fight with it, he embraced it, leading to the potential of being more efficient in his thought processes, and ultimately, more available to experience the moment he was in at training. As such, Ben's change in expectations was classified by the research team as low-none, however his change in understanding of self-compassion as moderate. It may be important for practitioners presenting concepts of mindfulness and self-compassion to athletes to first assess their expectations. Further, building in ‘understanding checkpoints’ may help increase awareness of realistic expectations and to create a space within training to debrief their understanding of the mechanisms for positive change. This may have helped Ben to understand that his perceived ‘control’ may actual be awareness and acceptance without the need for control. It is clear that for some athletes in the intervention, their

pre-intervention expectations affected how they experienced the intervention and the outcomes they received.

Change in Mindfulness

Three levels of change in understanding of mindfulness and self-compassion were classified by the participants' indication of prior knowledge at *T1* and how that may have changed at *T2*, and of concepts related to mindfulness (Zizzi & Anderson, 2017; Khong 2021) and self-compassion (Neff, 2003). Table 3 illustrates the change in understanding of mindfulness and self-compassion that occurred from the MBI. Some athletes understood mindfulness by the techniques involved, and related it primarily to self-regulation at *T1*, a common theme evidenced by statements like, "I guess when you're in the moment practicing mindfulness, it's for you to take a step back, calm yourself down." Further, after having completed the program, Mia talked about the role mindfulness played in her life:

When we were in training week and everything, we have our morning practice, and then I'd have an 8 A.M., a 9 A.M., and then an 11 A.M. [class], and it was super hard for me to be focused that entire time. But just kind of breathing, and taking one moment at a time, kind of helped me. Like the... what was that one... the words like, "I'm breathing in, I'm breathing out," that one always helped me.

This suggests that for Mia, engaging in mindfulness practices helped her to manage moments of high stress—common occurrences in the lives of SAs—and reduce their detrimental impacts. Additionally, it appeared as though this helped her understand that fully focusing for an entire class may be unrealistic, but a moment-to-moment focus could be helpful and more feasible.

Conversely, another SA at *T1* indicated that mindfulness played an unhelpful role at times, saying, "If I'm nervous it plays a bad role because it just gets me more nervous behind the blocks and I think that's something I don't know how to control..." This comment may be

consistent with the aforementioned efforts to ‘control’ the mind (Tiffet et al., 2022). Further, this finding is not uncommon, as other studies have noted that individuals have struggled with difficult or adverse experiences related to mindfulness practice, as meditation has the tendency to increase awareness of thoughts and feelings, whether pleasant or unpleasant (Farias et al., 2020; Cote et al., 2019). Similarly, another SA at *T1* said, “I think the point is really to calm down, not stress out, and get into the right mindset.” These athletes may have yielded a low amount of change. However, with prolonged practice and a better understanding of mindfulness, ways of changing one’s relationship to those unpleasant experiences may be possible. For example, Lacey stated at *T2*, “Prior to this program...my swim practices were just very much going through the motions, not really putting in any sort of intention behind every practice. Now...I try my hardest to find an intention so it’s not like a drag.” She further stated, “I’ve definitely learned the importance of being very intentional with things I am doing in practice, not necessarily being so anxious or just going through the motions.” Khong (2021) discusses the propensity of Western psychology to view mindfulness as a “tree” (skill or technique) and miss the “forest” (the full teachings of Buddha and mindful living; p. 120). With an informed guide, athletes engaging in prolonged mindfulness practice may learn to meet life and sport with a mindful attitude (i.e. acceptance, nonjudgment, compassion), rather than simply a set of skills. Lacey’s high amount of change, then, is classified through her realization of some of the ‘forest’ by the end of the program.

Further, Andersen (2020, p. 274) discusses the “paradoxical” nature of MBIs in sport to enhance self-concept and self-esteem, rather than teaching athletes how to let go of the root cause of unhappiness and performance dysfunction (i.e. through non-judgmental awareness, being open and curious, acceptance, non-striving, and dropping one’s ego). With this in mind,

modern sport MBIs such as MAC, MSPE, and MMTS 2.0, which calls this sport *dukkha*, were adapted for use in the present study and are aimed toward enhancing performance through these concepts. It may be that some athletes learn that there is no “right mindset”, nor is striving to achieve it helpful. Mindfulness is about training awareness and acceptance of whatever arises in the mind, with intentionality in the moment, which may indirectly lead to performance outcomes due to mitigating the dysfunction that comes from anxiety and unhelpful self-talk.

Additionally, SAs most commonly noted that mindfulness means the qualities specific to present-moment focus and attention. For example, Bella commented on her journey through the program:

At the beginning I was like, “What in the world are we doing? Why, why are we doing this?” It was like for three or four weeks, I was like “Oh, my gosh! Why are we doing this?” And then we got in the water, and like I was talking about those [focus] cues we got to create and then be guided through them. So by doing that then my understanding kind of happened like, Okay, well this can actually really be helpful.”

It appears that Bella experienced a high amount of change through her journey of applying the concepts of mindfulness to practical implications of her performance. Ben provided another example, stating “I don’t look at the people in lanes next to me. I feel like mindfulness plays a role in that...I’m focused on my race, if they swim faster than me, that’s whatever. I’m just focused on my time.” Although the present study may be the only investigation into how SAs understand mindfulness and self-compassion in sport, Alvear et al. (2022) looked at how 326 adult meditators defined mindfulness via an open-ended questionnaire. Consistent with findings from the present study, the majority ($n = 191$) defined mindfulness in the theme of attention and awareness. Additionally, present qualitative findings support other studies indicating that mindfulness may help in training present-moment focus, a necessary ingredient for peak performance and flow (Noetel et al., 2019; Wang et al., 2023).

Change in Self-Compassion

At *T1*, some SAs were honest when asked about self-compassion, like Leo who said, “I actually have no idea what that one means.” These responses were merged into the theme None/Low Understanding. More common in both interviews, however, were SAs who discussed self-compassion in the theme of *Self-Love and Kindness*, although preliminary responses lacked depth (*T1* avg. interview length 15 min., compared to *T2* avg. length 23 min.) compared to *T2* responses. For example, at *T1* Sofia said, “I actually don’t know much...but it’s like to understand my limits and my body and my thoughts and everything, and be cool with it.” After having completed the program, her view was such that self-compassion was about, “Being more respectful with myself in some difficult times...and if I’m not feeling well it’s okay...” Her new-found understanding of self-respect and acceptance of feelings demonstrated a high level of change in understanding of self-compassion. One individual in the study, Carlos, demonstrated a high level of understanding from *T1* to *T2*, therefore a low amount of change, as his personal definitions seemed to match concepts of Neff’s (2003) conceptualization of self-compassion, like the practice of speaking to yourself the way you would a loved one. At *T1* he said:

For me, self-compassion is the ability to see myself in third person, cause I personally feel more compassion for another person than for myself a lot of times. And what would I say to myself if whatever happens to me, happens to somebody else? So I'm saying like, what would I say to them?

This depth of understanding was an outlier at *T1*. However, following the program, more of his teammates were able to further articulate what self-compassion meant. In the *T2* theme Permission to Feel, Naomi said, “That would just be like allowing yourself to feel the feelings you’re having, and be able to move on from them.” Others discussed self-compassion as it related to awareness, like Bella, who stated it was, “...being aware that you can’t really control

everything. So if you have a bad day, letting it happen, if you have a really good day, feeling the joy of having a good day.” When asked about the role that self-compassion played in her life after having gone through the program, Naomi further stated, “The whole section that we had on self-compassion and moving on from those [unhelpful] feelings we’re having, I put those in use at meets already.” This high level of change result provides some preliminary evidence that for some, not only was self-compassion helpful in mitigating the negative impacts of the internal experience, they were also able to adopt this practice into their performances relatively quickly.

Furthermore, when asked to expand on the role that self-compassion played in their life, some SAs at *T2* connected it to concepts of mindfulness, such as awareness and acceptance of internal dialogue and feelings. For some, it seemed as though self-compassion was the catalyst for making mindfulness meaningful, noting it as a specific form of awareness that was useful and applicable to life or performance. For example, Ben explained a process that he went through in a competition:

I usually get pretty nervous standing behind the box, and I like to get in my own head. And then I kind of, during the mindfulness, like when those meets popped up while we were doing this, I kind of used the self-compassion to be like “No, I’m better than this. I can use this energy to do good.” Instead of focusing on it and being negative.

Ben’s initial understanding of self-compassion was as a means of self-care at *T1*, “You have to worry about yourself, you have to make sure you’re taking care of yourself.” This changed following the MBI, and at *T2* his experience at the start of a race suggests that a mindful awareness of his nerves, coupled with a self-compassionate attitude, helped him to repurpose his energy toward success, rather than a negative interpretation. A recent study (Kuchar et al., 2023) and reviews (Cormier et al., 2023; Röthlin et al., 2019) provide evidence of self-compassion and its efficacy on mitigating self-criticism, however, few in sport have investigated the effects that it

may have on helping SAs to conserve cognitive resources. It appears that individuals like Ben, Naomi, Bella, and others that experienced moderate to high change in understanding were able to free themselves from a struggle with their thoughts and emotions, and instead use their mental energy to focus on the task at hand. This even allowed one individual, Keira, to be more coachable by changing her relationship to herself and her internal experience. She stated, “I’ve gotten better at accepting more feedback, it used to be like, I don’t want to hear it 20,000 times... but now...I’ve accepted that it’s not a bad thing and that there’s things you need to improve on.” These swimmers were able to use mindful self-compassion to conserve mental resources and be more available to moments in their sport. Although psychological flexibility and aspects of resilience have been examined in various sport MBI studies (Ptáček et al., 2023), this focus on conserving energy does not appear to exist in related sources. However, in a longitudinal study on social services providers and business students, Schabram and Heng (2022) found that self- and other-directed compassion helped to “replenish their own depleted resources” (p.453) and alleviate aspects of burnout, such as exhaustion, cynicism, and inefficacy. Eysenck and Calvo (1992), in their processing efficiency theory, suggested that the dysfunction of cognitive anxiety, specifically worry, creates a reduction in an individual’s capacity for working memory available for a given task. This process ultimately leads to diminished efficiency during tasks that have high demands on working memory (Williams et al., 2002). More recent studies have shown that mindfulness training may help individuals sustain attention and working memory in stressful situations (Jha et al., 2022; Jha et al., 2017; Morrison & Jha, 2015). In addition, recent research in a non-sport population suggests that self-compassion, as delivered through Mindfulness-based Cognitive Therapy (MBCT), protects against the increased mind-wandering that comes with depression (Greenberg et al., 2018). Mindfulness-based training that includes self-compassion as

a key component may thus provide benefits for athletes by helping them conserve cognitive resources and train their capacity to be mentally available to the moment.

Another interesting example in the present study was Lucas, who explained the role that self-compassion played for him after completing the intervention:

I think it's being kind to oneself and not tearing yourself down, and the words for mindfulness, from the program, I would be consider it to be mindful, not being harmful to yourself when you bring yourself back to that mindful moment and doing it gently. And I think it's just being kind to yourself, not saying hurtful things that tear yourself down kind of thing, treat yourself as you want others to be treated kind of thing, or... and that's a little backwards. But yeah...

This explanation of the 'gentle' nature of shifting attention from thoughts, back to the present, indicates that this individual was able to capture an understanding that mindfulness may be about awareness and present-moment attention, but also self-compassion playing a role in the 'quality' of attention that leads to adaptive coping. These qualities of attention match the operational definition provided by Bishop et al. (2004), that mindfulness is, "a quality of relating to one's experience within an orientation of curiosity, experiential openness, and acceptance" (p. 234). Lucas appears to have coupled these qualities with that of self-compassion. Research in the areas of mindfulness and self-compassion have overlapped in the last few decades, making them appear to be two distinct constructs. However, compassion has been a central concept in ancient mindfulness, dating back to the Buddhist scriptures known as the Pali Canon (1st century BCE), along with loving kindness, empathetic joy, and equanimity (Pali Canon, n.d.). In modern Western psychology 'self-compassion', Neff (2003) included mindfulness as a core concept. However, Bluth and Blanton (2014) present an understanding that together, mindfulness entails bringing attention and nonjudgmental awareness to the present moment, including the suffering that comes with the human experience, and self-compassion as applying the warmth and

kindness involved in assuaging that pain. It appears that many individuals in the present study were able to make this connection, and that for some of those athletes who experienced a moderate-high level of change, chose to integrate some aspect of mindful self-compassion into their daily academic or sport routines.

Limitations and Future Directions

There are several limitations to the present study that should be noted. First, although this sample was advantageous due to the large roster size and inclusion of multiple genders, other levels of sport such as NCAA DI and DIII, youth, professional, or elite sport populations may present different perspectives. Future studies may investigate the experiences of other groups. For example, some studies have noted that female athletes may be more open to self-compassion than men, and athletes in general may be resistant to self-compassion due to feelings that it may lead to complacency (Mosewich et al., 2019). Future intervention studies may seek to explore these populations specifically, as understanding and expectations could differ among these groups, leading to different outcomes. Additionally, an important consideration toward the critiques in the literature surrounding the potential paradoxical nature of Eastern vs. Western mindfulness could be explored in future studies. For example, expectations and understanding could be explored with SAs participating in a more Eastern philosophy-focused intervention and compared with those in a Western-based MBI. The same could be investigated with separate groups of experienced versus non-experienced meditators.

Second, there was some attrition among the number of participants who completed *T1* interviews ($n = 26$) and *T2* ($n = 16$). It is possible that participants at *T2* were among those with more favorable and positive perspectives of the intervention, saw the most benefits, or enjoyed the process most. However, some SAs at *T2* did report experiences that were not positive. It

should be noted that the research team did not gather information as to the identities of those that attrited. The inclusion of all data at *T1*, even responses of those that did not complete *T2* interviews, may have impacted the examination of intervention supported changes in expectations and understanding. Future studies may attempt to capture this information and account for those that did not complete both interviews, or only include data from those in both *T1* and *T2* samples.

Third, although interview data were only captured at the beginning and end of the intervention. Future studies may consider adding a mid-point interview to capture the full arc of progression of expectations and understanding. Although the present study did not utilize a mid-point interview, pre-intervention data were collected to gather initial baseline data before exposure to the intervention. Future studies may also consider a follow-up interview to assess for changes in understanding and expectations when participants are farther removed from the training. Lastly, the interviewers asked participants specifically about the concept of self-compassion within the MBI. This approach may have increased the prevalence of social desirability bias toward self-compassion. Future investigations may consider more open-ended interview guides to see if self-compassion arises inductively as a main outcome of the MBI.

Summary and Conclusion

First, of particular note to SEPPs is the observed changes in expectations. Although most participants stated that their expectations were realized and limited change occurred, it is important to note that most SAs look for MBIs to help them improve in their overall wellbeing in addition to sport performance, particularly as it relates to self-regulation of emotion and increased focus. There was some evidence to support the idea that expectations may be tied to outcomes received (Mistretta et al., 2017; Tiffet et al., 2022), such that those expecting to control

their thoughts and emotions may have a more difficult time grasping the concepts of awareness, acceptance, and non-judgement – the proposed mechanisms of change offered through mindfulness practice (e.g., Kaufman et al., 2018; Zizzi & Andersen, 2017). Second, it may be important for SEPPs to make time for discussion and management of expectations with clients before engaging in mindfulness and self-compassion practice. Third, as suggested in Khong (2021), more benefits may be gained through prolonged exposure to mindfulness and seeking to understand the underlying core concepts (i.e. awareness, acceptance, non-judgement, compassion) rather than simply a set of techniques (i.e. breathing or body scan for self-regulation). It may take time for SAs to shift in their understanding of how mindfulness and self-compassion may translate to their life or performance. Additionally, this study may also present further data supporting the potential paradoxical nature of Western psychology MBIs (Roychowdhury et. al., 2021), and examples of those that may have experienced confusion or limited gains and adherence to mindfulness practice as a result. Fourth, it may be important for practitioners, coaches, and SAs alike, to understand that mindfulness and self-compassion practice can lead to more efficiency in life and sport. Rather than engaging in efforts to create the ‘right mindset’ when necessary (i.e. striving to be confident, positive, or focused), adopting a mindful, self-compassionate attitude to whatever arises in the mind or environment can be more efficient and present an increased availability to meet the demands of moment and task at hand.

Literature Review

Mindfulness has been around for thousands of years as a way of being. Springing from the teachings of Eastern philosophy, religion, and of Buddha, it has permeated ideologies of many ways of life across the globe. In the last few decades, mindfulness has been popularized in Western culture and society as a means of easing suffering in a myriad of ways. Much research has been focused on ways of using mindfulness to increase quality of life and performance in different domains. This literature review will serve to outline the basis and justification for examining one mindfulness, self-compassion, their reciprocal relationship, and the role it may have in change for sport performing individuals. This literature review will begin with an explanation of mindfulness, its theoretical underpinnings, where it has come from, and how it has found its way into Western psychologies, and more specifically, as a means of enhancing the well-being and performance of athletes. Following will be a discussion of self-compassion, what it is, how it relates to mindfulness, and its effects on various populations. This discussion will also include information on self-compassion interventions outside of sport, and how it is measured. Self-compassion in sport will then be outlined. Additionally, the literature on the relationships between expectations and outcomes of interventions will be reviewed. Finally, this review of the literature will lead to a discussion of future research, and the basis for support of a study exploring the perceptions and experiences of college student-athletes after completing a mindfulness and self-compassion intervention.

Mindfulness

Mindfulness - What is it? Where did it come from, and how did it get here?

The concept of mindfulness has spanned across thousands of years as part of Eastern philosophy and tradition. Roychowdhury et al. (2021) outlines the transnational migration of

mindfulness, and that its roots lie within the religious context of ancient India and specifically Hinduism, as a practice of seeking knowledge about life, consciousness, and self-transcendence. The authors further explain that the first recorded mentions of these contemplative practices are documented in Hindu Vidic texts somewhere near 3000 - 2500 BCE. Mindfulness is often associated with Buddhism; however, the concepts of meditative practices mentioned by the Buddha were garnered from these Indian traditions. The Satipattana Sutta (20 BCE) was one of the first texts of Buddhism to include these concepts, though its concepts are mentioned in a variety of ancient texts spanning across culture and geographical location. The *Dhammapada* is one of the oldest surviving Buddhist texts and is considered the original teachings of the Buddha (or *dhamma*) himself (Carter, 2000). Originally a Pali text, the *Dhammapada* belongs to the Theravada school of Buddhist tradition, which is of Eastern culture, specifically in places like Laos, Sri Lanka, and Thailand (Carter, 2000). An English translation of this text describes its verses as being instructional as to the ethics of living and a reminder to readers of the impermanence of life (Roebuck, 2010). Another ancient text consistent with Buddhist ideals including the concepts of mindfulness is the *Tao Te Ching*. This text, written around 400 BC, is credited to the Chinese philosopher Laozi and the Taoism philosophy of life. In an English translation, Mitchell (2006) suggests that the *Tao Te Ching* can be translated to, “*The Book of the Immanence of the Way*”, or “*The Book of the Way*” (p. vii). In its 81 chapters, read like poetry, the book covers philosophies of Taoism that include, “doing-not-doing”, awareness, and living as one with nature and of society (Mitchell, 2006).

Coming to understand the nature of mindfulness and its roots to ancient cultures, at times, seems much more like walking through a maze than a linear story through time and history. Grossman (2011) discusses how the construct of mindfulness from Buddhism has arrived by way

of thousands of years of phenomenological analysis. The modern Western psychology versions are from decades of trying to understand its concepts (Grossman, 2011). However, contemporary researchers have commented on the concepts of traditional mindfulness, making it more digestible to the modern scholar. Some modern understanding of the concepts from traditional explanations of mindfulness practices are outlined in Khong (2021) as including, "remembering, recollection, retention, reflection, and clear comprehension" (p. 7). In sum, the root understanding of mindfulness comes from the Eastern Hindu and Buddhist philosophies aimed at easing human suffering and reaching self-transcendence through reflective and contemplative practices (Royshowdhury, 2021). However, these concepts have made their way across the world, and have been inserted into modern and Western psychology in North America. For the purposes of this review, and eventually this study, it should be understood that mindfulness is viewed through this process of distillation, but its roots are noted.

In Western culture, the most popular and well-documented interpretation of mindfulness is, "the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally to the unfolding of experience moment by moment" (Kabat-Zinn, 2003, p. 145). Royahowdhury (2021) traces the lineage of mindfulness in Western culture dating to the 16th century when scholars and religious figures appropriated Eastern philosophy and studied its concepts. Contemplative practices termed mindfulness in modern times of Western society are associated with raw attention and awareness, focus on the present more than the past or future, and nonjudgement (Khong, 2021). The explosion of mindfulness into mainstream society and psychology in Western civilization was born from similar circumstances, a means to ease suffering, but the mechanisms for mitigating suffering may be different than its Eastern tradition. The lineage of mindfulness in Western culture starts with the formation of mindfulness-based

interventions (MBIs) in the field of psychology, as a means to help improve peoples' physical and psychological quality of life.

Mindfulness-Based Interventions outside sport

John Kabat-Zinn is credited with the original appearance of mindfulness in the form of a manualized protocol in the late 1970s to mediate the occurrence of suffering in the human experience. Although it is outside the scope of this review to do a complete synthesis of the vast literature on all outcomes reported from MBIs, readers can find useful summaries in academic journals and databases of medicine and clinical psychology. This section of the literature review will focus on Mindfulness-based interventions in Western psychology and highlight common outcomes and issues across adaptations of MBIs in the general psychology literature. Specifically, this review of MBIs in the general psychology literature will focus predominantly on outcomes related to stress, anxiety, and similar psychological symptoms of distress as they are common themes in the literature surrounding MBIs and fit most closely to the present research topic. In this review, effect size estimates are reported, or standardized mean differences (SMD) where applicable for various meta-analyses or reviews when studies compare across continuous and differing outcome measures. These estimates can be noted as small, medium, or large and show comparisons of effects across MBIs.

Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn et al., 1982) was created in an 8-week manualized protocol format to supplement the treatment of patients with chronic conditions related to stress, depression, anxiety, and pain. Since then, MBSR has been used in a wide variety of settings and populations. Much of the literature on MBSR revolves around the reduction of stress, anxiety, and depression among a variety of patients with health conditions. For example, Zhang and colleagues (2019) conducted a study composed of 66 pregnant women

split into an MBSR trial group ($n = 34$) and a control ($n = 32$). Participants were given pre and post intervention measures of anxiety, using the State Trait Anxiety Inventory (STAI; Spielberger et al., 1970), the Pregnancy Stress Rating Scale (PSRS; Chen et al., 1983), and the Self-rating Depression Scale (SDS; Zung, 1965). Baseline scores on these measures from both groups were analyzed using t-test or chi-squared, and repeated measures of analysis of variance (ANOVA) for the outcomes (Zhang et al., 2019). Results indicated no difference in time-by-group interaction for depression ($\eta^2 = 0.005$), but significant differences for prenatal stress ($\eta^2 = 0.427$) and anxiety ($\eta^2 = 0.240$). This study indicates that the mindfulness group had a large effect on anxiety and stress in pregnant women. Other authors have attempted to analyze studies across populations on similar outcome measures in the form of reviews and meta analyses.

For example, these authors include Zou et al. (2020), who conducted a meta-analysis on the efficacy of MBSR for reducing anxiety among the adolescent population. The analysis included randomized controlled trials (RCTs) in the English databases with young adults ranging in age from 12-25, and that were clinically diagnosed with an anxiety disorder (Zou et al., 2020). The analysis included studies comparing MBSR to various control group methods, including health and wellness lecture courses and typical treatments as usual. The effect sizes for continuous results were represented with Cohen's d of standardized mean difference (SMD) at 95% confidence interval (CI). Analysis indicated that MBSR significantly decreased symptoms of clinical anxiety in relation to controls at the conclusion of the intervention (SMD = -0.14 CI - 0.24 to -0.04). The authors also noted that interventions in this review varied in length which may have affected results; however, MBSR is suggested to be better at treating anxiety symptoms in young adults. Since the initial investigation of MBSR (Kabat-Zinn, 1982), some

research suggests that it is more efficacious in treating anxiety, depression, and stress in various populations.

RCT research designs have become more common in the literature investigating the efficacy of MBIs in the general psychology literature, and other researchers have set out to investigate the effectiveness of MBSR in comparison to other mindfulness-based approaches. Haller et al. (2021) conducted a meta-analysis investigating MBIs for anxiety disorders. This study included RCTs utilizing MBSR, as well as theory-driven treatments such as Mindfulness-Based Cognitive Therapy (MBCT) and Acceptance and Commitment Therapy (ACT). This analysis included 23 studies (1815 adult participants) with various anxiety diagnoses as described in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). Results of this analysis showed that each of the MBIs led to acute decreases in anxiety compared to usual treatment controls, including Cognitive Behavioral Therapy (CBT). Treatment outcomes lasting 6-12 months yielded no significant differences compared to control treatments, indicating that anxiety reduction using these interventions may be advantageous in the interim, but more longitudinal post-treatment follow-up studies are needed. A systematic review conducted by Kraines et al. (2022) outlined current research investigating the use of MBSR and MBCT on cognitive outcomes related to psychological disorders such as depression. They identified 10 studies, five RCTs and 5 single-arm trials comparing the two. Results indicated that 7 out of 10 studies showed one or more cognitive improvements and the other three did not indicate any. They also found disparate use of language, methodology, and samples making results across studies inconsistent.

These studies show that although some positive outcomes are present in mindfulness research on cognitive aspects of disorders such as anxiety and depression, consistency in the

literature is needed to properly compare across experiments. At present, studies investigating MBIs and other mindfulness-based therapeutic approaches are growing in number. They are also becoming a more commonly found treatment modality in clinical settings, and more research indicating their level of efficacy is needed in order to match their prevalence. In order to fully bridge the gap between science and clinical use of MBIs, more research is needed to understand the mechanisms behind why mindfulness does or does not work and for whom. Research designs with more consistent methodology, samples, and language surrounding what mindfulness is and how it works may enhance the literature quality. Although the research may have room for improvement, the popularity of MBIs has spread across disciplines, and the field of sport and psychology (SEP) has adopted its concepts for use in enhancing performance and wellbeing among athletic populations.

Mindfulness-Based Interventions for Sport

MBIs have permeated the landscape of Western medicine and psychology over the last few decades, and preliminary evidence of their efficacy has brought attention to researchers and professionals in SEP. This came as a result of Kabat-Zinn et al. (1985) and their adaptation of MBSR with United States Olympic rowers. Although this intervention with rowers was not published as a peer-reviewed manuscript, it was the first to document the use of an MBI with an athletic population. A few decades later, others began adapting principles of MBIs for use in improving performance and wellbeing amongst athletic populations. Specifically, the Mindfulness Acceptance, and Commitment (MAC; Gardner & Moore, 2004) approach was developed. This MBI includes elements of mindfulness but is more closely aligned with concepts from Acceptance and Commitment Therapy (ACT). Gross et al. (2018) investigated the effectiveness of the 6-week intervention in comparison to a traditional psychological training

protocol. This MBI includes 7 total modules that focus on psychoeducation, mindfulness and defusion, values, acceptance, committed action, skill reinforcement, and maintenance of mindfulness and acceptance skills. Data were analyzed using a mixed-model ANOVA and within-group differences suggested that the MAC group decreased in anxiety, eating concerns, and other markers of psychological distress, as well as increased in psychological flexibility (Gross et al., 2018). Overall, the MAC program has shown some initial efficacy in diverse sport populations.

Although the MAC program created a nuanced approach to sport psychology training modalities, some MBIs have been more extensively researched than others. One such MBI is the Mindful Sport Performance Enhancement approach (MSPE; Kaufman et al., 2009). MSPE stems from more traditional roots of MBSR and seeks to impact athletes both in daily life as well as performance. This 4-week program includes sport specific mindfulness training techniques such as body scans, sitting meditation, yoga, and walking meditation (Kaufman et al., 2009). The program specifically seeks to help athletes by increasing the occurrence of flow states. An initial investigation of its usefulness in sport was conducted by Kaufman et al. (2009), who studied community golfers and archers that completed the 4-week MSPE protocol. After analysis, some changes were observed after the intervention, such as significant increases in the archers' trait mindfulness and optimism as well as state flow occurrence amongst all participants (Kaufman et al., 2019). Additionally, Chen and Meggs (2021) recently studied the effectiveness of MSPE with a group of 16 National Level club swimmers. Participants were grouped into an MSPE trial and a separate relaxation training program. Outcome variables included state and trait mindfulness, as well as state and dispositional flow. After the 8-week intervention period, statistical analysis revealed that the MSPE group enhanced measures of flow in comparison to

the relaxation group (Chen & Meggs, 2021). Chen et al. (2020) also investigated the effectiveness of MSPE with a distinct sport population. In this study, amateur baseball players in Taiwan ($N = 21$) completed the 4-week MSPE intervention. Participants completed measures related to flow, state anxiety, and mental health before, directly after, and four weeks following the intervention (Chen et al., 2020). Results demonstrated increases in flow ($p = 0.001$; $p = 0.045$), anxiety in competition ($p = 0.056$; $P = 0.008$), eating disorders ($p = 0.009$; $p < 0.001$), and other improvements in mental health measures (Chen et al., 2020). Additionally, Glass et al. (2019) conducted the first RCT of MSPE. This study included 52 division III collegiate athletes who were assigned randomly to either an MSPE group or a waitlist-control. Athletes completed pre and post measures related to depression, anxiety, stress, life satisfaction, trait mindfulness, psychological flexibility, flow, sport anxiety, and athletic performance. Results showed that of the athletes completing the protocol, significant increases in flow, life satisfaction, performance, and flow were observed, in addition to decreases in cognitive rumination or worry, with medium to large effects (Glass et al., 2019).

These studies demonstrate some positive effects of a specific MBI in the sport context for enhancing performance and wellbeing. MSPE appears to be the most closely related intervention to the original MBSR protocol and the more traditional roots of mindfulness. In addition, the more consistent outcome measures across studies make it easier to more confidently suggest that the program is showing promising results among groups of athletes, in comparison to the MAC approach and other sport MBIs. Research quality with the MSPE program could improve by including more diverse samples, as many have included white division III college athletes in the United States and recreational athletes in the community. More diverse samples could allow for greater generalizability in results and a stronger argument for adopting this program amongst

practitioners seeking to improve athletes' wellbeing and performance. In sum, it seems as though amongst the established sport MBIs, MSPE is the most thoroughly and quality investigated protocol for enhancing wellbeing and performance amongst various athletic populations.

Another more recently developed MBI for sport is the Mindful Meditation Training for Sport intervention (MMTS 2.0; Baltzell & Summers, 2018). Although this program is more recently developed and has room for investigation, some have attempted to analyze its effectiveness with college athletes and coaches. The MMTS 2.0 was designed to guide athletes towards the development of adaptive means of responding to sport distress. This program was modeled after previous mindfulness and acceptance-based approaches but offered in a less time-intensive manner that may be more fitting to an athletic population (Baltzell & Summers, 2018). The MMTS program is offered in a 6-hour format that can be broken into 6 hour-long sessions, or 30-minute sessions twice per week (Baltzell & Summers, 2018). Sessions cover topics such as a psychoeducation and orientation to mindfulness, labeling and distractions, concentration, self-compassion, self-regulation, and awareness (Baltzell & Summers, 2018). Studies utilizing quantitative research designs are sparse with this program; however, Zadkhosh and colleagues (2018) explored whether the MMTS protocol could improve performance or reduce sport anxiety in comparison to a control group and a neurofeedback group. The study included 45 amateur-level soccer players split up into a neurofeedback training group, an MMTS group, and a control. Pre and post measures of sport anxiety were given to the participants, and athletic performance was gauged by asking them to complete a soccer shooting test. The evidence suggests that the MMTS intervention group reduced sport anxiety by 23%, yet there was a 10% reduction in sport performance. Baltzell and Akhtar (2014) also investigated changes in affect and mindfulness amongst 42 NCAA division I female athletes ($n = 19$ MMTS group). After the 6-hour

intervention, the comparison group ($n = 23$ division I female rowers) showed a moderate 13% decrease in negative affect (i.e., feeling upset, jittery, or hostile) and the MMTS group a small 3% decrease (Baltzell & Akhtar, 2014). Additionally, the MMTS group demonstrated a small, but significant 12% gain in mindfulness scores. The results of the quantitative research on the MMTS protocol show little improvements in negative affective states and mindfulness, and no significant relationship with performance indicators.

However, the large proportion of evidence on the MMTS program comes from qualitative research. Across studies, a total of 45 participants (19 DI female soccer players; 23 male/female tennis players; 3 coaches) have been included in MMTS research. Two studies with college athletes, including NCAA Division I women's varsity soccer players (7 total) and 9 NCAA varsity tennis players (5 male; 4 female) utilized individual interviews to better understand their experiences with the program and investigate any self-reported effects (Baltzell et al., 2014; Cote et al., 2019). Participants in both studies commented on increasing their ability to change their relationship with emotions, including moderating their intensity. In addition, most athletes stated that they grew their awareness of emotions and were better able to practice self-compassion in adverse situations both in and out of sport. Athletes across studies also noted that they employed breathing techniques learned from the program, but initially struggled with meditation and mostly did not complete the outside of session practices (Cote et al., 2019). In another study, Baltzell et al. (2015) interviewed coaches completing the MMTS program in an effort to understand their experiences. All coaches in the study ($n = 3$) agreed that the program was a valuable mental training method and helped them to increase their coach-athlete relationships by being aware of both their own emotions and those of their athletes. All coaches also agreed that although positive occurrences were observed, they were unclear whether the

MMTS program alone was the reason for these changes (Baltzell et al., 2015). In conclusion, the MMTS program is the newest sport MBI in the literature, and methodological rigor could be rated as low. More quantitative research is needed including more broad sampling and performance measures. However, this program is ahead of others in the use of qualitative investigation of participants' experiences, which adds to the literature and invites future research to consider adopting this approach. Additionally, this program is the first to explicitly include the addition of self-compassion to the program, which may be an important construct for emotional regulation, an important and frequent outcome measure for all sport MBIs.

Overall, the quality of research on MBIs within sport has been critiqued and MBIs may be ahead of the research and quality evidence of its effectiveness. Noetel et al. (2019) conducted a recent systematic review by compiling 66 studies that included mindfulness and acceptance-based interventions for enhancing performance, wellbeing, or both. Results indicated large effect sizes for increasing performance measures such as flow, as well as enhancement of mindfulness and decreases in competitive anxiety. However, the authors concluded that the research was graded at low quality due to no comparison of treatments in RCTs and limited internal validity across studies. This review shows evidence of positive impacts on increasing mindfulness and performance, as well as decreasing anxiety. However, the rigor of mindfulness research in sport and performance psychology has room for improvement. Others have suggested similar concerns related to the research quality on mindfulness and MBIs, specifically as it relates to the ambiguity of the definition of mindfulness in the literature, methodological issues including nonideal construct validity among mindfulness measures, small sample sizes, lack of reporting on adverse effects of mindfulness use, and arguable interpretation of results (McAlarnen & Longshore, 2017; Van Dam et al., 2017). Future research may also include an emphasis on the

specific components or concepts of MBIs in hopes of understanding which aspects of mindfulness lend to the greatest benefits and changes among participants. Some research indicates that self-compassion may be an important concept related to mindfulness, and sport MBIs such as MMTS offer it as its own module. In order to more fully understand the evidence of self-compassion within sport, it may first be important to outline self-compassion as its own construct in the general psychology literature.

Self-Compassion

The construct of self-compassion in the literature is largely elucidated by, and associated with, the work of Kristin Neff. Neff (2003) discusses self-compassion as an antidote to self-indulgence and an over-emphasis in Western culture on self-esteem building. She further states that self-esteem invites estimations of self-worth, and an overemphasis contributes to unhealthy social comparison and, in turn, a significant disrupter of psychological wellbeing. Neff (2003) defines self-compassion as, “being touched by and open to one’s own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one’s suffering and to heal oneself with kindness” (p.87). Within this definition lies three integrated components of self-compassion which include (a) self-kindness, or showing kindness to oneself especially in the presence of adversity or self-criticism, (b) common humanity, or understanding the nature of self-suffering as being interconnected with the suffering of others, and (c) mindfulness, which is defined by applying a nonjudgmental awareness to thoughts and feelings (Neff, 2003). Since the work of Kristin Neff was published in 2003, over 1600 studies and graduate dissertations have been published on the topic of self-compassion (Bluth & Neff, 2018).

The following section outlines a few meta-analyses and reviews of self-compassion in the general psychology literature to demonstrate common outcomes. This review does not purport to

be a full outline of all self-compassion research, but it attempts to sufficiently set the stage for a discussion on the relevance and importance of self-compassion in the present study. As such, researchers in the field of psychology, broadly, have attempted to study the role that self-compassion may have in the wellbeing of various populations. Marsh et al. (2017) conducted a meta-analysis, including 19 publications with adolescent participants (10-19 y/o; $N = 7049$). An inverse relationship with large effect was observed in these studies between self-compassion and markers of depression, anxiety, and stress ($r = -0.55$; 95% CI -0.61 to -0.47). Additionally, Zessin and colleagues (2015) conducted a meta-analysis with studies among adult populations. The research included 79 total studies and found an overall relationship between wellbeing and self-compassion to be low to moderate ($r = .47$). These studies demonstrate that self-compassion could be a relevant factor in psychological distress in adolescent and adult populations. As it relates to coping with distress, Ewert et al. (2021) completed a systematic review of 136 studies and z-transformed Pearson correlation coefficients were shown in self-compassion and adaptive coping ability ($r = .306$) and self-compassion with maladaptive coping ($r = -.500$). Additionally, analysis showed a correlation coefficient of ($r = .340$) among the constructs of self-compassion and emotional approach coping, and ($r = .205$) with problem-focused coping (Ewert et al., 2021). Researchers in this study also considered moderators like age, gender, and geographical background, and found that age was a moderator of the connections among self-compassion and adaptive coping, as well as emotional and problem-focused coping (Ewert et al., 2021). Although some correlations are low to moderate in this study, research suggests that self-compassion could be involved in overall wellbeing and coping mechanisms of individuals.

In the field of psychology, professionals have noted the connections between self-compassion and aspects of psychological wellbeing. Therapeutic approaches have been

developed and examined on their ability to positively impact individuals in a variety of settings. Compassion-focused therapy (CFT; Gilbert, 2010) was of the first theoretical approaches specifically designed to bring a compassionate quality of mind to negative and maladaptive cognitive patterns. Using warmth and self-kindness techniques, the CFT approach proports to help people move towards change in their relationship to negative emotions (Gilbert, 2010). The compassionate mind training program (CMT; Gilbert & Irons, 2005) was developed as a treatment protocol featuring the CFT approach. The pilot study was conducted in a hospital setting with patients suffering from harsh self-criticism and shame and opted to complete 12 2-hour sessions of CMT. Results showed that individuals had significant decreases in anxiety, depression, inferiority, self-criticism, and submissive behavior following the CMT protocol (Gilbert & Proctor, 2005). Since its creation, the CMT program has been used to treat a myriad of psychological concerns (Neff & Germer, 2013).

Additional research utilizing a self-compassionate intervention approach have been conducted. For example, Ferarri et al. (2019) completed a meta-analysis including 27 RCTs utilizing self-compassion interventions. They found that these interventions demonstrated significant increases in 11 different psychosocial outcomes in comparison to control groups (Ferrari et al., 2019). This included large aggregate effect sizes of Hedge's g for eating behaviors ($g = 1.76$) and rumination ($g = 1.37$). Moderate effects for self-compassion, depression, stress, mindfulness, self-criticism, and anxiety ($g = 0.57 - 0.75$; Ferrari et al., 2019). Additionally, Smeets and colleagues (2014) studied the usefulness of a short 3-week self-compassion protocol. Female college students ($n = 52$) were randomly selected to either the self-compassion group or an active control. Self-compassion was measured using the brief version of the Self-Compassion Scale (SCS-SF; Rates et al., 2010), mindfulness by the Kentucky Inventory of Mindfulness Skills

(KIMS-E; Bear et al. 2004), and a variety of psychological constructs were measured such as life satisfaction, connectedness, optimism, self-efficacy, mood, rumination, and worry (Smeets et al., 2014). Results demonstrated that the intervention group significantly increased scores in self-compassion, optimism, mindfulness, and self-efficacy, as well as decreases in rumination compared to the control group (Smeets et al., 2014). This study shows that a self-compassion intervention could be an effective means of positively enhancing wellbeing among college-student populations. It seems as though self-compassion is an ever-growing concept in the general psychology literature. Researchers in other areas of study, such as sport, have attempted to insert self-compassion as a means to enhance performance and wellbeing among athletic populations.

Self-Compassion in Sport

The growing evidence supporting the relationship between self-compassion and aspects of psychological health such as thought patterns, emotions, and behaviors, have been applied in the realm of sport. For example, Lizmore et al. (2017) set out to determine if there was a relationship between perfectionism and self-compassion, optimism, rumination, and pessimism. The authors surveyed 239 collegiate student-athletes (SAs) on levels of perfectionism, in addition to self-report measures of rumination, pessimism, optimism, and self-compassion (Lizmore et al., 2017). Through regression analysis they found a negative relationship with self-compassion and perfectionistic tendencies among men and women SAs (Lizmore et al., 2017). Additionally, Reid and colleagues (2015) evaluated the effects of self-compassion exercises on the responses of female athletes to emotionally adverse sport occurrences. The sample included 103 female athletes from a broad range of sport level (amateur to national level) and age (14-25 years) (Reid et al., 2015). Participants completed measures on self-compassion, narcissism, and

self-esteem, in addition to responding with their cognitions and emotions to a hypothetical adverse sport situation (such as contributing to a team loss). Results showed a relationship among self-compassion and negative affect ($r = -.40$), catastrophizing thoughts ($r = -.30$), personalizing thoughts ($r = -.32$), and behavior equanimity ($r = .28$) (Reis et al., 2015).

Additionally, self-compassion has also been studied in sport as it relates to athletes' relationship with themselves in times of sport adversity. Ferguson et al. (2015) studied female athletes ($n = 137$; age 16 – 25 y/o) and asked them to complete measures of self-compassion and eudemonic wellbeing in sport. They were also asked to respond to an adverse sport situation and comment on their thoughts and emotions. Results indicated a significant correlation between autonomy, body appreciation, and meaning and vitality in sport ($r_s = .18-.47$) (Ferguson et al., 2015).

The literature in the field of SEP indicates that there may be a relationship between self-compassion and aspects of sport performance and wellbeing. Although outcomes measures vary between studies, commonalities surround the idea that self-compassion may be related to wellbeing and performance specifically akin to adversity in sport situations. It may be that the inclusion of self-compassion training could help to mitigate some of the self-judgment and less efficient thought-patterns could be prevalent among high-striving and perfectionistic populations, such as in athletic populations. Therefore, it may be necessary to discuss the nature of fostering and developing self-compassion in the sport context.

Researchers in SEP have attempted to determine how self-compassion can be best developed in athletic populations. For example, Ingstrup et al. (2017) explored the nature of self-compassion development with 10 female athletes who were identified as highly self-compassionate through a self-compassion survey. Participants ($n = 10$) consented to interviews and were asked about how self-compassion came to be a part of their lives and performances.

They discussed three main areas including (1) the role of their parents in developing self-compassion, (2) learning self-awareness, and (3) learning from others (Ingstrup et al., 2017).

This qualitative paper outlines how some female athletes perceive their own development of self-compassion, giving practitioners some guidelines for implementing self-compassion with athletes in the sport context. They alluded to their upbringing and their parents' roles in teaching them to be kind to self and others. They also discussed the importance of learning to be self-aware of self-judgment and critical states of mind. Although they did not mention mindfulness, this state of awareness is a key concept of mindfulness practices.

Further, the development of self-compassion has been attempted through the use of self-compassion interventions. For example, Mosewich et al. (2013) implemented a self-compassion intervention with athletes self-identifying as self-critical. They were randomly selected to the self-compassion group ($n = 29$) or an attention control group ($n = 22$). Measures of self-compassion, self-criticism, rumination, and concern over mistakes were collected before, after, and four weeks after the intervention period (Mosewich et al., 2013). MANOVA indicated moderate effects of the intervention on scores before, after, and 4-week follow-up ($\eta^2 = .43$). This study further indicates the potential usefulness of including self-compassion as a training tool for enhancing resilience to adverse conditions in sport, in addition to increasing wellbeing.

Although the inclusion of self-compassion in athletic populations has shown some promise, some research has indicated that not all individuals are open and accepting of this kind of self-kindness. Röthlin et al. (2019) conducted a review of empirical studies on self-compassion in athletic populations. Their review included peer-reviewed publications and identified 17 that were mostly quantitative and cross-sectional in design; however, some qualitative studies emerged that investigated athletes' attitudes towards self-compassion. They

concluded that many athletes in these studies shared hesitancy towards self-compassion for fear that adopting that approach may lead to performance inferiority, and believed that being hard on oneself was necessary for getting better in sport (Röthlin et al., 2019). Other studies have also noted the stigma of self-compassion among athletic populations (Ferguson et al., 2014).

Mosewich et al. (2019) highlights many key points towards the inclusion of self-compassion in sport, and states that it may be necessary for practitioners to target and be aware of stigma among athletes. Further, it has been shown that high self-criticism can have negative impacts on wellbeing (Ferguson et al., 2015). However, Reis et al. (2021) explored male athletes' ($n = 16$) experience with self-compassion and masculinity through interviews. They found that athletes in the study were open and accepting to alternate conceptualizations of masculinity, such as homosexuality, and were amenable to accept and adopt self-compassion if it helped to enhance performance (Reis et al., 2021).

These studies indicate that although some sport populations may be more accepting and open-minded than others, there is a stigma surrounding self-compassion in athletics. This presents a possible barrier to implementing self-compassion specific training tools or interventions with these populations. Therefore, it may be helpful to understand how best to approach the subject of self-compassion with athletes in a way that is meaningful but does not trigger an immediate bias. Additionally, much of the self-compassion literature in the realm of sport has been done with female athletes. Future studies may consider the inclusion of male athletes in intervention research. Further, the quality and impact of self-compassion research could benefit from the inclusion of multiple sport contexts, such team versus individual, various ethnic and racial backgrounds, and sport levels.

Combining Mindfulness and Self Compassion

Although both mindfulness and self-compassion have been extensively researched as distinct psychological constructs, there is also a wealth of literature investigating the seemingly intertwined relationship between the two. The following section will highlight these distinctions and explicate their development among the general and sport context. Specifically, mindfulness entails an individual bringing an attitude of nonjudgement and awareness to the typical present moment, and self-compassion entails applying kindness to specific moments of suffering (Bluth & Blanton, 2014). The practice of mindfulness includes an open acceptance to all parts of the human experience, such as pain and joy. Self-compassion focuses on the relationship to self, thus it is involved in the mindful awareness of suffering, and creating the internal resources to assuage that pain (Baer et al., 2012; Neff, 2003). Bluth and Blanton (2014) suggested that through mindfulness practice and learning to become nonjudgmentally aware of one's own suffering, self-compassion may be concurrently developed. Bluth and Blanton (2014) also examined self-compassion as potentially mediating the relationship between mindfulness and outcomes such as emotional wellbeing in their study with 65 adolescents age 14-15 (40.3% of total sample), and 16-18 (59.7% of total sample). Students were given measures of self-compassion, mindfulness, and emotional wellbeing, and path analysis was used to examine the relationship between each variable (Bluth & Blanton, 2014). Results indicated that mindfulness and self-compassion were mediators between students and their emotional health (Bluth & Blanton, 2014). A model proposing the associations between mindfulness and self-compassion was presented. This model suggests that mindfulness is involved in awareness of thoughts, awareness and contact with self-criticism and worry, and increased acceptance of self, and self-compassion as introducing greater self-kindness, and recognition of self as part of the greater

human experience (Bluth & Blanton, 2014). Additionally, others have studied individuals who practice mindfulness and meditation, and found that more experience in practice is consistent with increased levels of self-compassion (Lykins & Baer, 2009; Neff, 2003). It appears as though different conceptually, mindfulness and self-compassion may work congruently to effectively enhance psychological wellbeing.

In hopes of harnessing the characteristics of both mindfulness and self-compassion, Neff and Germer (2013) created The Mindful Self-Compassion program (MSC). This intervention was specifically created to develop self-compassion amongst the general population. The program includes mindfulness and self-compassion skills in an 8-week format modeled after the MBSR program, where participants are engaged in 2-2.5-hour sessions. However, this program focuses primarily on enhancing self-compassion and teaches mindfulness skills as a secondary component (Neff & Germer, 2013). Neff and Germer (2013) conducted the initial study and publication with this program, and outlined their pilot study, as well as a RCT comparing a MCT group to a control. The pilot study investigated scores on self-compassion and mindfulness with outcome measures related to general wellbeing such as happiness, depression, anxiety, stress, life satisfaction, and connectedness with other people and society (Neff & Germer, 2013). They found significant increases in self-compassion and mindfulness, as well as life satisfaction, happiness, depression, anxiety, and stress, but not social connectedness (Neff & Germer, 2013). In their second study, an MSC group ($n = 25$) was compared to a wait-list control ($n = 27$) and found that the intervention group increased significantly on measures of self-compassion, mindfulness, and wellbeing. Additionally, Neff and Germer (2013) outline many studies that indicate programs such as MBSR and MBCT are also related to enhancing self-compassion in

various populations. They also mention that self-compassion was shown to be a meaningful component of change in MBIs to improve overall wellbeing (Baer, 2010; Holtzel et al., 2011).

In sport, Tingaz and Çakmak (2021) investigated the relationship among mindfulness and self-compassion, in addition to performance ranking. The sample included 237 SAs who were asked to complete the Mindfulness Inventory for Sport (MIS) and the Self-Compassion Scale (SCS). Results indicated that mindfulness and self-compassion scores were positively related, and those athletes that ranked higher had higher scores on the nonjudgement subcomponent of the MIS compared to low ranking athletes (Tingaz & Çakmak, 2021). Further, Lyon and Plisco (2020) collected self-report measures of self-compassion, mindfulness, dispositional flow, and sport anxiety from 48 elite female athletes. Analysis showed that among the sample of female athletes, self-compassion significantly predicted levels of flow, above the value of mindfulness (Lyon & Plisco, 2020). Additionally, both mindfulness and self-compassion accounted for 27% of the variance in participants' flow experience (Lyon & Plisco, 2020). This is one of the only studies to look at the influence of self-compassion and mindfulness specifically on flow and anxiety in an athletic population and indicates that attempting to enhance these qualities may be a fruitful effort.

Through reviewing the literature on mindfulness and self-compassion, it appears as though all MBIs may be involved in enhancing self-compassion to some degree. In sport, MBIs such as MSPE, MAC, and MMTS have grown in number of peer-reviewed publications in the last few decades. However, MMTS is the only mindfulness-based program within sport to date that has included self-compassion as an explicit part of the protocol. The manual for the MMTS program (Baltzell & Summers, 2018) outlines their use of self-compassion in the program and gives justification for its purposeful inclusion. In their chapter, "The Power of Mindfulness With

Warmth”, the authors indicate that self-compassion and mindfulness are intertwined (p. 47). They further explain that the modern understanding of mindfulness has strayed far from its roots, and that self-compassion and kindness are an original concept lost along the way of appropriation of concepts (Baltzell & Summers, 2018). This assertion is consistent with the account presented by Roychowdhury et al. (2021) related to the lost concepts of mindfulness through its transnational migration from Eastern to Western society. It is suggested that in the original MBI for Western psychology, MBSR, Kabat-Zinn made clear that mindfulness reflects, “...both mind and heart”, and a friendly attitude towards self is an important component of mindfulness practice (Kabat-Zinn, 2003, p. 145). Additionally, the MMTS program presents self-compassion as an integral concept for working with particularly negative and invasive thoughts and emotions (Baltzell & Summers, 2018). Since the explicit concept of self-compassion has been left out of most sport MBIs, it has not been extensively studied in the literature as a quality of mindfulness. Although some indication of self-compassion increasing with all mindfulness practice is present in the literature, the explicit teaching of this attitude towards self in the context of performance may be beneficial. In addition, sport MBIs have been extensively studied in terms of their efficacy for a variety of outcome measures; however, participants’ experiences, expectations, and understanding of mindfulness or self-compassion has not.

Expectations and Experiences of MBIs

Although the literature on participant experiences and understanding of mindfulness is sparse, a few researchers have employed qualitative measures to investigate this topic. To fully explore the effectiveness of mindfulness and self-compassion in sport, it may be important to utilize both quantitative and qualitative methods (Arnkoff et al., 1996). Grossman and Van Dam (2011) also discuss the importance of using interview protocols in mindfulness research and

point out that it may be the most appropriate approach for attempting to understand the complexities that come with mindfulness. They further discuss that these complexities and understandings may be missed if only self-report measures are used (Grossman & Van Dam, 2011). As previously discussed, the MMTS program has been evaluated using a qualitative approach, and participants expressed how they were affected by the program, and recommendations for improving the protocol were given (Baltzell et al., 2014; Baltzell et al., 2015; Cote et al., 2019). However, few studies have been conducted that explore how participants' understand the complex concepts of mindfulness or self-compassion. Goisbault et al. (2022), however, did investigate the interaction between elite French female basketball players and a 15-week MBI. They found that scores increased on measures of acceptance, perceptions of stress, and life and performance satisfaction. Through qualitative inquiry, they also found that participants' understanding of these concepts in the MBI grew and changed throughout the intervention (Goisbault et al., 2022). It may be that a full understanding gleaned from the intervention helped them learn how to apply these important concepts into their lives and performance. However, more research on the understanding of these concepts would be needed to make such a claim.

In addition to limited research on understanding of mindfulness, some have investigated the effects of participants' expectations towards MBIs. Mistretta et al., (2017) employed a qualitative approach as part of a mixed-method study of 45 college SAs that engaged in the MSPE program. Participants were split up into an MSPE intervention group and a wait-list control. Before the intervention began, participants were asked to complete a background questionnaire that included an open-ended item asking to identify the top three things they hoped to get from the program (Mistretta et al., 2019). Following the intervention period participants

were given a program evaluation questionnaire as part of a battery of self-report measures (Mistretta et al., 2019). Qualitative results indicated that participants hoped to gain self-regulation benefits from the program, such as emotional, stress, and anxiety regulation (Mistretta et al., 2019). In addition, the athletes noted that they wanted to increase in mental toughness, self-awareness, and overall sport performance (Mistretta et al., 2019). Following the conclusion of the program, in the evaluation, participants mentioned that they got out of the program what they expected (Mistretta et al., 2019). This study may be the only one to date that includes expectations of a MBI in sport. Although this study only included one item for participant responses on expectations, it gives some insight into how participants view one MBI prior to engaging, and what they might expect to gain. Future research should consider more fully investigating these expectations towards MBIs, as it may be that expectations are related to understanding and outcomes of participation in such programs.

Outside of sport, some researchers have investigated the relationship between expectations and intervention outcomes. In one study including adolescents, (age 12-17) participants were randomly selected to a waitlist control, or one of two separate intervention groups that included mindfulness meditation ($n = 76$) or hatha yoga ($n = 92$) (Quach et al., 2017). Results indicated that the yoga group intervention expectations were positively correlated with completed home-based practices (Quach et al., 2016) Another study outside of sport also captured participant expectations about mindfulness interventions and found that they were mixed between open and curious and fixed, expecting it to make a specific difference their life (Shoultz et al., 2016). Similarly, Tiffet et al. (2022) inquired about college students' expectations for mindfulness practice. They found that those more interested in controlling their thoughts and feelings, such as getting rid of anxiety or depression, realized less positive results than those

open to learning about acceptance and nonjudgement (Tiffit et al., 2022). These studies provide insight into the effects of experiences and expectations of mindfulness interventions from a qualitative perspective.

In order to fully understand the applications of mindfulness and self-compassion in sport, and its usefulness for enhancing athlete wellbeing and performance, researchers may want to consider how it is received from an individual perspective. It appears that the unique experiences of athletes completing a mindfulness or self-compassion-based intervention is much less studied than other aspects. Future research may employ more qualitative methods to investigate how participants understand mindfulness, and how that affects their adherence to mindfulness interventions, including home-based practice outside of sessions and overall outcomes. Future research may also consider the inclusion of team sports, as this is lacking in the current literature as the MMTS research investigating participant experiences mostly includes individual athletes. The interaction of mindfulness and self-compassion in a team setting may provide different perspectives on how these concepts are received in the presence of peers. The literature outlined in this review suggests that a relationship between mindfulness and self-compassion exists. Some evidence supports the concepts of both mindfulness and self-compassion as being involved in the wellbeing and performance enhancement of athletes in sport and performance psychology; however, more research is needed to fully understand the types of interventions most efficacious, the proper dosage of those interventions, and how participants actually engage in them, including expectations, understanding, and experiences.

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Tables

Table 1 Participants completing both interviews

Pseudonym	Gender	Age
Carlos	Male	22
Keira	Female	20
Luke	Male	21
Arturo	Male	20
Lexie	Female	20
Lacey	Female	20
Sofia	Female	19
Naomi	Female	21
Leo	Male	21
Angela	Female	22
Jessica	Female	19
Ben	Male	21
Bella	Female	19
Mia	Female	18

Table 2. Levels of change – Expectations for the Intervention

Levels of Change	Themes (between T1 & T2)	Participant Pseudonym	Sample Quotes
<i>Moderate - High Change</i>	Processing emotions	Naomi	T1 – “I kind of struggle with moving past emotion sometimes. I just struggle moving past, moving on.” T2 – “I’ve been able to just identify and work through those emotions and move on easier.”
	Positivity	Luke	T1 – “Having [student-athlete schedule] kind of forced on us...that is one of my goals...being able to have that positive mindset and doing it in a more controlled setting.”
	Increased Enjoyment		T2 – “So that was more of the goal of what I meant by positive mindset is because as a senior, now I’m tired of swimming...Now let me retire, but I’m almost there...I can find a way to enjoy it.”
<i>Low-No Change</i>	Self-Compassion & Acceptance	Carlos	T1 – “I think it’s about knowing how to mentally work around what you’re not proud of, what bothers you. You know, we’re working through that without punishing myself too much and without trying to hide it.” T2 – “Yes [realized more self-compassion], and that’s because I had a chance to hear more from my teammates. I’m not sure the need of self-compassion is always something that people are very open about.”
	Self-regulation	Arturo	T1 – “We start racing, I start getting so nervous for no reason...I lose sleep over that. Oh, am I going to do good at the meet? I always do, but I still get that jittery feeling that maybe I could have done more. So that one is big for me.”
	Perfectionism		T2 – “A little [change]. I am still nowhere I would want to be. I broke a school record but I still wanted to go faster. Wow, congratulations. I did pretty good, but I still felt like I didn’t do as I wanted.”

Table 3
Levels of change- Understanding of Self-compassion & Mindfulness

Levels of Change	Themes (between T1 & T2)	Participant Pseudonym	Sample Quotes with <u>Subtheme</u>
<i>High change</i>	Self-Compassion Means...None/Low	Leo	T1 – “I actually have no idea what that one means.” T2 – “It’s like loving yourself.”
	Self-Compassion Means...Self-Love & Kindness	Sofia	T1 – “I actually don’t know much... it’s like to understand, like my limits and my body and my, I don’t know, like my thoughts and everything. And be cool with it. But I don’t know...”
	Self-Compassion Means...None/Low		T2 – “Being more respectful with myself in some difficult times...and if I’m not feeling well it’s okay...”
	<i>Moderate Change</i>	Self-Compassion Means...Self-Love & Kindness:	Naomi
Self-Compassion Means...Self-Awareness & Understanding		T2 – “That would just be like allowing yourself to feel the feelings you’re having, and like be able to move on from them.”	
<i>Low Change</i>	Self-Compassion Means...Self-Love & Kindness	Carlos	T1 – “Self-compassion is the ability to see myself in third person, cause I feel I personally feel more compassion for another person for myself a lot of times. And what would I say to myself if whatever happens to me, happens to somebody else? So I’m saying like, what would I say to them?”
	Self-Compassion Means...Self-Love & Kindness		T2 – “I think self-compassion is the capability to keep loving yourself...through difficult situations...be who you want to be, live your life without judging yourself, without hurting yourself, punishing yourself over the problem.”
<i>High Change</i>	Mindfulness Means...Controlling the Mind	Bella	T1 – “I think successful people know how to control. They are very good at controlling the controllables, and they don’t let the uncontrollables bother them. I think mindfulness can play into that.”
	Mindfulness Means...Self-regulation		T2 – “...taking a minute and relaxing your body and your mind to focus on what you’re about to do.”
<i>Moderate Change</i>	Mindfulness Means...Self-Regulation	Angela	T1 – “I guess calm is another one. Sometimes calm yourself, and take a step back, I guess.”
	Mindfulness Means...Self-Regulation		T2 – “The more relaxed I am, it’s easier to be aware and self-compassionate in the heat of the moment. It’s hard because you’re obviously just thinking about whatever is going wrong, but being able to relax and take a step back, and then be self-compassionate or aware of things that are going on, they kind of go hand in hand.
<i>Low Change</i>	Mindfulness Means...Self-Regulation	Ben	T1 – “...when you’re not relaxed, you can’t think straight.”
	Mindfulness Means...Controlling Mind		T2 – “Whether there’s negative things happening around you, you need to be aware that you need to be positive. Just that whole aspect of like drown out the negatives, just worry about yourself.”
	Mindfulness Means...Acceptance & Adaptability	Carlos	T1 – “I have the right of feeling that way, and the only way of overcoming it is accepting it. Not beating it up, embracing it.
	Mindfulness Means...Common Humanity		T2 – “Mindfulness is...seeing yourself as an individual as part of a society, as one of them, and not making it all about yourself...I can fail, have success, I can work around this, you know?”

Appendix A

Demographics and Expectations Questionnaire*(Delivered via Qualtrics)****Part 1. Tell us a little bit about yourself and your sport experiences***

1. Age: _____
2. Year in School: 1st-year ___ Sophomore ___ Junior ___ Senior ___ Post-Grad ___
3. Race/Ethnic background:
 African American _____ Asian or Pacific Islander _____ Caucasian _____
 Hispanic or Latino _____ Native American _____ Other (please specify): _____
4. What is your primary Sport: _____
5. Approximately how many years have you competed in your primary sport? _____
6. Currently you spend approximately _____ hours per week in your sport.
7. Have you had any previous exposure to sport psychology or mental training?
 Yes ___ No ___
8. (If you indicated) that you have had previous exposure to sport psychology or mental training. What did you do? (Fill in blank)
9. The following question is about your knowledge and/or practice of mindfulness.
 Mindfulness refers to the process of paying attention in the present moment, intentionally, and in a non-judgmental way. It can be practiced through formal “meditations” (like focusing on the breath, body, sensations, or a mantra), or through informal mindfulness practices (walking or eating in a mindful way). “Regular” mindfulness practice is defined as a few times per week.
 Please mark (X) one statement that most accurately describes your relationship to mindfulness and/or meditation:
 _____ I currently practice mindfulness regularly and have done so for 6 months or more.
 _____ I currently practice mindfulness regularly but have done so for less than 6 months.
 _____ I practice mindfulness sometimes but not regularly.
 _____ I am not currently practicing mindfulness, but I may try it sometime in the next 6 months.
 _____ I am not currently practicing mindfulness and I do not plan on starting a mindfulness practice in the next 6 months.
10. Have you ever had a negative experience with mindfulness or meditation?

Yes _____ No _____

If yes, please describe the experience.

11. (If you indicated) that you have been exposed to mindfulness or currently practice. Please provide detail as to what and how you have engaged with mindfulness. (Fill in blank)

12. Have you been exposed to self-compassion exercises in the past, or do you practice self-compassion currently?

Yes _____ No _____

13. (If you indicated) you have been exposed to self-compassion practices or currently practice. Please provide detail as to what and how you have engaged with self-compassion activities. (Fill in blank)

14. What are the top three things you expect to change from completing this program?

- 1.
- 2.
- 3.

15. What three words would you use to describe what it means to be mindful as a student-athlete?

- 1.
- 2.
- 3.

Appendix B

Interview Guide (T1)**Introduction to be read to participant:**

Thank you for taking the time to join me today for a brief interview about your expectations and understanding of mindfulness and self-compassion. I am specifically interested in learning more about what you expect to gain from completing the 7-week mindfulness program that your team will be doing together. I also hope to learn more about your current understanding of mindfulness and self-compassion, and any role that they may play in your life or sport performance. My ultimate goal is to talk with you about your expectations and understanding of mindfulness and self-compassion and not judge them in any way. I am interested in your views on each of these topics whether they are positive, negative, or neutral.

The interview today will be recorded with your consent, and then will be transcribed word for word to keep your meaning. After this process, your identity will be protected by giving you a fake name such as John/Jane, 19 y/o swimmer. We will make any and all attempts to remove any identifying information and no one outside of the research team will be able to view the recorded interview or your personal information.

- Do you have any questions before we begin the interview?
- Do you consent to being recorded?

Q1: Please describe for me, in as much detail as possible, your current understanding of self-compassion.

-How have you learned this?

Q2: Please describe for me, in as much detail as possible, the current role that self-compassion plays in your life and/or sport performance.

Q3: Please describe for me, in as much detail as possible, your current understanding of mindfulness.

-How have you learned this?

Q4: Please describe for me, in as much detail as possible, the current role that mindfulness plays in your life and/or sport performance.

Q5: On the demographics questionnaire, you indicated that you most expected __1__, __2__, and __3__ to change from the 8-week mindfulness intervention.

- Can you please tell me more about what you meant by [1]?
- Can you please tell me more about what you meant by [2]?
- Can you please tell me more about what you meant by [3]?

Q6: On the demographics questionnaire, you listed three words to describe what it means to be mindful, which were ____, ____, ____.

- Can you please tell me more about what you meant by [1]?
- Can you please tell me more about what you meant by [2]?
- Can you please tell me more about what you meant by [3]?

Appendix C

Interview Guide (T2)**Introduction to be read to participant:**

Thank you for taking the time to join me today for a brief interview about your expectations and understanding of mindfulness and self-compassion. I am specifically interested in learning more about any changes in your expectations and understanding of mindfulness and self-compassion after having gone through the 7-week mindfulness program. My ultimate goal is to talk with you about your expectations and understanding of mindfulness and self-compassion and not judge them in any way. I am interested in your views on each of these topics whether they are positive, negative, or neutral.

The interview today will be recorded with your consent, and then will be transcribed word for word to keep your meaning. After this process, your identity will be protected by giving you a fake name such as John, 19 y/o swimmer. We will make any and all attempts to remove any identifying information and no one outside of the research team will be able to view the recorded interview or your personal information.

- Do you have any questions before we begin the interview?
- Do you consent to being recorded?

Q1: Please describe for me, in as much detail as possible, your current understanding of self-compassion.

-How have you learned this?

Q2: Please describe for me, in as much detail as possible, the current role that self-compassion plays in your life and/or sport performance.

Q3: How has your understanding of self-compassion changed throughout the mindfulness training, if at all?

Q4: How has your attitude towards self-compassion changed throughout the mindfulness training?

Q5: Please describe for me, in as much detail as possible, your current understanding of mindfulness.

-How have you learned this, specifically?

Q6: Please describe for me, in as much detail as possible, the current role that mindfulness plays in your life and/or sport performance.

Q7: How has your understanding of self-compassion changed throughout the mindfulness training, if at all?

Q8: How has your attitude towards self-compassion changed throughout the mindfulness training?

Q9: What were the most meaningful ideas, practices, or concepts that you took from the mindfulness training?

Q10: Before the mindfulness program started, you indicated that you most expected __1__, __2__, __3__ to change.

- Have you experienced a change in __1__ as you expected?
- Have you experienced a change in __2__ as you expected?
- Have you experienced a change in __3__ as you expected?

Q11: After having gone through this program, what three words would you use to describe what it means to be mindful? Ask for details on each word.

Q11: What, if any, future intentions do you have related to mindfulness or self-compassion practice?

Appendix D

Overview for Sport-adapted MBI

	Module – 1 Intro to mindfulness, values, and committed action (2 sessions)	Module 2 – Acceptance and Self-compassion (2 Sessions)	Module 3 – Mind-Body Connection and Sport (2 sessions)	Module 4 -Lifelong Mindfulness to Thrive (1 session)
Key Concepts	<ul style="list-style-type: none"> - Program overview - Mindfulness intro - Present-moment awareness - Attention - Establishing values and committed actions 	<ul style="list-style-type: none"> - Sharing mindfulness practices so far - Acceptance - Sport dukkha - Self-compassion - Self-empowerment - Defusion 	<ul style="list-style-type: none"> - Mind-body awareness - Mindful movement - Sport-specific anchors - Mindfulness & performance routines 	<ul style="list-style-type: none"> - Combining skills for poise and flexibility - Life skills - Continued daily practice
Activities & Exercises	<ul style="list-style-type: none"> -5-minute breathing meditations (physical cues) -Videos w/ athlete endorsements of mindfulness -Guided values-driven journaling -Establishing weekly plan for values-based committed actions -5-10 min. guided meditations 	<ul style="list-style-type: none"> - Breathing ladder concentration exercise (Baltzell & Summers, 2017) - Weekly values-based plan/check-in - Guided discussion on acceptance & defusion (athlete-created metaphors) -Self compassion/empowerment-based journaling) -Optimal performance exploration 	<ul style="list-style-type: none"> - 10-min. body scan - Weekly values-based plan check-in - Guided discussion/journaling about sport-specific anchors - Mindful movement exercise (yoga or sport-based) - Discussion about applying flexible mindset to performance routines - 5-minute imagery meditation 	<ul style="list-style-type: none"> -Journal prompts to combine skills for poise and flexibility - Partner reflections: values and committed actions in other life domains - Reflections: Mindfulness and life skills - Additional resources shared for formal and informal practice
Follow-through	<ul style="list-style-type: none"> -Weekly plan w/values - 5-10 min. of guided meditation a day (resources provided to SAs) 	<ul style="list-style-type: none"> -Following weekly plan w/ values - 5-10 mins. Of meditation per day (resources provided) - Brief meditations into practice (resources provided to coach) 	<ul style="list-style-type: none"> -Following weekly plan w/ values - 5-10 mins. Of meditation per day (resources provided) - Brief meditations into practice (resources provided to coach) 	<ul style="list-style-type: none"> -Following weekly plan w/ values - 5-10 mins. Of meditation per day (resources provided) - Brief meditations into practice (resources provided to coach)

Appendix E

Extended Methods***Researcher Positionality***

It is important to consider and discuss one's own positionality with respect to the data derived from qualitative methods of research. As an individual, I have been exposed to and practiced mindfulness, including elements of self-compassion, in many ways over the last several years. In my personal life, I have practiced mindfulness both formally and informally to varying degrees which has sparked my interest in further exploration of the topic. This practice includes experientially through teachers in sport and education, as well as through technology (i.e. headspace.com) and applied practice. In my academic career as a postgraduate, I have come to consume and interpret the emerging literature in the realm of mindfulness, and its myriad of applications in Western society, medicine, psychology, and human performance. As an applied practitioner working in the sport consulting and counseling fields with high achieving athletes at the youth, college, and professional levels, I have attempted to apply my knowledge and understanding of mindfulness and self-compassion to positively influence the areas of well-being, sport enjoyment, and performance. It is important to note that my positionality as a consumer, researcher, and applied practitioner of mindfulness has fueled my further investigation into this research study.

It is also important to understand that my relationship with the concepts of mindfulness and self-compassion are apparent in my work and may lead to particular biases in conducting research on the topics. These biases may include projecting my own perspectives or values about the subject onto participants or data unknowingly. In addition, I may promote response bias

unknowingly as participants may answer inquiry based on what they think I, as the researcher, may want to hear. It is important that as the researcher, I reflexively journal and note my presumptions about mindfulness, the intervention, or of the participants throughout the process of data collection and analysis to be consistently aware of how this interaction may influence how I may influence the study and its data. Self-awareness will be exercised throughout this research process, and will be consistently reinforced throughout the entirety of the project.

The research team members all operate within the context of one mid-Atlantic university system within the United States, of which may carry its own cultural and professional implications such as the importance of research in general, especially for academic consumption and professional and personal development. It is important to recognize that the nature of conducting research in this setting has implications unique to each member of the research team, and practicing self-reflection and reflexivity in regard to these implications is helpful for understanding how this may affect the co-construction of knowledge with participants in the interviewing process. The primary author, as well as two of the faculty members on the research team have been engaged with mindfulness and self-compassion both personally, and professionally, in the fields of sport, exercise, and counseling psychology. It is important to note that all three of these authors come into this study with the preconceived notion that both concepts may be inherently helpful for improving the lives of individuals in a myriad of ways. Additionally, all three authors understand that mindfulness and self-compassion are, in some way, culturally appropriated practices that have been adopted for use in the way that will be present within the intervention for the present study. This understanding should be noted as each author engages in the research process of design, data collection, and data interpretation.

As it relates to participants in the present study, the primary researcher and faculty members have been engaged in teaching, research, and/or counseling and sport psychology consulting with college students and athletes. Additionally, the research assistant is currently a college undergraduate student with some knowledge and experience with sport psychology in an academic setting. These relationships between researchers and the population included in this study should be noted and continued to reflect upon throughout the research process to understand how they may cooperate to produce the knowledge gathered in this study.

Appendix F

Extended Results

Data analysis via reflexive Thematic Analysis resulted in multiple themes and subthemes related to self-compassion, mindfulness, and expectations. Results will be presented first through *T1* data, which yielded higher-order themes relating to self-compassion, mindfulness, and expectations.

Time 1: Beginning of Intervention

In the initial round of interviews at *T1*, 104 subthemes were organized under 11 higher-order themes. Results for *T1* will be presented in three major sections, (1) Self-compassion, (2) Mindfulness, and (3) Expectations.

Self-Compassion

With the interviewer, participants expanded upon their current relationship to the concept of self-compassion. This section includes the higher-order themes of: *Self-Compassion Means*, *Role of Self-Compassion*, and *Learning Self-Compassion*. For a full list of themes and subthemes, see Table 4, Appendix G.

Self-compassion means. Participants expanded on their current understanding of what the term self-compassion means to them. In the first subtheme, *Self-awareness and understanding*, many participants provided limited responses, such as “I actually don’t know much...but it’s like to understand my limits and my body and my thoughts and everything, and be cool with it.” Additionally, many voices in the intervention were captured under the subtheme, *Self-Love and Kindness*, expressing that they believed self-compassion to be “[being]

kind to yourself, not beating yourself up for little things”, “giving myself grace”, or as Carlos stated more fully:

For me, self-compassion is the ability to see myself in third person, cause I personally feel more compassion for another person than for myself a lot of times. And what would I say to myself if whatever happens to me, happens to somebody else? So I'm saying like, what would I say to them?

Further, one SA talked about self-love in terms of acceptance, for example, “I guess I would define self-compassion as loving who you are no matter if that’s physically or mentally”, or acceptance such as, “I think it would be like understanding you’re not perfect and accepting that sometimes you make mistakes, and that’s fine”. Additionally, others talked about self-compassion in terms of how they spoke to themselves and were combined in the subtheme of *Self-Talk and Self-Belief*. One participant stated, “I know that my body can do it. I think that trying to convince my mind like, yeah you are right here right now so you need to do this”. Others mentioned self-talk in terms of the subtheme *Cognitive Reframing*, such that, “I think self-compassion is like when something negative happens in your life...you’re still positive, still telling yourself, it’s going to be okay, not just the negative parts”. Lastly, some participants were honest in their explanation of what self-compassion currently means to them, stating things like, “I actually have no idea what that one means”. Four total participant responses were combined in this subtheme of *None/Low*.

Role of self-compassion. Twenty-one subthemes were combined to make up this higher-order theme related to the current role that self-compassion plays in the participants’ life or sport performance. Subthemes in this section are, *Benefits in Life*, *Benefits in Sport*, and *Challenges*. When asked about the role that self-compassion plays, some immediately talked about the subtheme *Benefits in Life*. One example was related to interpersonal relationships, “If you don’t

love yourself, then how are you gonna just succeed in life? That's not just for swimming, but for everything. Like, if you don't love yourself, then how are you gonna go out and interact with people?" Others already expressed that self-compassion helped them with understanding and acceptance of feelings related to difficult situations in life, like Bella, who mentioned, "Just in the past couple of weeks we've had lots of loss in my friend group and family. So I think that has been really helpful, that it's okay to have feelings".

In the second subtheme, *Benefits in sport*, participants discussed the role of self-compassion in helping them to achieve or maintain a present-moment focus, for example, Leo mentioned "If you don't love yourself, then how are you going to swim in the water? You have to be mentally all there...if you're not, then you're just swimming laps". Another student-athlete described the role of self-compassion as related to self-awareness, but specifically in order to 'correct' or 'control' thoughts stating, "I guess once again it's being self-aware and correcting those thoughts and catching them". Additionally, some talked about self-compassion as relating to their resilience or motivation, such as Luke who mentioned, "My best times are still in my senior year of high school. So it's extremely important to have self-compassion over the last three years...not let that weigh me down...try to keep pushing and get those PRs". Others were honest toward the current role it played for them in sport, stating that either they have not achieved self-kindness, for example, "I don't really have a lot of self-compassion towards myself...especially with swim...I'm very analytical about how I perform, and have a lot of high expectations of myself".

In the last subtheme in this section, *Challenges*, participants stated that they felt the nature of self-compassion in their sport was difficult to achieve or maintain. For example, Angela stated, "For me personally, it's very hard right now because I'm injured...because I feel

like I'm not doing anything...I guess it takes a stronger mentality to still be self-compassionate". Lastly, another participant mentioned, "I don't think a lot of people that do it...I don't think they do it as much as they think they do...sometimes I think it's harder to do when it's necessary" eluding to their view that it is more difficult to practice self-compassion during times of adversity.

Learning self-compassion. A total of six subthemes were combined to make the higher-order theme of *Learning Self-Compassion*. In the first subtheme, *Friends and Family*, participants stated that they mostly learned self-compassion through important people such as, "...my friends are telling me, you're too hard on yourself. Stop beating yourself up over this, it's not a big deal. I need to learn to relax". Others mentioned their parents, like one individual who said, "I think my family. My family's always been really open about letting me have my feelings and telling me it's okay to be sad and okay to be happy". Others, in the subtheme of *Personal Experience*, talked about particular situations through their development that lead to adopting self-compassion in their lives. For example, one individual said, "Through 16 years of swimming, I still get stressed out standing behind the block, getting ready to swim even after all this time. So it's good to tell yourself that you can do it". Additionally, Carlos shared a story about confounding factors that led to him experiencing panic in the pool and subsequently adopting a more self-compassionate mindset. He stated, "...all this caused me to have a nervous breakdown in the middle of an event and I stopped...to answer your question...that was the time the only tool I had to cope with it, and eventually overcome it, was self-compassion". In the next subtheme of *Religion*, a few individuals stated that their spiritual background taught them self-compassion. For example, one person stated, "I came from a Christian family...and I was taught that self-love is important, as God is love and what not". Additionally, in the subtheme *Role*

Models or Coaches, individuals talked generally about coaches or individuals they looked up to talking about the mental side of sport. They spoke about these mental skills when asked about self-compassion, specifically, one participant stated that, “In high school...I wanted to quit swim...so I went to this coach...he taught me visualization”. Additionally, another stated, “I’m a big Aaron Rogers fan, so I’ve heard him talking about stuff like that”. Further, some participants had worked with a professional, and responses were combined into the subtheme, Sport Psychologist/Therapy. For example, Arturo mentioned, “I’ve been with a sport psychologist before, and that’s one thing I’ve been working on because I’m really hard on myself, so that’s where I get it”. Lastly, a few individuals in the subtheme *School*, mentioned things like, “Maybe like classes in school where they talk to you about like, it’s important not to put yourself down”.

Mindfulness

In this second major section of T1 results, individuals elaborated on their current relationship to the concept of mindfulness. This section includes the higher-order themes of: *Mindfulness Means*, *Role of Mindfulness*, *Practicing Mindfulness*, and *Learning Mindfulness*. For brevity, not all subthemes will be expanded upon in this section. For a full list of themes and subthemes, see Table 5.

Mindfulness Means. When asked what mindfulness means to them, many of the participants’ responses were categorized in the subtheme of *Self-Regulation*. One participant stated that, “Mindfulness would be like blocking out all the stressfulness...”. Others expressed similar sentiments, such, “I think that for you to be mindful you need to be a relaxed person, you can have too many things on your mind, because you need to focus on one thing”. Another SA talked about self-regulation as it relates to mind-body connection, stating that mindfulness is about, “...having your mind and body in the same spot”.

In this subtheme of *Awareness (thoughts/emotions)/ of Others*, participants discussed mindfulness as being about awareness of their internal experiences and, or, of others in their surroundings. For example, one explanation included, “Mindfulness...is more of being aware of your mental state...what your body is going through, both physically, mentally, and emotionally. Another individual talked about mindfulness as it related to her experience of practicing it, stating, “I guess it’s just being aware of how your feelings are, and how you can get distracted and how to center it back”. Once individual, Lacey, talked about awareness as it relates to control, “I think smart people are very aware of everything that’s happening, and they know how to control situations”. In contrast, one other participant mentioned the non-judgmental quality of awareness, stating, “That’s the key component of mindfulness. It’s like in a non-judgmental way...you’re going to think about everything around you and yourself but be super cool about it”. An additional quality of awareness that participants spoke of was clarity, for example, Ben stated that, “Mindfulness is just having a clear state of mind to me”. Lastly, SAs discussed the external awareness that mindfulness brings, for example, “I just associate mindfulness with more of awareness of your situation”, or, “When I do meditations, I kind of just don’t think about anything, and I hear the sounds around me, I guess”.

Additionally, many participants discussed that to them, mindfulness is about *Present-moment Focus*. This focus was described as, “Focusing on the details in training, like the catch, and the two or four beat kick, just little details in the technique”. Interestingly, another individual expressed present-moment focus as a way to cope with negative self-talk, stating, “I want the bad things to leave in that place of the past, and then focus on the other things”. Another common explanation of present-moment focus was related more specifically to grounding, in that it is, “Being able to tone everything out, tune into yourself...it’s more like grounding”. Similarly,

language using an undertone of ‘controlling the mind’ was used to talk about present-moment focus, such as, “blocking out all the stressfulness, all the distractions”. In addition, to these individuals, this also meant to stay positive, “You have to be positive, you can’t sit there and think about everything that’s wrong with you... that’s what will get you through tough times”. In contrast, some talked about letting go of distractions as it relates to present-moment focus. For example, “...being aware of the thoughts coming and going, and being aware that you need to be able to let them go”.

Other less common statements were grouped into the following subthemes. One example is *Resilience*, where participants talked about how mindfulness relates to their mental toughness. For example, one person stated that mindfulness means, “...determination, it takes a lot to have all these positive thoughts and kind of not put myself down and just keep pushing forward”. Additionally, a few mentioned *Acceptance and Adaptability* as defining characteristics of mindfulness, such that, “It's like the radical acceptance of like, it is what it is, and you can take it in like, any way you want to. But what you do will not change it, and being okay with that.” Others spoke about mindfulness as *Self-care*, stating, “Being mindful gives my brain a little bit of a break from everything that I’m worried about all the time...”. Further, some participants made the connection between mindfulness and self-compassion in the subtheme Self-compassion or Gratitude. For example, one person mentioned, “...you’re taking time to yourself to think, and using that self-compassion and that gratitude that we were talking about earlier”. Lastly, six individuals were grouped in the None/Low subtheme, and were honest that they had no understanding of mindfulness, stating for example, “I don’t know what to think. I have no idea”.

Role of Mindfulness. In this theme, responses were grouped together based on how participants spoke about the role that mindfulness plays in their lives currently. Student-athletes largely talked about three main subthemes, which include the role mindfulness plays *In Life*, *In Sport*, and *Practicing Mindfulness*. For brevity, only particularly salient subthemes and lower-order classifications will be outlined in this section, however, a full list can be found in Table 5, Appendix H, and the codebook is available upon request.

In the subtheme of *In Life*, participants expanded upon how their current relationship with, and understanding of mindfulness impacts their lives in a variety of ways. Four participants were open and honest that there was no current role of mindfulness in their life, or they stated that it was actually unhelpful in that it caused them to overthink or ruminate on a past event. For example, one individual stated, “If I’m overthinking something that went wrong, maybe I don’t think it’s a helpful thing”. Others mentioned things like, “The meditating, being mentally healthy, that’s never really been my lifestyle or anything like that”.

Although a few indicated having a neutral or negative relationship with mindfulness at the time of these *TI* interviews, others talked about the beneficial ways it was a part of their life. Many participants talked about mindfulness as it related to Self-regulation in their everyday life. One example is Leo, who mentioned, “I just do it for my life...I mean it definitely helps me manage my emotions, just trying to be mindful of everything”. Others mentioned managing emotions, like one SA who stated, “It’s helped me calm down...I have slight anxiety problems and it’s helped me stop thinking about it”. Another salient group of participant responses were related to Awareness of self and others. Participants expressed that mindfulness allowed them to practice awareness of their internal experience as well as their relationship to others. For example, one individual stated, “If I catch myself doing negative coping mechanisms for my

anxiety in class, I bring myself back to the moment”. Further, Keira mentioned that mindfulness was, “...not just for myself, but also others, sort of where we are, like in a practice or our attitudes during a meet or something...how we’re all acting towards one another or towards ourselves”.

Further, other SAs talked about *Clarity of mind*. For example, “The current role, I think it’s just to help clear my head”, or another who said, “I think it allows me to really pick apart why I’m doing something...”. Another common topic was around *Positivity and/or wellbeing*. Examples include Luke, who stated having some previous exposure to mindfulness stated, “Overall, [the role] is a lot more positive emotion...like water off a duck’s back when things happen. I feel like a new human being spawned once I started doing these things”. Another, with less experience stated that they use mindfulness to, “Tell myself what I’m capable of and how much on my plate I can take at that point in time”. Grounding in the present was also commonly discussed. Again, Luke stated, “I’m so much more grounded in life and swim, just in general I’m super grounded, I’m very logical”. Another with previous mindfulness experience, Carlos, mentioned that, “It’s a way of getting my head back together into myself and my life, because I’m usually very distracted”. Lastly, some mentioned that mindfulness played a role in Perspective Shift. SAs stated that, “It [mindfulness] kinda moves my focus off of the bad things that are always continuously happening, because there’s always bad things happening, but it helps me move past them and look at the good side”. Luke also added, “So many people are unaware of how they could feel if they just take a step back, just feel themselves...”.

In the subtheme, *In Sport*, SAs expanded upon the current role, if any, that mindfulness played in their athletic pursuits. Only one individual in this subtheme stated that mindfulness played an unhelpful role, stating that, “If I’m nervous it plays a bad role because it just gets me

more nervous behind the blocks and I think that's something I don't know how to control...". The majority of participants, however, talked about the role that mindfulness played in self-regulation. For example, "I think the point of that was really to just calm you down, not stress out, and get into the right mindset". Similarly, although only one participant, Lacey, mentioned intentionality through mindfulness practice, it appeared to be a salient part of her experience. This sentiment was captured in her response, "I've definitely learned the importance of being very intentional with things I am doing in practice, not necessarily being so anxious or just going through the motions". This was an especially interesting response after just the first session of the intervention. Others mentioned the role of mindfulness though awareness of their body in the water. For example one person stated, "To know what your body's feeling and like your mind helps you stay on track". Other comments related to the role mindfulness played at this time related to a performance mindset, specifically pertaining to motivation, resilience, or commitment. For example, Luke stated, "I'm not sure swim-wise how it has benefited me...it definitely gives me a sense of resilience...like the grind is less of a grind...I can just keep going". Lastly, participants talked about focus. Specifically, some used terms from the first session, such as anchoring. For example, "In sport, they [intervention leader] described using an anchor point, or a motion to center yourself back". Another individual shared that, "I have some goals that I want to attain and at the same time, just really being in the moment of like, this is my last year".

In the last subtheme, *Practicing Mindfulness*, when participants were asked to comment on the current role that mindfulness played in their life, many immediately discussed how they had practiced it. Luke, an individual that had previous mindfulness experience, mentioned his practice of meditations, stating, "I've actually been meditating for about three years now", and

mentioned that, “I made up my own kind of way of meditating, from the way I sit to the way I breathe to what my anchor is, I made kind of a personalized thing”. Another individual commented on the meditation from the first session of the intervention and stated, “When I do the meditation, I kind of just don’t think about anything, and I hear the sounds around me”. Others on the team mentioned practicing things like yoga through apps, and breathing exercises that they connected to mindfulness, such as, “I found this thing called semantic breathing”, and another who mentioned, “I had a previous swim coach that before a big meet we’d work on breath control and just sit there and calm down”. Similarly, some connected visualization techniques to mindfulness, such as, “I had a coach that we’d visualize what we were going to do, and think about all the little things we were supposed to do”. Further, another said, “In visualization, you think about your race...basically you swim your race in your head and see how fast you’re going”. Interestingly, others also mentioned the importance of consistent practice and the difficulty that comes with it, such as, “Sometimes I know what I need is to meditation, to take a step back and breathe, but I just can’t. It’s too much stress, too much to do, the setting I’m in, the people around me...”. In contrast, some individuals talked about being able to practice mindfulness informally, such as Naomi, who mentioned, “...during practice, like in the middle of a set I just lose focus...I’m using those anchor points to draw myself back..”. In addition, Bella stated, “I know you guys talk about taking time to practice, I don’t do that...I think it’s just something that’s there...when something bad happens, I’m like well, it could be worse, so I think that’s my way of practicing it...”.

Learning Mindfulness. In this theme, the swimmers discussed where they had learned about mindfulness so far. At this point in the intervention, many participants did not have much to add. However, some SAs that have had previous exposure discussed the various ways that

they have been introduced to mindfulness. For example, Luke mentioned that his own personal experiences led him to mindfulness. He stated, “During COVID summer everyone was locked up, I found this interesting thing called semantic breathing”...he went on to say that, “I wasn’t looking for a way to cope, escape, or feel better. I just felt drawn to it...I had to know more, I wanted to keep learning about it...it wasn’t an escape but it was kind of the result of it”. Other individuals on the team talked about learning it from their parents, coaches, in school, or from previous work with a therapist or sport psychologist.

Expectations

In the last major section, participants gave insight into the expectations that they gave in the initial demographics questionnaire, before the initial session. This section presents the responses of further inquiry by interviewers into these expectations. A full list of themes and subthemes can be seen in Table 6, Appendix I. Themes included are *Peace and Positivity*, *Coping with Stress and Difficult Emotions*, *More Mindful Attitude*, and *Performance Mindset*.

Peace and Positivity. Here, participants talked about how they expected to learn more about how to relate differently to the stress and self-deprecation that comes with being a SA. Some individuals talked about self-compassion and acceptance, as evidenced by Jessica who had sustained a season-ending injury, “I have been trying to give myself a little bit more self-compassion and mindfulness that even though I want to be in the water, for me to get better, I have to give myself time to heal”. It was interesting that these ideas were already apparent to her even after only one session. Another individual, Arturo, hoped that he would learn to accept his effort and achievements more, expanding on this by stating, “Sometimes I get my goals, but I don’t feel satisfied...I feel like I could’ve done this and that better...I never feel like I did a hundred percent”.

Other individuals on the team hoped to gain more peace by learning to be more positive. These individuals demonstrated an understanding that through the intervention they might learn how to control their mind to think more positively and avoid negative thoughts and feelings. For example, one SA mentioned they hoped they would become, “Just more mentally aware of where my mindset is going, and how to control it to go back towards a more positive outlook...”. Although this may be unrealistic, others, like Luke, shared similar sentiments related to feeling balance and flow, “...the absolute goal, I wish someday I’ll have that flow all the time”. Lastly, some SAs were interested in learning how to change their perspective, rather than simply being more positive. As one participant put it, “I think it goes back to...I’m just having a bad day, being able to move past that...change the outlook and the satisfaction of what I’m doing and why I’m there”.

Coping with Stress and Difficult Emotions. In this subtheme, SAs reported that they most wanted to learn new ways of coping through processing their emotions. For example, Naomi stated, “Sometimes I don’t really know what emotions I’m feeling...if it’s just something completely out of my control, I get flustered...so I gotta work to understand what those emotions are”. She went further to say, “I kind of struggle with moving past emotions...moving past, moving on”. In addition, another individual on the team, Lacey, said that she typically prioritized other things than processing her emotions, stated that, “instead of taking a mental health day, or talking with my therapist, I would completely disregard those feelings and go to practice. Ultimately it wasn’t the smartest decision because it blew up in my face”. She explained that due to this she experienced a mental breakdown at the pool during practice. Her expectations for this program were, “...learning new ways to manage that kind of stress, being mindful about it...it’s healthy to learn more about it”.

More Mindful Attitude. In the next subtheme, participants expanded upon their expectations toward learning to adopt a more mindful attitude about life and sport. Although participants connect this sport performance at times, this subtheme is distinct in that SAs specifically cited becoming more mindful, in relation to how they currently understood it. However, there were different opinions as to what this meant. For some, it meant increasing their awareness of self and others, like Lacey who said, "...there's a good amount of time I'm swimming, that I'm just not thinking about anything...zoning out. So just being more mindful...a little bit more intentional...". Another common area of expectations was related to present-moment focus. Sofia expanded upon this expectation by talking about all of her responsibilities, "I'm trying to be more focused in things like studies and practices...and my relationships with friends and family in Brazil...to make everything work...I have to be focused and sometimes I can't, I'm too tired from practice in the morning". Further, another individual also shared that they hoped to become less reactive, stating, "sometimes I do have the tendency to judge people, or a situation immediately, so I guess [learning] of understanding more, or being more calm in the situation rather than reacting that quick".

Performance Mindset. In the last subtheme for expectations, many SAs were interested in the MBI directly impacting their sport performance. Many related the mindfulness intervention to another tool that could be learned and applied in a general sense. One individual stated, "Just by learning more about it, because knowledge is power, and it's another tool to put in my belt to use to kind of chill out a little bit". Bella also stated, "I didn't know what mindfulness was or what it could do for you, so I think just a general understanding of how it can be beneficial can pay off in the future". Other individuals more specific about learning to control their mindset, like one who stated, "...mindfulness, meditation, could get me in the right state of

mind where I can block everything else out to just, go fast”. Further specific qualities of a performance mindset were related to increasing confidence. One participant hoped to learn to gain, “...confidence in my races. Like I said, I overthink so I tend to excite myself over a little bit...swimming is 90% mental, 10% actual physical strength”. Similar to other themes about mindfulness and self-compassion, many participants hoped to use the MBI to change in their ability towards self-regulation. Many expanded upon this as it related to coping with stress and anxiety. One individual shared their perspective from their own culture:

“I want to change when I’m nervous...I don’t know if it’s the same in English, but we have like two Me’s...my bad me and my good me, and sometimes the bad one is stronger in the meet. And before the meet I say, oh, no. I’m going to do this, I’m going to be fine, but the nerves are so strong, and I didn’t do good in the race. I want to be more strong in that part”.

Many others on the team shared this sentiment by stating that they expected to learn more about how to attain greater emotional balance or control. For example, Jessica mentioned, “I just want to be more steady with how my emotions are, and how I deal with them presently...” Other on the team related their expectations for performance more generally to being more resilient swimmers. Ben mentioned getting back to where he was before COVID, “I was pretty determined...I had a pretty spectacular performance my freshman year...then COVID hit and it kind of deteriorated...so I think it’s just the point, I want to get back to freshman year, where it was normal, everything was good”. Another individual defined resilience as her self-talk, “Just you know, telling myself if the practice looks hard, just tough it out, I can do it, telling myself I can do it when I think I can’t”.

Time 2: End of intervention

At the end of the MBI, participants were asked to again complete interviews. In these T2 results, 76 subthemes were organized under 11 higher-order themes. This data is presented in three major sections, (1) Self-Compassion, (2) Mindfulness, and (3) Expectations.

Self-Compassion

Following the intervention, participants were again asked to expand on their perspectives of self-compassion, and specifically, if those perceptions changed after having completed the program. These comments were combined and presented here in the higher-order themes of, *Self-Compassion Means, Learning Self-Compassion, Role of Self-Compassion, and Change in Understanding*. A full list of themes and subthemes can be found in Table 7, Appendix J.

Self-Compassion Means. In this round of data, individuals may have had a more nuanced way of explaining what self-compassion meant to them. For example, Naomi and Bella talked about how, to them, it was about the permission to feel, as evidenced by Naomi's statement, "That would just be like allowing yourself to feel the feelings you're having, and be able to move on from them". Others discussed self-compassion as it related to awareness, like Bella, who also tied it into giving yourself permission to feel emotions, stating, "...being aware that you can't really control everything. So if you have a bad day, letting it happen, if you have a really good day, feeling the joy of having a good day". Additionally, although many in *T1* discussed present-moment focus, very few talked about the 'quality' of that focus and how it may be influenced by self-compassion. In contrast, post-intervention, one SA said, "When we did actual practicing, he'd [intervention leader] say to gently bring yourself back...which I don't think I've heard before...it's not like the end of the world...you don't have to be upset if you lose focus..." Additionally, most participants talked about self-kindness, like Angela who said:

It's realizing that things aren't always going to go perfectly, and that you have to keep in mind that you don't have control over things a lot of times, and even if you do have control over things, you have to essentially be nice to yourself and not tear yourself down over things that don't necessarily go well.

Additionally, Jessica took this a step further in her discussion about self-love, stating:

My understanding has really kept to my core beliefs of how people work as people, and how I work as a human. It's about loving ourselves... giving us the ability to grow and change. Even if that's a good or bad change, it's giving us that little cushion to help us make those changes as we see fit.

Although many of the SAs also talked about key concepts of self-compassion such as forgiveness and defusing from unhelpful or negativity, Ben suggested that it was about getting rid of it, for example, "just like forgetting about the negative...trying to get that negative energy away...using it as an escape".

Learning of Self-Compassion. In this theme, SAs expanded upon what sources in their lives have influenced their understanding of what self-compassion means to them. Many, as expected, talked about the influence of the MBI itself, like Naomi who said, "The whole section that we had on self-compassion and moving on from those feelings we're having, I put those in use at meets already". Others talked about the influence of family values, like Bella who said, "I think it comes a lot from my parents just because of how they raised me." Additionally, Keira, Arturo, and Angela, talked about sport participation influencing how they learned self-compassion. As Angela put it, "My sport, honestly, just because you're not always going to have a good swim, and you can't beat yourself up every time you don't...it's just terrible on your mentality." Lastly, some individuals felt that they learned self-compassion from particularly difficult personal experiences, like Leo, who mentioned that after a break up in high school, "...I

learned that I have self-compassion because I hated myself for a while...just going from hating myself to loving myself..."

Role of Self-Compassion. In this theme, participants discuss how self-compassion plays out in their lives after completing the MBI, if at all, and in what ways. Individuals mostly talked about how self-compassion influenced their sport participation. For example, Keira talked about accepting feedback and being more coachable after the intervention. She stated, "I've gotten better at accepting more feedback, it used to be like, I don't want to hear it 20,000 times... but now...I've accepted that it's not a bad thing and that there's things you need to improve on." Additionally, many SAs expanded upon the nature of self-kindness they learned from the intervention, and how that has impacted their sport participation. This self-kindness was evident in Jessica's response, "I've been a lot less hard on myself. I overwork myself constantly, it's one of my fatal flaws, but it's just learning to love both myself and the work I do..." Another common impact of mindfulness in sport was for self-regulation purposes. Naomi equated self-compassion with the breathing ladder activity in the MBI, stating, "I did the breathing ladder a lot...probably like four or five times a week for about ten minutes." She went further to say, "I was getting nervous going into our mid-season meet, and I just kinda let myself work through those feelings. Then I went to go a season best time and PR. It was helpful."

Although participant responses indicated that the impact on sport performance was most salient, many talked about how self-compassion has played a role in their life outside sport. One individual talked about how self-compassion helped them realize their own self-worth, stating, "In my relationship with others...just figuring out that I'm actually worth more than I'm thinking, like beathing yourself down will make you think that you're not worth what you are actually worth." Additionally, some addressed the role that self-compassion now played in their

ability to have healthy coping strategies, specifically in situations of increased stress or in relation to difficult thoughts or emotions. As Carlos put it:

I would say self-compassion for me is a lifeline. It's why I'm still here. I think its for everyone...there are ways of hiding, or some healthy or unhealthy ways of coping with guilt, for example, however, I feel like self-compassion is the very last resource we can use to live...I like to use the following tool. Because I've always been more considerate with other people than myself, I like to think of myself as whatever is happening to me happens to them. As a friend, what would I tell them? An that's what I tell myself.

This individual demonstrated a high understanding of self-compassion both before and after the intervention. Others on the team had other perspectives on how self-compassion was helpful. For example, Leo talked about how positive self-talk was learned, and mentioned, "...once I figure out what I'm really thinking then I'll switch to 'maybe I should do something else. Maybe I should stop thinking about this.'"

Change in Understanding. Although most change is evident by participant responses to their definitions of self-compassion before and after the intervention, the research team specifically asked how their understanding may have changed. Some of the SAs were clear that things had not really changed, like Leo who said, "If anything, it just added on to confirm what I believed rather than adding anything vastly new to it [my understanding]." Others discussed how the MBI made them more aware of self-compassion, and now had more of a language to use. For example, Arturo said, "...the stuff we talked about I already knew but didn't have the words for it. Vocabulary if anything." Similarly, Bella said, "I think it made me more aware of it, it's always been something that's been there and not necessarily been something I've always turned to." In contrast, other members of the team talked about going from no understanding to having some conceptual awareness of what self-compassion means to them. For example, Mia explained that, "I think at the beginning I was kind of more focused on self-care...before this study

happened, I didn't really think much of it...but now it's something that I use almost every day, which is kind of crazy." Sofia expanded upon how her understanding changed, and it related to acceptance of self and feelings specifically. She said, "Before I used to be like, I can't be sad, I have to study, I have to do good at practice, or do good in meets...now I know its okay... I allow myself to be sad sometimes."

Mindfulness

At T2, participants were similarly asked to expand upon their perspectives toward mindfulness after having completed the MBI. This section of results is broken down into the higher-order themes of (1) *Mindfulness Means*, (2) *Learning of Mindfulness*, (3) *Role of Mindfulness*, and (4) *Change in Understanding*. The full list of themes and subthemes for mindfulness at T2 can be seen in Table 8, Appendix K. In addition, upon completion of the MBI, at the time of scheduling for the final round of interviews, participants were again asked to list three words each for what mindfulness meant to them. Participants expand on those words in the following section.

Mindfulness Means. In this theme, members of the team gave additional insight into what mindfulness meant to them after having completed the 7-week MBI. Similar to self-compassion, many discussed mindfulness in terms of a set of techniques for a specific purpose. Many talked specifically about its impact on self-regulation. For example, Naomi noted a lack of conceptual understanding but a practical knowledge, stating, "I don't really know what I would say for definition, I just kind of have used the techniques we were given to focus in on certain things...to be able to relax and breathe." Angela, however, talked about how self-regulation was connected to self-compassion, she said, "The more relaxed I am, it's easier to be aware and self-compassionate in the heat of the moment...being able to relax and take a step back, then be self-

compassionate...they go hand in hand.” Further, many participants also picked up on the skills related to present-moment focus. As one individual put it, “It’s just trying to take time and be in the moment for a little bit. Not worry about the past or the future, just be there in the present, and sometimes you do it through exercises like breathing...” In addition, some individuals talked about practicing mindfulness as a means to grow in awareness, for example, “...the more you use it the more self-aware you are...” Similarly, Lacey said, “I would say mindfulness is more of like being aware of not only the people around you, but how you’re feeling and your emotions.”

Additional definitions of mindfulness were related less toward the practice and techniques of mindfulness, and more about conceptual understanding of components. For example, many talked about present-moment attention, but some went on to explain the qualities of mindful attention. Lacey mentioned that, “Prior to this program...my swim practices were just very much going through the motions, not really putting in any sort of intention behind every practice. Now...I try my hardest to find an intention so it’s not like a drag.” Many also talked about mindfulness as it related to self-compassion. As Angela stated, “Self-compassion really plays a big role in that. Just being mindful that not everything is going to go your way, and even if it does...not getting too excited about it, but like just taking everything for what it is.” Taking it a step further, some even mentioned a common component of self-compassion, common humanity. For example, Jessica said, “It’s being grounded, it’s about knowing what kind of cost that you are making as a human being, and like what kind of impact you are making.” Other qualities of mindfulness were related to gratitude, as one person put it, “Knowing that you are in the present, that’s a gift in itself”, and acceptance and flexibility, as Jessica said, “Acceptance of it’s okay if my mind wanders, I’ll just do my best to come back.” Additionally, Luke and Arturo were the only individuals to talk about mindfulness as it relates to detachment from thoughts.

Arturo said, “I would think about it more related to diffusion. You’re not what you think, you’re you.”

Although many members of the team explained mindfulness in a sense of the different practical and conceptual components, others related it to a method of controlling their mind. Specifically, Ben stated, “Mindfulness is being aware...so whether there’s negative things happening...you need to be aware that you need to be positive...just drown out the negatives, just worry about yourself.” He went on to say that he felt mindfulness was a very personal experience, “Most of these things are self-centered. It’s what you can do, focused on your body, your mind...so I don’t need to be sitting there thinking about what’s going on in that person’s head.”

Learning of Mindfulness. Although many participants were first exposed to mindfulness formally through this program, many talked about others sources of learning it. Family and cultural values were important to Carlos, who had the most exposure and prior knowledge of mindfulness. He said:

“I’m from Rio Brazil, and I would say mindfulness is a very growing science where I’m from. My parents are very into it and we’ve always accepted it as part of life, not something that is belief or not.”

Others talked about prior experiences in therapy, and learning mindfulness through sport experiences. Luke, however, felt that he learned mindfulness through personal research during COVID-19 isolation, saying, “I definitely got into meditation pretty early in that summer...and did research on it...it led me to just general breathwork and meditation...” Lastly, most individuals talked about the various ways that they learned mindfulness from the present study and intervention. Keira said, “When he [intervention leader] was

teaching us all the different mindfulness practices and explaining how you can dive into this...that is what helped me better understand what it meant.” Lacey suggested that the most helpful aspect of the intervention was later in the intervention, stating, “I would say I think it was when we were actually in the water...that was most helpful...we have an actual intention for doing it”. She also said that, “It was nice to be able to do it as a team with the intention of being a lot more focused and using our cues.”

Role of Mindfulness. Participants were asked to comment on the role that mindfulness played, if any, in their current life. Many participants began, by exploring with the interviewer, different ways in which it may have impacted their sport participation. Some SAs commented on the techniques that they learned, like, “PMR, I think its called...that’s very relaxing”, or discussed focus cues, like Bella who said, “Since we have started I've noticed that when I'm swimming that... one of the cues that I wrote down was like every time my feet hit the wall to like focus in on what I'm doing.” Others talked specifically about self-regulation in sport, such as Keira who talked about a pretty significant change:

I've noticed I've gotten a lot calmer, like there's still nerves, because you know, you still get jitters before you step up on the block, but it definitely isn't as bad as it usually would be. I'm able to, you know, take like one good big breath in and out and shake anything off and then get up onto the block and get ready to swim, which I usually wouldn't have been able to do.

Further, SAs discussed having more present-moment focus. For example, Ben said, “I don't look at the people in lanes next to me. I feel like mindfulness plays a role in that... I'm focused on my race, if they swim faster than me, that's whatever. I'm just focused on my time.” Luke also mentioned how mindfulness has played a role in helping him change his relationship to his sport in the present moment. He said, “...as a senior I'm tired of swimming. Let me retire, but I'm

almost there... why not enjoy what I'm doing, even though sometimes it's not the most fun thing. I can figure out a way to enjoy it."

In addition to sport performance, SAs explored the ways that mindfulness may play a role in the lives more generally. Through discussion, Mia stated how:

When we were in training week and everything, we have our morning practice, and then I'd have an 8 A.M., a 9 A.M., and then an 11 A.M. [class], and it was super hard for me to be focused that entire time. But just kind of breathing, and taking one moment at a time, kind of helped me. Like the... what was that one... the words like, "I'm breathing in, I'm breathing out," that one always helped me.

Others talked about self-regulation in everyday life, for example, "In my current life, it plays a good amount... I get very anxious, and I do some deep breathing. That just stops me from worrying about the future, past, or whatever I'm thinking." Additionally, Jessica talked about the profound impact that mindfulness has had for her, and mentioned, "The meetings have really affected my mindfulness toward myself... its much more graceful, not as hard and fast, more fluid." She went on to say that, "I'm a lot more happy with myself, and where I am with my mindfulness. It's given me more allowance to be accepting... its given me the extra confidence boost I needed and really pushed me forward."

Change in Understanding. In the last theme, individuals were specifically asked about how their understanding of mindfulness changed and what aspects of the program led to those changes. Most detail in terms of understanding is evident by their definitions of mindfulness, but here SAs commented on whether they felt there were meaningful changes or not. Some were clear that there was no real change in understanding for them, like Ben who said, "I wouldn't necessarily say it has. I think the training has made it easier for me to understand how to fulfill the mindfulness role in my life and my sport. But I wouldn't personally say it has really

changed.” Others mentioned change in terms of learning techniques. Bella described her journey through the program as:

At the beginning I was like, “What in the world are we doing? Why, why are we doing this?” But now again, it was like for three or four weeks, I was like “Oh, my gosh! Why are we doing this?” And then we got in the water, and like I was talking about those cues we got to create and then like be guided through them. So by doing that then my understanding kind of happened like, Okay, well this can actually really be helpful.”

This information about how to apply techniques into a performance setting was the most commonly cited change in understanding of mindfulness. Of note, others also talked about how they learned that mindfulness could be practice informally, and the barriers of having enough time were of no consequence, stating that, “The amount of time it takes...it doesn’t always have to be a long amount of time...”, and “figuring out that there are what seems like a billion different ways to practice mindfulness was definitely changing for me.”

Expectations

In the last major section of T2 results, participants were asked whether they felt there was any changes related to their expectations toward the intervention. This section is presented in the major themes of (1) *Expectations Met*, and (2) *Expectations not met*. A full list of themes and subthemes for expectations can be found in Table 9, Appendix L.

Expectations Met. Most participants in the study indicated that their original expectations toward the intervention were met. Some general expectations that participants had were related to understanding how mindfulness can benefit them, increasing their frequency of mindfulness practice, and increased overall mindfulness. Towards these expectations, Bella stated, “Especially in the water...it has been so crazy when my feet hit the wall, I can focus in on that and set myself back up...” Further, Jessica said, “It’s grown [mindfulness]..it’s helped me get

better grades, and it's helped me be more self-compassionate...it all really wraps together.”

Others discussed their expectations being met in relation to performance mindset. Specifically improving in awareness, self-regulation, focus, and motivation. Related to her expectations of performance mindset, Keira said:

I started to use it a lot more, and with like the first time I did it, I didn't even realize that I was starting to do. It was just like, “Oh! I'm practicing mindfulness. I didn't even realize I was doing it.” So I just sort of like self-consciously started to do it more than I thought I would. It's really been helpful.

Further, a few SAs expanded upon the impact that the MBI had on their expectations toward increasing their focus. For example, Luke said, “I've done everything I could to kind of understand where I am, and just focus on where I am and how it will affect where I'm going...So I definitely think it's helped.” Some individuals also commented on meeting their expectations related to improving their overall wellbeing and relationship to self. One example is Lacey who summed it up nicely:

I think because of how much more I am aware of like mindfulness and like self-compassion, I think I care a lot more about my feelings and my emotions. Whether that's stress over an exam, or whether that's me stressing about a practice, I'm able to sit down and really think about why I may feel that way versus shutting it out.

Expectations Not Met. Although most participants reported meeting their expectations toward the intervention, some shared with their interviewer that they fell short in some areas, or changed. Before the intervention, Arturo stated that he wanted help in managing his feelings of perfectionism related to swim that, at times, caused him distress. When asked if this expectation was met, he said, “A little...but I'm still nowhere I would want to be...I broke a school record but I still wanted to go faster...” Similarly, related to learning more about self-regulation, one SA said, “I think it'll take more time and practice for them [anxiety and stress] to go down more,

and practicing it more in my sport context.” Mia also mentioned that she felt her expectations were not met relating to discerning her feelings, and said, “Probably not as big a change as the other ones...it’s a little bit easier to understand what I’m feeling after, but not in the moment...”

These results suggest that most participants felt that their expectations toward the intervention were met.

Appendix G

Table 4. Self Compassion (TI)

Themes	Subthemes
Self-compassion means	Self-awareness and understanding Self-Love & Kindness Self-talk and Self-Belief Cognitive Reframing None/Low
Role of Self-compassion	Benefits in Life Interpersonal relationships Protective Factors Focus Less worry Well-being or enjoyment Sleep or relaxation Understanding and Acceptance (of thoughts, emotions, situations) Balance Limited or no benefits Benefits in Sport Present-moment focus Self-awareness Resilience Enjoyment Self-Acceptance and encouragement None/unsure Challenges Requires Discipline Staying compassionate during adversity Self-understanding and Awareness
Learning Self-compassion	Friends and Family Personal experience Religion Role models or coaches Sport psychologist/therapy School

Appendix H

Table 5. Mindfulness (T1)

Themes	Subthemes
Mindfulness means	<p>Self-Regulation Mind/Body Connection</p> <p>Awareness (thoughts/emotions)/of others Awareness of Self (thoughts, feelings, emotions, body) Control Non-judgmental awareness Clarity (of mind, values, purpose) External Awareness/awareness of others</p> <p>Present-moment focus Grounding Positivity/Controlling the mind Let go of distractions (e.g., thoughts, emotions, external factors) and refocusing Sleep or relaxation</p> <p>Resilience Acceptance and adaptability Self-care Self-Compassion or Gratitude None/Low</p>
Role of Mindfulness	<p>In Life Emotional/Arousal Regulation Balance Awareness of self and others Clarity and self-understanding Positivity and/or wellbeing Grounding in the present Perspective shift No benefit/unhelpful</p> <p>In Sport Self-Regulation Intentionality Awareness Motivation, resilience, or commitment Focus/Anchoring/grounding No benefit/unhelpful</p> <p>Practicing Mindfulness Web-based application Yoga Grounding Breathing exercises Hypnosis Meditations Visualization Informal Practice Importance of consistent practice Difficulty practicing meditation</p>
Learning Mindfulness	<p>Parents Personal experience Sport psychologist/therapy Coaches</p>

School

Appendix I

Table 6. Expectations (T1)

Themes	Subthemes
Peace and Positivity	Self-compassion and acceptance Positivity Balance and flow Change perspective Cognitive Reframing Unsure
Coping with Stress and Difficult Emotions	Processing Emotions
More Mindful Attitude	Awareness of self and others Present-moment focus Less reactive
Performance Mindset	Control More confidence Self-regulation Stress and anxiety Greater emotional balance or control Resilience Learn and apply mental skills

Appendix J

Table 7. Self-Compassion (T2)

Themes	Subthemes
Self-Compassion Means	Permission to feel Awareness of emotions Present- moment focus Acceptance Self-Love & Kindness Psychological flexibility Getting rid of negativity Self-Forgiveness Defusion
Role of Self-Compassion	In sport performance Approach to sport performance Self-kindness Resilience Self-regulation Present -moment focus In life Self -kindness Healthy Coping Positive self-talk Happiness
Learning of Self-Compassion	Family values Program Sport participation Therapy School Religion Personal experiences
Change in Understanding	More aware No change Acceptance of self and feelings From nothing to something/conceptual shift

Appendix K

Table 8. Mindfulness (T2)

Themes	Subthemes
Mindfulness Means	Self-regulation Grounding Present-moment focus Controlling the mind Awareness Self-compassion Detachment from thoughts Common humanity Personal experience Qualities of attention Gratitude Acceptance and flexibility
Role of Mindfulness	In Sport Techniques used Focus cues Self-regulation Resilience Present-moment focus Performance readiness Increased enjoyment In Life Present-moment focus Self-regulation Personal Increased confidence Informal practice Self-compassion
Learning Mindfulness	Sport Experience Family/Cultural values Therapy Program COVID isolation
Change in Understanding	Through techniques Control Present-moment focus None/low Integration of values with mindfulness How to use in performance Informal practice From nothing to something

Appendix L

Table 9. Expectations (T2)

Themes	Subthemes
Expectations Met	<p>More mindful</p> <ul style="list-style-type: none"> Understanding how mindfulness can benefit Increase mindfulness practice More mindful of others Increased mindfulness <p>Performance Mindset</p> <ul style="list-style-type: none"> Increased awareness Self-regulation Present-moment focus Increase performance Increased focus <p>Wellbeing & Relationship to Self</p> <ul style="list-style-type: none"> Processing emotions Self-compassion Attitude towards sport Feeling good about self Caring about wellbeing Steadiness Positive mindset
Expectations Not met	<p>Perfectionism</p> <p>Intervention as Therapy</p> <p>Feeling during performance</p> <p>Ability to discern feelings</p> <p>Self-regulation</p>