

# A Qualitative Study of the Mindfulness Meditation Training for Sport: Division I Female Soccer Players' Experience

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This study explored how members of a Division I varsity women's soccer team experienced a 6-week, 12 session mindfulness meditation training for sport (MMTS) program. The coaching staff and entire team participated in the MMTS program. Seven of the team members volunteered to be interviewed after their participation in the MMTS program. Thematic analysis was implemented. Most participants reported difficulty understanding the process of meditation at the start of the MMTS program. Post-MMTS, they reported an enhanced ability to accept and experience a different relationship with their emotions, both on and off the field. They also noted the importance of creating a phrase of care for self and team for cohesion purposes. Enhanced mindfulness, awareness, and acceptance of emotional experiences were attributed directly to the mindfulness training. Participants provided specific recommendations for future sport-focused mindfulness meditation programs.

**Keywords:** sports, athletes, mindfulness, meditation, intervention, qualitative

Traditional performance enhancement work with athletes has focused on the development and utilization of athletes' psychological skills (Browne & Mahoney, 1984). These core mental skills include goal setting, imagery/mental rehearsal,

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arousal control, self-talk, and precontemplative routines (Anderson, 2005; Browne & Mahoney, 1984; Orlick & Partington, 1988). Such traditional sport psychology techniques are often used to help the athlete suppress and/or control unwanted negative thoughts or emotions to improve performance (Craft, Magyar, Becker, & Feltz, 2003; Maynard, Smith, & Warwick-Evans, 1995).

While the development of psychological skills has been given considerable attention, the efficacy of these approaches is in question (Gardner & Moore, 2012). There has been growing interest in an alternative approach that focuses on cultivating mindfulness to enhance sport performance (Gardner & Moore, 2004; Kaufman, Glass, & Arnkoff, 2009). The process of mindfulness training is quite distinct from trying to control or suppress internal experience. Gardner and Moore state, "The primary focus of mindfulness and acceptance-based models is to promote a *modified relationship* with internal experiences (i.e., cognitions, emotions, and physiological sensations), rather than seeking to *change* their form or frequency" (p. 309). The mechanism of change in the mindfulness training approach, the practice of awareness and acceptance, results in enhanced mental efficiency (Gardner & Moore, 2012). Such efficiency allows the athlete to place more attention on the task at hand versus on internal experience.

Mindfulness training in sport started with Kabat-Zinn, Beall, and Rippe's (1985) mindfulness meditation training for collegiate and Olympic rowers. Mindfulness is defined as "an open-hearted, moment-to-moment nonjudgmental awareness" (Kabat-Zinn, 2005, p. 24). The two main mindfulness-based approaches for athletes include the Mindfulness-Acceptance-Commitment (MAC) approach (Gardner & Moore, 2004, 2007) and Mindfulness Sport Performance Enhancement (MSPE; Kaufman, Glass, & Arnkoff, 2009). Initial research findings have demonstrated that mindfulness-based interventions can enhance athlete mindfulness (DePetrillo, Kaufman, Glass, & Arnkoff, 2009; Kaufman et al., 2009), flow (Gooding & Gardner, 2009; Kaufman, Glass, & Arnkoff, 2009; Kee & Wang, 2008), and performance (Schwanhausser, 2009; Gardner & Moore, 2004; John, Verma, & Khanna, 2011).

Mindfulness training in sport cultivates acceptance of external events and internal information such that the athlete can reduce distraction and more wisely focus on relevant moment-to-moment information to optimize performance (Bernier, Thienot, Codron, & Fournier, 2009). Yet, there has been little consideration to date of the personal experience of athletes who are first exposed to mindfulness practices, in terms of their receptiveness to the training and their perception of the impact of the mindfulness practice on their psycho-emotional sport-related experience. This study therefore considered the self-reported experience of seven athletes from a Division I women's soccer team, who participated in a 6-week, 12 session mindfulness training for sport (MMTS) program.

## Background of the Study

The impact of mindfulness meditation in sport is of particular interest to this study. There have been many studies that have highlighted the benefits of mindfulness meditation in nonsport samples. An association between meditation practice and both brain plasticity and changes in brain structure has been established (Davidson

et al., 2003; Hölzel et al., 2011; Lazar et al., 2005). For example, Hölzel and colleagues (2011) recently reported an increase in meditators' left hippocampus gray matter concentration (which is critically involved in learning and memory and helps regulate emotion) after participating in an 8-week Mindfulness-Based Stress Reduction (MBSR) program.

Research in mindfulness-meditation also indicates the benefit of enhanced ability to cope with stress. For example, Davidson and colleagues (2003) reported that participants in an 8-week clinical mindfulness meditation-training program experienced reduced anxiety and increased positive affect. Meditation was also found to produce increases in left-sided anterior activation, which is associated with faster recovery after a negative provocation (Davidson et al., 2003; Xiong & Doraiswamy, 2009). Tang and colleagues (2007), using a mindfulness-based meditation practice, found that the intervention group improved attention, self-regulation, and reaction to a mental stressor, as well as produced less cortisol. Mindfulness meditation training may provide a mechanism for athletes to optimally respond to psychological distress associated with competitive sport. Specifically, reduced anxiety, more positive affect, and improvement of attention and self-regulation would all be theorized to benefit athletic performance.

As mentioned previously, mindfulness training for athletes is an alternative approach to traditional performance enhancement. Mindfulness training in performance enhancement involves strengthening nonjudgmental awareness and acceptance of in-the-moment cognitive, affective, and sensory experiences (Gardner & Moore, 2004; Gardner & Moore, 2007), and this awareness may be useful to aid performance during competitive situations (Behncke, 2004).

Kabat-Zinn and colleagues (1985) were the first to report using mindfulness meditation training with athletes for performance purposes. They provided mindfulness-based meditation training for both collegiate and national team rowers. Some of the Olympic rowers noted that the mindfulness-based practice contributed to their performance. Since this early study, there has been growing interest in the relationship between mindfulness and factors associated with optimizing sport performance. Positive relationships between dispositional mindfulness and flow in sport (Kee & Wang, 2008), mindfulness and most dimensions of flow (Kaufman, Glass, & Arnkoff, 2009), and between mindfulness and in-game free throw percentages of Division I men's basketball players (Gooding & Gardner, 2009) have been reported. Further, Budnik (2009) examined the personality profile, stress coping styles, and self-image of karate competitors with different attitudes toward meditation, since meditation training is part of traditional karate training. Karate competitors who perceived meditation as unimportant experienced more anxiety and more easily lost their tempers. In contrast, individuals who reported that meditation was important to the practice of karate were better able to make logical decisions (Budnik, 2009).

Emerging in the sport research are new approaches to cultivate mindfulness. Gardner and Moore (2004, 2006, 2007) have designed the Mindfulness-Acceptance-Commitment (MAC) approach for sport performers to help them develop mindfulness and self-regulated attentional skills. This approach facilitates athletes accepting thoughts, feelings, and sensations as they occur before and during competition, versus trying to suppress and change such aversive experiences, and to concurrently

commit to actions that support their personal values (Bernier, Thienot, Codron, & Fournier, 2009; Gardner & Moore, 2004, 2007). This approach is informed by the clinical treatment known as Acceptance and Commitment Therapy (ACT) [see Gardner and Moore (2007) and Schwanhausser (2009) for a detailed explanation of the MAC approach]. A number of studies have used the MAC protocol with positive results, including enhanced performance and mindfulness of an adolescent springboard diver (Schwanhausser, 2009); less worry, more enjoyment of sport experience, and more engagement in sport of one male swimmer (Gardner & Moore, 2004); and after 6-weeks of engaging in the MAC approach, best sport performance was reported by a female power lifter (Gardner & Moore, 2004). In a theoretically MAC-based intervention, Bernier and colleagues (2009) implemented a traditional psychological skills training program with mindfulness and acceptance concepts with seven national golfers. Postintervention, all seven golfers in the intervention group increased national ranking, while only two of seven controls also increased national ranking. Improved performance was attributed to participants' heightened attention to relevant internal and external information in their sport context, from mindfulness and acceptance training.

Aherne, Moran, and Lonsdale (2011) considered the effectiveness of mindfulness training with collegiate athletes. The experimental group reported significantly greater flow states after mindfulness training compared with control participants. Kaufman, Glass, and Arnkoff (2009) assessed the impact of the Mindful Sport Performance Enhancement (MSPE) with recreational archers and golfers. The level of state flow that athletes reported during their weekly performances increased significantly over the course of the training. While the MSPE did not lead to performance improvements, the archers reported experiencing a significant increase in dispositional mindfulness.

With the interest in mindfulness meditation training for athletes, the dose of practice has greatly varied, for both guided practice and recommended independent daily practice. The MSPE approach includes the most time demanding approach. Its four sessions run from 2.5–3 hr, including 45–90 min of mindfulness based practices. The initial week of recommended independent practice begins with three 15-min sessions and, by week four, progresses to six 45-min independent sessions (Kaufman et al., 2009). In contrast, a study by John et al. (2011) of pistol shooters included six sessions per week of a daily group dose of 20 min with no recommended independent practice. The weekly dose of mediation practice for Kabat-Zinn and colleagues' (1985) study was 30 min, with one or two recommended daily independent practice session of 15 min. The briefest intervention to date was offered by Aherne, Moran, & Lonsdale (2011). Over six weeks, participants completed either a 10-min mindfulness exercise "once a day on specified days" or a 30-min mindfulness exercise once per week (p. 182).

When designing MMTS, the range of both group practice and recommended independent daily practice was considered based on previous research, the time constraints of Division I athletes' practice time and reasonable expectation of athletes participating in a mandatory program. The meditation dose of MMTS was less than other mindfulness meditations interventions in sport and, thus, was exploratory in nature.

## The Present Study

The purpose of the current study was to understand the experience of seven National Collegiate Athletic Association (NCAA) Division I female soccer players who participated in the 6-week, 12 session MMTS program. A total of 19 athletes participated in the MMTS program, with seven volunteering to participate in the postintervention interview. We sought to understand MMTS factors that would both contribute to and impede athletes from learning and practicing the core mindfulness meditation practices and related skills. The participants were asked questions about how they felt beginning the program, challenges, benefits, and recommendations for improving the MMTS program. There has been no consideration to date of the *experience* of athletes who have participated in mindfulness based meditation programs. Therefore, there is a need to understand how to best design mindfulness-based intervention for competitive athletes that is appealing and appropriate to athletes new to mindfulness training.

## Method

This study was conducted with seven ( $n = 7$ ) female Division I varsity women's soccer players from the same team, in the Northeast region of the United States. The head coach of the team employed a mindfulness meditation instructor to provide meditation training to the team. The MMTS program consisted of 12 sessions; each session took 30 minutes. Sessions were held twice each week over the course of the six-week period. The head coach of the team required that all team members of the Division I female collegiate soccer team attend all sessions of the meditation program. All coaches and the staff ( $n = 3$ ) also participated in the six-week mindfulness meditation training, alongside their athletes. Athletes were instructed to practice meditation outside of the program daily for 5–10 min per practice session. While all athletes ( $n = 19$ ) and all coaches and the staff ( $n = 3$ ) participated in the intervention, as previously mentioned, only those athletes who volunteered to take part in the study were interviewed ( $n = 7$ ).

### Brief Description of MMTS Program

MMTS is a mindfulness meditation program for sport. According to Sedlmeier et al. (2012) typical tools used to teach new mindfulness meditators include "observing one's breathing, counting breaths, and engaging in labeling (labeling the current thought experience as, for instance, "emotion," "pain," "planning," or "judgment"; p. 1141). All of these tools were included in the MMTS program as point of focus while practicing nonjudgmental acceptance of thoughts, feelings and sensations. In some sessions, the athletes brought to mind a challenging moment in sport and practiced nonjudgmental acceptance of thoughts, feelings and sensations. This is similar to the Stepping Into Fear, a nonsport mindfulness meditation exercise (Siegel, 2010).

In addition, MMTS includes a focused compassion exercise. Paul Gilbert (2010) is the founder of Compassion Focused Therapy (CFT). Gilbert (2009b)

emphasizes that a key attribute of compassion includes the “ability to be emotionally tolerant of distress” (p. 281). A focused compassion exercise was included given competitive sport can often activate performance anxiety, including debilitating self-critical thoughts (LeUnes, 2008). Without compassion, negative judgments are expected to interfere with mindfulness (Hofman, Grossman & Hinton, 2011). The MMTS compassion exercise is consistent with *compassion imagery*, an aspect of Gilbert’s (2009a) CFT compassionate mind training designed to “help people develop and work with experiences of inner warmth, safeness, and soothing” (p. 199), and with Loving Kindness Meditation (LKM) which is a practice of warmth and unconditional kindness toward self and others (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008; Salzberg, 2011). Though such compassion practices are not typically a stand-alone component of mindfulness meditation programs, compassion meditations and LKM are commonly practiced in the context of mindfulness within the Buddhist tradition (Hofmann et al. 2011; Marlatt & Kristeller, 1999; Salzberg, 2011).

The primary goal of the MMTS sessions was to train participants to increase their levels of mindfulness, to practice acceptance and nonjudgment of thoughts, feelings, and sensations. The dose, or amount of meditation practice per session, varies among mindfulness-based research methods in sport. Thirty minutes for each group session was allocated by the head coach. Twenty minutes of each session were devoted to the facilitator educating the participants on various aspects of mindfulness and the forthcoming exercises of each session. The facilitator also allowed time in each session for the participants (both athletes and coaches) to ask questions. It was decided to offer a dose of 10 min of each session to mindfulness meditation practice. A dose of 5–10 min of daily practice was recommended for the duration of the MMTS program.

There were four main areas to the training: open awareness capacity; caring thoughts for self and teammates; concentration exercises; and practicing acceptance of negative mind-states.

**Open awareness capacity.** Initially, the training was focused on having the participants practice being aware of what was occurring, in terms of the senses that they experienced (these included sounds, body sensations, and thoughts). In addition, participants were instructed to practice observing their experiences in a passive, nonjudgmental, interested way.

**Caring thoughts for self and teammates.** Participants were guided in some sessions to an alternate focus of wishing themselves and their teammates well, within the performance realm. This exercise began with each participant internally wishing herself well (i.e., warmth and kindness toward herself as an athlete). Participants would then be prompted to send similar wishes (and the warm feelings associated with these) to individual teammates and the team as a whole. This portion of the training was based on both CFT compassionate mind training (Gilbert 2009a, 2009b, 2010, 2011) and LKM, which involve increasing feelings of warmth, kindness, and caring for self and others (Fredrickson et al., 2008; Hofmann et al., 2011)

**Concentration exercises.** A variety of concentration exercises were introduced throughout the training. One example of such an exercise was an “attention-breathing ladder.” A portion of this activity included participants counting to themselves; they would begin at number one, count to ten with each exhale, and then count

back down to the number one with each inhale. If they lost their place, they were instructed to begin the counting process again.

**Practicing acceptance of negative mind-states.** Participants were prompted to think about past negative performance events. This exercise is similar to the Stepping Into Fear mindfulness meditation (Siegel, 2010). This alternate focus is consistent with the mindfulness meditation intervention from Kabat-Zinn and colleagues (1985) in which sport participants were prompted, in their independent mindfulness meditation practice, using an audio-tape to do the following:

Sit in an alert, dignified posture. Stabilize the mind in the present using awareness of breathing. Shift attention to a sense of the body as a whole. Evoke the image of oneself rowing in a race. Evoke feelings of harmony, flow, perfect technique and synchrony, and a sense of being part of one organism.

In the MMT training, the athletes were asked to bring to mind an event in sport that involved a negative feeling, such as frustration, embarrassment, or anger (Siegel, 2010). Once recalled, participants were encouraged to become aware of emotions associated with what they were recalling. Next, participants were asked to sit with (e.g., accept) their associated feelings and thoughts. For instance, participants were asked to notice and accept "frustration." Exercises like these were intended to help participants to become more accepting of negative mind and emotional states, to develop a different relationship to such internal experience. After each session of mindfulness training exercises, there was subsequent discussion about how such practice in the training could be directly transferred to the field, in practice and/or competition.

## Interview Procedure

Following the 6-week intervention, all 19 athletes were invited to participate in a postprogram interview to discuss their experiences, what worked, what did not work, and recommendations to improve the program. Seven athletes volunteered to participate in the postprogram interview, which is the basis for the current study. Participation in the interview was volunteer and self-selected: All athletes who volunteered to be interviewed were interviewed. Each of these seven athletes was interviewed individually. Interview times ranged from 20 min to 1 hr. Using a general interview guide developed for the purposes of this study, the semistructured interviews were designed to understand the athletes' experiences within the mindfulness meditation program. The interviews consisted of open-ended questions regarding the following: (a) what they liked about MMTS (if anything); (b) what they did not like about MMTS (if anything); and (c) how the program impacted them (if at all). Institutional Review Board approval was previously granted, and all participants signed an informed consent form, were debriefed, and were treated according to the ethical guidelines of the American Psychological Association.

## Data Analysis

The interviews were audiotaped, and then transcribed verbatim. The transcripts were thematically analyzed and coded independently by two researchers. Content analysis of the participant responses, as described by Patton (2002), was used to

determine common themes. Using the inductive procedure of open coding (Strauss & Corbin, 1998) transcripts were reviewed, and meaning units were labeled and grouped with similar content. Meaning units were then derived from every segment, which ranged in length from short phrases to entire paragraphs. Finally, all meaning units were given a brief title to convey the participant's meaning. Upon careful consideration, meaning units, dimensions, and higher-order themes emerged. Themes were based on grouping similar meaning units under dimensions that emerged from the data and grouping similar dimensions under higher order themes that emerged from the data. Dimensions and higher order themes were discussed by two of the researchers until agreement on both levels was established.

## Results

Seven dimensions emerged that represent the challenges, benefits, and constructive criticism regarding the athlete participants' experience of the mindful meditation intervention. There is a table provided for each dimension, Tables 1 through 7, with each representing one dimension. The higher order themes within each dimension are presented in alphabetical order, and the raw data themes within each higher order theme are listed in order of highest to lowest frequency. Some athletes noted a point that was coded more than once per raw data unit. In the tables, the total number of raw data units is included. Therefore, each athlete could be represented in more than one meaning unit in each table.

### Dimension 1: Baseline/Sport Focused and Stressed

The first dimension represents the initial attitudes, general emotional states, and behaviors experienced by the participants before starting the MMTS intervention. Two higher order themes emerged within this first dimension (see Table 1).

**Soccer focused and competitive.** Out of the seven athletes interviewed, three described themselves as highly focused on playing soccer and competing. One athlete discussed her approach to competition as, "I'm *really* focused for games and stuff because when you prep for the game, you're really thinking about the

**Table 1 Dimension 1: Baseline: Sport Focused and Stressed ( $n = 7$ )**

Higher order themes	Raw data themes
Soccer focused and competitive ( $n = 3$ )	Competitive ( $n = 2$ ) Focused on soccer ( $n = 2$ )
Excessive demands ( $n = 7$ )	Stressed ( $n = 4$ ) Busy ( $n = 4$ ) Emotional regulation challenges ( $n = 3$ ) Hard on themselves ( $n = 5$ ) Overwhelmed academically ( $n = 2$ )

game and what you have to do . . .". Another athlete commented to the same effect, stating, "I'm pretty focused in practice." One other participant offered many specific examples of high intensity, and contributing to highly competitive practices.

**Excessive demands.** Out of the seven athletes interviewed, seven participants reported feeling intense pressure and demands. Three reported having difficulty managing negative emotions that were associated with high performance expectations and responsibilities as student-athletes. Examples of excessive demand included feeling "overwhelmed academically" (2 out of 7; "My grades are not where I want them to be; that's where the stress is coming from"), excessively busy (4 out of 7; "A lot of times we go from the locker room to the field to lift straight from the classroom so it's like you have to shift focus pretty fast, and it's even worse in season"), and "stressed" (4 out of 7; "I'm still a stress mess! . . . I am just stressed all the time.") Typical thoughts revolved around athletes' recognition of their day-to-day pressures of managing both academic and sport demands. Five athletes specifically pointed to "being hard on themselves" before the meditation training. One athlete commented:

The biggest difference with the meditation was that when I would make a mistake, instead of being hard on myself, and not being able to recover . . . Like if I would lose the ball, I would sit and be sad that I lost the ball and not even like try to go and get (it) again. So I would be down on myself like that . . .

## Dimension 2: Impact of the Program: New Relationship With Emotions

Out of the seven athletes interviewed, seven athletes reported that the meditation program impacted their relationship with emotions, both on and off the field (see Table 2).

**Different relationship with emotions on the field.** Six participants reported experiencing a different relationship to emotions on the field ("I was able to be calmer . . . when practicing and competing"). One athlete stated, "Trying not to freak out as much has definitely made me be able to focus on what needs to be done and it's getting done." Similarly, a second athlete stated,

I think I'm able to focus the excitement or anxiety towards my play instead of getting too pumped up and then trying to do too much at the beginning of the game . . . (like) devoting myself to win a ball that I probably can't get to cause I'm over excited.

Out of the seven athletes interviewed, three participants also noted *increased perseverance* as an outcome of participating in the MMTS. One athlete provided a specific example:

Towards the end of the game . . . (when I was) becoming fatigued and everything, instead of saying that I'm tired and having my body sort of break down, [I] mentally push through it and work up the field for an attack, or get back and defend.

**Table 2 Dimension 2: New Relationship With Emotions ( $n = 7$ )**

Higher order themes	Raw data themes
Different relationship with high intensity emotions on field ( $n = 7$ )	Better able to moderate intensity ( $n = 6$ ) Increased perseverance ( $n = 3$ )
Improved <i>focus</i> on field ( $n = 6$ )	More <i>focus</i> in performance ( $n = 2$ ) More <i>helpful</i> in practices vs. competition ( $n = 1$ ) Better emotionally prepared ( $n = 1$ ) Better response to injury ( $n = 3$ ) Less distraction on field ( $n = 3$ ) More quickly recover from mistakes ( $n = 1$ )
Different relationship with negative emotions <i>outside of sport</i> ( $n = 6$ )	Helped with interpersonal challenges ( $n = 4$ ) Enhanced general emotional awareness and acceptance ( $n = 3$ ) Helped with academic stress ( $n = 4$ ) Used breathing focus ( $n = 4$ )
Different relationship with negative emotions <i>on soccer field</i> ( $n = 6$ )	Able to accept, calm down, and decide how to react ( $n = 6$ ) Able to move past negative occurrences ( $n = 6$ ) Identifying emotions when playing ( $n = 7$ ) More able to accept thoughts ( $n = 5$ ) Became aware of physical/emotional connection ( $n = 4$ )

**Improved focus on field.** For six of the seven athletes, an enhanced ability to focus on the field ranged from general statements of being more focused (“Being really focused in the present and being really observant”) to very specific examples of enhanced focus such as more quickly recovering from mistakes, feeling more emotionally prepared, feeling more focused for competition (“I could definitely notice more focus during the game”), having a better response to injury, and feeling less distraction on field. One athlete directly linked meditation to enhanced focus, stating, “I’m just really focused . . . I think if I continue to meditate than hopefully I’ll be able to do it [be focused] more consistently.” One participant commented about enhanced team focus as well. She stated:

It was a good feeling. It was contagious around the team. We were confident that the player on the ball was going to what they could with it but when they passed it off, the next player was going to be ready, too. We don’t always feel in the big games like that.

**Different relationship with negative emotions outside of sport.** Out of the seven athletes interviewed, six athletes reported benefits learned in MMTS outside of the soccer context. Highlighted benefits ranged from a different response to *academic stress* (4 out of 6; "like before tests, taking deep breaths in and out just so that I'm a lot more relaxed and calm before I go in it" and "I know I am a procrastinator already, but instead of pulling an all-nighter tomorrow, I can focus on it now") and helped with interpersonal challenges (4 out of 6). An example of MMTS helping with interpersonal challenge is exemplified by one participant's statement, "I was able to [think], all right, this is just something that happened. And it happened. And that it's done. I labeled it as "done" and moved on and I think everyone's moved on." Three participants also reported more emotional awareness and acceptance. This is demonstrated by the following participant comment: "I definitely was able to see a difference; throughout my day . . . I would be able to notice the different emotions that I'm having reactions to things."

**Different relationship with negative emotions on the soccer field.** A range of new response to emotions was reported by all seven athletes. One of the main ones was being able to identify emotions when playing. One athlete stated, "Just like saying, 'Oh, I'm angry,' but not becoming a part of it." Another recalled, "I would say that I could recognize sooner if I was slipping into a frustrated time period in practice." Another emerging ability was to move past negative occurrences on the field ("I felt like I was able to kind of just accept it and be able to move forward from there"). In line with more awareness of aversive emotions and moving past the negative, six athletes also noted a number of times being able to stop, calm down, and decide how to react. There were also reports of being more able to accept thoughts (5 out of 6; "I think that [meditation] helped me, just because I wasn't always focusing on all the bad stuff and I was able to kind of let it go"). Finally, four athletes noted a strengthened awareness of their physical/emotional connection. One athlete recalled, "In games or practices, I would notice where the tension was more. So it was easier to relax those muscles that were tense." One athlete gave an example of effectively recognizing and managing emotions on the field:

I'm [thinking], 'Okay it happened. I'm mad.' And it's actually turning the mad into . . . energy kind of . . . and I turn that into being even more intensely involved in the game. So, not letting it get me . . . out of the game. It's a new kind of energy to get me back into it . . . So it's like a new direction for the emotion . . . It is helping rather than distracting and making it worse.

### Dimension 3: Perspectives on Meditation Positively Evolved

Seven of seven athletes reported an increased appreciation and understanding of MMTS and the usefulness of meditation throughout the program. Initially, however, it was quite difficult for seven athletes to practice meditation and understand the connection of meditation training to soccer.

**Attitudes changed when meditation connected with soccer.** All seven participants noted a reticence to participate in MMTS. Once participants discovered a direct connection between the meditation practices and soccer performance, their acceptance of the program quickly increased. Three participants noted that it clicked,

when the purpose of the meditation became clear. One player recalled, "Towards the end, once [the facilitator] applied the soccer aspect to [meditation] and life, that's when it started clicking for me." Athletes were led through imagery exercises in which they practiced re-experiencing a self-selected emotionally aversive soccer moment and then practiced accepting the feelings of the given experience. For some, visualizing soccer experiences was powerful. When reflecting on imagery practice of aversive emotion, one athlete stated, "[We were] preparing ourselves so that if something that would cause those same emotions [happened] in the future, we wouldn't have the same reaction of breaking down."

**Attitudes changed with practice.** About half way through the program, six participants noted a shift in their attitude about the meditation practice. One participant stated,

Literally, I was like, 'Oh my gosh! This makes sense. This is gonna help me, this is gonna be great,' and then I did have to change my attitude. That was a personal thing for me. But, it got so much better in the second half of the classes."

Four athlete participants seemed to find a rhythm in their meditation practice ("After the first . . . couple weeks . . . we all kinda [got] used to it and got into a rhythm and started getting into it more"). Five participants also reported becoming more engaged when the meditation activities became more directive in terms of active cognitive directives. One athlete stated, "I was actually actively thinking about something instead of trying to . . . not think about anything, I guess. So that was a little bit easier for me." During the beginning of the program, seven of the seven athletes had difficulty sitting still and trying to pay attention to their breathing. However, when the athletes were given the task of recalling past experiences or counting their breaths, five of the seven reported that it was easier for them to stay focused and immerse themselves in the activity that they categorizes as more cognitively demanding.

**Early challenges.** There were some specific challenges for the athletes at the start of the program. Some simply struggled with meditation practice, which mostly had to do with not understanding how to meditate. One athlete stated:

I tried pretty hard, especially the first class. I thought [it] was really slow . . . [in a different voice] 'Focus on your breath, listen to what you can hear.' And I'm like, 'All I can hear is you talking to me [laughs]. I don't understand what I'm doing' . . . I had like a ton of questions.

Three of the participants also had misconceptions of meditation. One athlete reported, "I was maybe a little closed minded going in to it," and another athlete described a lack of understanding, saying "I think it's safe to say that our entire team was a little confused about . . . just what even meditation even meant, and we all have preconceptions of it's something else." Even though the meditation instructor emphasized that there was no right way to meditate, and that whatever occurred was an opportunity to practice acceptance, three athletes reported negatively judging

their ability to meditate; they felt "bad" at meditating. One athlete recalled her frustration, "I was like, great, I'm supposed to be more relaxed, and all I can think about is how bad I am at meditating."

**Meditation facilitator key.** The athletes' connection (buy-in) to the meditation program may be partly attributable to the meditation leader. First, three athletes reported that they liked the meditation facilitator's personality ("I really like [the facilitator]. I thought that he was a pretty good personality for our team.") And, second, the facilitator attending a game was pivotal; a point noted by most study participants. One athlete stated:

He came to watch us play and he came back in the class saying, 'You guys have to be aware of all this stuff' and related it to what he saw . . . A lot of people were like, 'All right, sweet, he knows about us now. He knows how we play' . . . He kind of got to know people individually and apply the soccer part into our training, which was great.

Table 3 identifies the raw data themes and higher order themes for dimension 3: perspectives on meditation positively evolved.

#### Dimension 4: Recommendations for Program Improvement

Athletes provided feedback about how to increase the program's effectiveness when applied to future participating athletic teams.

**Presentation of meditation training.** Five of the seven athletes talked about how to improve the presentation of the program on the part of the instructor. Five athletes wanted the instructor to relate (the meditation practice) to real-life/sport examples more. One athlete's critique was "Just explaining it, without everyday use, was kind of difficult for me to relate [to]". She went on to suggest, "Relate it to scenarios,

**Table 3 Dimension 3: Perspectives on Mediation Positively Evolved**

Higher order themes	Raw data themes
Early challenges ( $n = 7$ )	Struggled with mediation practice ( $n = 7$ )
	Misconceptions of mediations ( $n = 3$ )
Attitudes changed when mediation connected to soccer ( $n = 6$ )	"Clicked" ( $n = 3$ )
	Visualizing soccer, "powerful" ( $n = 6$ )
Attitudes toward mediation changed with practice ( $n = 6$ )	Players found mediation "rhythm" ( $n = 4$ )
	Mediation activities became challenging/active ( $n = 5$ )
	Accepted practice for what it is ( $n = 2$ )
Mediation facilitator key ( $n = 7$ )	Facilitator at game pivotal ( $n = 3$ )
	Like facilitator's personality ( $n = 3$ )

like real life scenarios, earlier in the process.” Other participants stated they liked the examples that were provided. One athlete reflected, “I like how he chose people from our team to give examples of.” Clearly the use of example was important to illustrate the application of meditation practice to sport and everyday life.

**Timing of the program.** The primary critique of the program was the time of day that it was administered. Six athletes felt it was in conflict with their physical needs. Athletes reported struggling to actively participate in the meditation program because sessions were held after practice when athletes were tired and hungry. One athlete described, “We did it after practice, at 7:30 [pm], when we’ve been practicing since 4:00 and it’s like, ‘We’re hungry; we’re tired.’”

There were recommendations to meditate before practice. Four athletes reported that this change would provide a chance for them to experiment with these new techniques immediately on the field. One athlete suggested, “Maybe do it before practice so you can sort of incorporate what you learned in the meditation session like directly into that practice for that day.” Also in relation to time, athletes suggested to extend length of program. One athlete noted that she would have gained more from the program had it lasted longer than six weeks. Also, with the many demands on their schedules (e.g., academic, social, and need for physical recovery), three athletes noted struggling with distraction. One player reflected, “After practice I was just like, all I want to do right now is do my work, like, I don’t have time to do this . . .”.

Table 4 indicates the raw data themes and higher order themes for dimension 4: recommendations for program improvement.

## Dimension 5: Reflections on the Process of Meditation

This dimension incorporates athletes’ perceptions of personal gains as well as their positive and negative feelings associated with the program.

**Gained something from the program.** Four athletes reported enhanced emotional awareness on the field. One athlete stated, “Just recognizing them [emotions] more was helpful because as opposed to playing through them, and without recognizing

**Table 4 Dimension 4: Recommendations for Program Improvement**

Higher order themes	Raw data themes
Presentation of meditation training ( <i>n</i> = 5)	Relate to real-life/sport examples more ( <i>n</i> = 5)
	Encourage feedback and homework ( <i>n</i> = 2)
	Less talking at times ( <i>n</i> = 2)
Change timing of the program ( <i>n</i> = 7)	Players exhausted and hungry ( <i>n</i> = 6)
	Mediate before practice ( <i>n</i> = 4)
	Players distracted ( <i>n</i> = 3)
	Extend length of program ( <i>n</i> = 1)

them, you can't fix 'em as much." Athletes also identified new mental skills resulting from participation in the meditation program. Athletes described this gain in the following way: "The stuff that I've learned from it [meditation program] I've been using a lot more like the breathing and . . . our mantra."

**Positive perceptions about the process.** Seven athletes talked about how the program was helpful. Some statements included, "It helped us out"; "The little things have definitely helped"; and "I still definitely see the differences it has made." Others commented on their assessment of the program being good/enjoyable. A few statements included: "I'm glad I experienced it" and "It was definitely a good experience." One athlete communicated these overall positive feelings to interviewers though the following statements: "I really liked the whole thing. Just the entire process, and I think it's helped . . . to go through the process." The athletes also expressed benefits from participating in a team setting. One athlete stated, "That was also a good thing, that we did it as a group. It was a collective thing. Because if I was just doing it by myself . . . I wouldn't have been as focused or . . . done it as well."

**Neutral/negative feelings about the process.** Neutral feelings about the program were based on the simple observation that the program was new/unique. One athlete commented: "Just something different that I [have] never seen before or experienced before." The impact of the program was discussed also in terms of you get what you give. One athlete noted that the value can only be obtained with effort. She stated:

You have control over, how much you're able to feel, by how seriously you're taking the exercise. Because you know, in any of those 6 weeks, we could have just sat there and like fallen asleep, but it's like how much you put in . . .

Though all of the interviewees noted a positive impact throughout the program, they questioned attributing all of the good to the meditation practice. Some of the athletes noted that any improvements experienced during the program could have been attributed to the positive impact due to coach, regardless of participation in the meditation program. One athlete said, "But, we've come in to practice—and coach has helped us—she lets us know exactly what we're doing."

Four athletes also questioned whether meditation helped them manage their emotions effectively or if the change could be attributed to other factors. A few noted that positive changes that occurred could be attributed to spring training, "I don't know if it's (improvements) directly from the program or just the regular process of Spring season." Others thought that they had already developed requisite skills to cope with aversive emotions:

At this point in our lives we've all found a way to cope with such overwhelming emotions or else if we didn't we wouldn't be playing like for [a Division I school]. We've all, whether people perceive them as right or wrong, found ways to deal with our emotions.

Table 5 indicates the raw data themes and higher order themes for dimension 5: reflections on the process of meditation.

**Table 5 Dimension 5: Reflections on the Process of Mediation**

Higher order themes	Raw data themes
Gained something from mediation ( <i>n</i> = 4)	Emotional awareness ( <i>n</i> = 4) New mental skills ( <i>n</i> = 2)
Positive perceptions about the process ( <i>n</i> = 7)	Helpful ( <i>n</i> = 5) Good/enjoyable ( <i>n</i> = 7) Liked as a team activity ( <i>n</i> = 1)
Neutral/negative perceptions about process ( <i>n</i> = 6)	New/unique ( <i>n</i> = 4) Credited positive impact of MMTS to other factors ( <i>n</i> = 4) Get what you give ( <i>n</i> = 1) Positive impact due to coach ( <i>n</i> = 2)

### Dimension 6: Self-Directed Meditation

Athletes were instructed to practice meditation outside of the program daily for 5–10 min per practice session. There were both challenges and successes with the self-directed meditation.

**Difficulties with self-directed meditation.** All seven athletes noted having an inconsistent daily practice outside of the meditation training sessions as prescribed by the instructor. One athlete described her thinking around her daily practice with “If I’m not . . . 100%, like I’m gonna meditate right now . . . If the idea kind of just like blows through my head maybe I’ll do it for just like 2 minutes.” A few of the athletes struggled to practice without a meditation leader (“It was harder for me to get myself down to actually sit and do it.”) They also noted being too busy to meditate (“I do think about meditating daily at least. Don’t always get to it . . .”), and too tired to meditate. One athlete noted considering continuing meditating after the program, “I hope to practice over the summer when I’m not . . . don’t feel so overwhelmed by everything.”

**Prompts for self-directed meditation.** All seven athletes specifically noted the environmental cues that prompted them to practice. Specifically, two prompts emerged when asked what inspired them to practice. Three athletes noted emotional prompts (“Sometimes I feel like I need to, just because it’s calming.”). Six athletes noted that alone/free time also prompted them to practice meditation independently. One athlete stated:

Definitely when I have free time and I’m alone is when I notice it, cause that’s when I am most aware of all my thoughts. So then it [mediation] will pop up. And I’m like, ‘I’m just thinking, I’ll sit here and meditate instead.’

**Timing of self-directed meditation.** Athletes meditated on their own outside of structured program time during a range of times (morning through evening) and

places (various spots on campus). Most of the interviewees practiced a few extra times per week for short bouts. Following is one example of how often and how long one athlete meditated: "I only did it a few times . . . just like five minutes . . . It would be a few deep breaths . . . Maybe five minutes, but that's it." There was also variation in when athletes meditated, with one athlete stating, "It was easier . . . to do it in the morning for sure. Like when we wake up." There was variation in where athletes meditated independently. For example, one athlete reported, "It's kind of fun to do it, like, sitting on the bus."

Table 6 identifies the raw data themes and higher order themes for dimension 6: self-directed meditation.

### Dimension 7: Caring Thought for Self and Team

As part of the meditation program, the team created a specific caring thought to wish toward self and team. The team independently decided to use this caring thought on the athletic field, which was a reported outcome though not intention of MMTS. The athletes brought the caring thought to mind as a team and individually as a reminder of their connectedness and unity. The good wishes toward self and team also served as a reminder of each athlete's ability to accept challenges on and off of the field.

**Caring thought for self and team impacted soccer and life.** Two athletes noted that the caring thought for self and team was inspirational. One athlete noted how the caring thought helped inspire her to be her best: "If I'm having a bad day I'm gonna think about how I want to be, I want to be this player, or this person. I just think that that's what the team took from that part of it and I think that was important." The athletes used the caring thought to decrease sport/academic/general

**Table 6 Dimension 6: Self-Directed Meditation**

Higher order themes	Raw data themes
Difficulties with self-direct mediation ( <i>n</i> = 7)	Difficulty applying mediation to their life ( <i>n</i> = 3)
	Inconsistent daily practice ( <i>n</i> = 7)
	Not committed ( <i>n</i> = 5)
	Struggled without meditation leader ( <i>n</i> = 5)
	Too busy to mediate ( <i>n</i> = 3)
	May continue mediating after the program ( <i>n</i> = 3)
Prompts for self-directed mediation ( <i>n</i> = 7)	Emotional prompts ( <i>n</i> = 3)
	Alone/free time ( <i>n</i> = 6)
Timing of self-directed mediation ( <i>n</i> = 7)	Varied amounts of time ( <i>n</i> = 7)
	Varied places ( <i>n</i> = 4)
	Varied times of day ( <i>n</i> = 4)

anxiety. Out of seven athletes, two athletes noted they wished the caring thought to themselves for exams. One stated, "I even started using it outside of soccer . . . like during a test when I'm like really freaking out or before a test. If I'm . . . trying to study, and I'm freaking out about it."

**Caring thought for self and team made team feel more united.** When the team developed (the) caring thought together, it was a powerful moment for 4 out of 7 participants. One athlete made the following statement about developing the caring thought:

And when we came up with our [caring thought] . . . everyone was on the same page. That's what I really liked about it. I liked that the team was doing the same thing. And everyone was doing it for each other. It wasn't just like 'Oh, I'm meditating, so that . . . my life is better,' or 'This is better for me,' it was more of like 'This is gonna make our team better.'

For 6 out of 7 athletes, the caring thought was used for self and team performance. One athlete described how the use of the caring phrase helped bond the team together, "This [caring phrase] has kind of formed to be what we're gonna do for next season, and I just think it encompassed everything that we've been talking about in our off season." The use of the caring thought became part of the team's way of getting ready for games. One athlete stated, "Before we start the game, we get together and we get each other ready, and we remind each other like it's [the caring thought] come up almost in every huddle since we made up the mantra." For 3 of 7 athletes, sharing caring thought for self and team was powerful, with both other athletes and the coaching staff. One player stated, "Hearing it from a coach, or some authority figure you respect, was definitely really powerful—so I really liked that one."

Table 7 highlights the raw data themes and higher order themes for dimension 7: team mantra.

**Table 7 Dimension 7: Caring Thought for Self and Team**

Higher order themes	Raw data themes
Caring thought for self and team impacted soccer and life ( $n = 5$ )	Caring thought for self and team was inspiration ( $n = 2$ ) Athletes used caring thoughts for self and team decreased sport/academic/general anxiety ( $n = 4$ )
Caring thought for self and team made team feel more united ( $n = 6$ )	Caring thought for self and team used for performance ( $n = 6$ ) Sharing caring thought for self and team powerful ( $n = 3$ ) Developed caring thought together ( $n = 4$ )

## Discussion

This is the first study to consider how members of a collegiate athletic team perceived the impact and experience of participating in a mindfulness-meditation based training for sport program. Essential to mindfulness, and MMTS, is the emphasis on acceptance and nonjudgment of what occurs moment-to-moment. MMTS also included alternate points of focus from the traditional tools of mindfulness meditation (Sedlmeier et al., 2012). These included (1) wishing self and teammates/team caring thoughts and (2) bringing to mind emotionally difficult scenarios while practicing acceptance and nonjudgment (Siegel, 2010). Some of the benefits noted may be a result of including the above additional elements to a traditional mindfulness meditation intervention for new practitioners.

One primary benefit reported was the enhanced ability to recognize and experience a different relationship with the emotions that occurred both on the field and in the classroom and to be able to de-center, that is to "step back and observe" (Gardner & Moore, 2007, p. 53). On the field, negative emotions were more readily identified and accepted. The athletes reported that they developed an ability to accept typically emotionally difficult internal experiences. Accepting such experiences may have led to their perception of enhanced ability to more wisely respond to such experiences. Specifically, the athletes reported being more able to: (a) accept, calm down, and decide how to react, and (b) move past negative occurrences.

Reflecting mindfulness, the athletes recognized the aversive emotion and learned to accept such emotions. In exchange, they reported an improved focus on the field, they were able to more effectively focus on the task at hand and experience a change in habituated (i.e., mindless) reactive patterns. This nonvolitional shift aligns with the mechanism of change in the mindfulness training approaches identified by Gardner & Moore (2012). Strengthened mental efficiency results from the practice of awareness and acceptance of internal experience. The athletes in this study noted an ability to focus on the task at hand while concurrently accepting difficult internal experience.

The reduction of the frequency of negative thoughts and the ability to let them go more quickly (Frewen, Evans, Maraj, Dozois, & Partridge, 2008) and the reduction of distracting and ruminative thoughts (Jain et al., 2007) has been reported following mindfulness meditation programs. Increased ability to recognize and develop a different relationship to such emotions is also consistent within mindfulness research (Behncke, 2004; Tang et al., 2007). Such reduction of cognitive activity is expected to contribute to optimal athletic performance (Gardner & Moore, 2007).

The changes for the athletes in this study were not immediate. All interviewees found themselves challenged initially by their participation in MMTS. Some athletes had misconceptions of meditation, in general, and what MMTS would entail. This suggests that providing and emphasizing an overview of what mediation is and explaining what would occur in each session would be helpful for similar future programs. In addition, many interviewees reported feeling "bad" at meditation. It may be necessary to directly address how to cope with an internal critical mind, early on, for high-level performers who are new meditation practitioners. Though the MMTS facilitator did address the importance of accepting all thoughts in the

training, clearly more emphasis was needed to help the athletes accept the normal self-criticism that occurs with novice meditators.

The dimension perspectives on meditation positively evolved shows that all participants reported a positive change in their attitude toward MMTS after a few weeks of practice. They found a rhythm with the program. The positive shift in attitude coincided with the introduction of active, directive meditation exercises (e.g., concentration ladders), and mental practice being specifically connected to soccer (e.g., bringing to mind aversive moments and practicing accepting related internal experience). In addition, interviewees specifically referenced the team's acceptance of the facilitator midprogram as essential in their positive shift in attitude toward the program.

Mindfulness meditation-based interventions for sport have also focused primarily on individual athletes versus teams (Solberg, Berglund, Engen, Ekeberg, & Loeb, 1996; Budnik, 2009; Gardner & Moore, 2004; Kaufman et al., 2009), with the exception of the study from Kabat-Zinn and colleagues (1985). This is the first study that reported specific benefits of athletes participating in a mindfulness training program as a team, versus individual athletes, participating in a similar program. One specific team benefit included creating a team caring phrase which was reported as contributing to team bonding. The caring phrase became a resource that was created by the team, and it was used for individual and team purposes to create warmth and caring for self and team. The coaches also used the caring phrase to inspire their athletes. This suggests that creating purposeful caring thoughts for self and team, created and used within the mediation program, may have the potential to give the team a source of meaningful support.

## Limitations

The athletes in this study were mandated to participate in MMTS, but they were not required to participate in the postprogram interview. As a consequence, only 7 of the 19 program participants chose to participate in the postprogram interviews. Therefore, the data derived from the postprogram interviews may not represent the experiences of all program participants and may, for example, represent the opinions of the more invested participants. However, mandatory versus voluntary participation could mitigate potential benefits of participating. In addition, the coaches participated alongside their athletes in the program. The benefits of the program may therefore have been augmented. Given coach participation, including strong buy-in from the coaches and possibly more attention by the athletes to the process due to coach presence, the athletes could have gained more from the program. Given only 7 of the 19 athletes on the team volunteered to participate in the postprogram interview process, generalizations to team experience cannot be made. It may be that only athletes with strong views or those who had a relatively more positive experience chose to participate in the interview. Thus, it is possible that this account of the benefits and/or limitations of the program is inflated. Long-term implications of participation in the program were not considered, as the interview process took place within a week post-MMTS participation. There was not a follow-up interview or questionnaire for the following performance

season to explore if the participants continued to attribute enhancements on the field to the meditation program or whether the athletes continued to participate in mindfulness meditation practice.

An additional limitation of the intervention was the organization and execution of the program. Feedback from the interviewees provided specific suggestions about how to improve MMTS. Specifically, interviewees indicated the program could be enhanced through the researchers taking the following steps: (a) prepare and educate athletes about meditation and what their participation in a meditation program will entail; (b) allow athletes time to "buy in" to the program; (c) within the program, embed a clear and consistent connection between meditation and sport; (d) understand the significance of the meditation program leader's ability to connect with the athletes; (e) organize the program sessions to best accommodate athletes' schedules in an effort to allow athletes to best absorb information and have the opportunity to practice newly learned skills in a timely and convenient manner; and (f) support athletes' future self-directed meditation practice to appropriately accommodate their newness to meditation and their demanding schedules. In addition, those designing MM programs in sport could include a means to assess frequency of between-session personal meditation practices.

## Future Research

In the past decade, there has been a resurgence in the interest of mindfulness meditation with athletes, after the long hiatus post Kabat-Zinn et al.'s (1985) landmark study. We need to continue to better understand both the benefits and how to best hone the offering of mindful meditation practice to athletes. Clearly, the MAC approach (Gardner & Moore, 2004, Gardner & Moore, 2007) has been demonstrated efficacious results and the MSPE approach (DePetrillo et al., 2009; Kaufman et al., 2009) shows promise, though it has not shown performance improvements. However, both programs are quite time intensive: The MAC approach requires eight modules, which generally includes a 12-week individualized protocol (Gardner and Moore, 2004), and MPSE meets for four sessions, each for 2–3 hr. Further research needs to consider whether more brief meetings, such as MMTS's 30-min sessions with 10-min meditations, could also contribute to performance and enhanced mindfulness. In addition, further consideration of the impact of providing mindfulness meditation training to teams, versus individuals, should be explored. And finally, researchers should consider which type of mindfulness meditation instructor would be most effective. The current study suggests that a facilitator who can connect with the team may be important for future meditation programs with a sport team. However, some mindfulness meditation studies with athletes have been reported as effective with no leader and only using an audiotape for individual daily practice (Aherne et al., 2011). In summary, there is a need for future research to address the impact of mindfulness meditation on sport performance for a larger range of level and type of sport. Future research should also examine possible differences of program impact among various sports, as well as between athletes on team sports versus athletes participating in individual sports.

## Conclusion

This initial qualitative study of the self-reports of team members participating in the mindfulness meditation program for sport (MMTS) resulted in expressed satisfaction and perceived sport and life benefits, on the part of the interviewees. One of the main challenges faced by competitive athletes is the ability to cope effectively with aversive preperformance and performance thoughts and emotions. Participants in this study reported a changed relationship with such internal experience as a result of the training: they were able to accept default thinking and emotions after a mistake, in practice and games, and seemed to have enhanced mental efficiency (Gardner & Moore, 2012) to focus on the task at-hand on the soccer field. Being able to witness aversive thoughts and emotions, accept them, and focus on the task at hand is an essential skill to develop to facilitate consistent, optimal performance (Gardner & Moore, 2007).

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