

EXPLORING POTENTIAL BENEFITS OF A MINDFULNESS-BASED
INTERVENTION FOR COACHES

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ABSTRACT

THESIS: EXPLORING POTENTIAL BENEFITS OF A MINDFULNESS-BASED INTERVENTION FOR COACHES

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In the broad world of athletics, those who pursue a professional career in coaching may encounter varying experiences. Despite differences shaped by sport, population, and level of competition, researchers agree that coaching is a stressful job and coaches are often ill-equipped to handle the stress caused by their profession (Giges et al., 2004). Mindfulness training has been shown to reduce stress and levels of perceived burnout, as well as increase emotional regulation, among other benefits (Baer, 2003). The Mindfulness Training for Coaches (MTC; Longshore & Sachs, 2015) program has displayed potential as an intervention tailored to the coaching population capable of increasing well-being and reducing stress among coaches (Longshore & Sachs, 2015).

The purpose of this study was to examine the effect of an online mindfulness-based intervention on perceptions of stress, emotion regulation, and burnout among full-time coaches. Sixteen full-time coaches ($n_{\text{female}} = 9$, $n_{\text{male}} = 7$) from the sport of swimming completed a six-week online mindfulness-based intervention program, an adaptation of the Mindfulness Training for Coaches (MTC; Longshore & Sachs, 2015) program. Participants completed online questionnaires gauging mindfulness (MIS; Thienot et. al, 2014), emotion regulation (DERS;

Gratz & Roemer, 2004), burnout levels (PFI; Trockel et. al, 2018), and stress (PSS; Cohen & Williamson, 1988) prior to the intervention, during weeks 3 and 5 of the program, and after the intervention. The baseline data indicated that full-time coaches report low levels of mindfulness, elevated difficulties in emotion regulation, high stress, and high burnout levels. Results revealed that, after the program, coaches experienced (a) a strong decrease in difficulties regulating emotions ($p = .02$) and stress ($p < .001$), (b) a trend towards an increase in mindfulness scores ($p = .08$), and (c) a trend towards a decrease in burnout ($p = .08$). Findings illustrate the relevance of participation in mindfulness for increased well-being in full-time coaches.

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CHAPTER ONE

Introduction

In the pursuit of performance excellence, the field of applied sport psychology has placed considerable emphasis on the development and application of mental skills. Techniques such as positive self-talk, guided imagery, goal setting, and relaxation techniques—often collectively referred to as psychological skills training (PST), are grounded in cognitive behavioral methods designed to foster self-regulation of internal thoughts and experienced emotions (Gardner & Moore, 2004). For several decades, sport psychologists have acted based on the assumption that controlling or modifying mental and emotional processes will lead to optimal functioning for successful performance (Hardy, Jones, & Gould, 1996). Negative emotional and physiological states such as anxiety, burnout, stress, pressure, and emotional mismanagement have long been reported by athletes and performers, thus prompting sport psychologists to design strategies meant to reduce those negative states and foster a positive mental state. Those strategies were built on the hypothesis that a positive mental state is a requirement for peak performance (Gardner & Moore, 2004). In response, several authors have presented empirical evidence indicating that attempting to suppress unwanted negative thoughts and emotions can actually have a paradoxical effect, bringing added attention to the unwanted stimuli and thus prolonging its presence (Purdon, 1999; Wegner, 1994). In light of these proposed inconsistencies present within empirical literature surrounding traditional PST techniques, several authors have advocated for an acceptance-based, mindfulness-centric approach to enhancing performance (Aherne et al., 2011; Gardner & Moore, 2004; Kaufman et al., 2009).

Mindfulness is defined as “paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally” (Kabat-Zinn, 1994, p. 4). Borrowing from Eastern religious and

cultural traditions grounded in Buddhist meditation, the modern psychological practice of mindfulness is secular, yet it retains many of the underlying themes of the practice from which it originates, including cultivating compassion, curiosity, a nonjudgmental attitude, awareness, and attention (Baer, 2003; Brown et al., 2007). As such, modern mindfulness training utilizes meditation in order to cultivate a state of present moment awareness and attention to the ebb and flow of experience from a nonjudgmental perspective. In athletics, by focusing on present moment awareness and attention, a performer is better able to adapt to the demands of the competition and prevents them from focusing on past mistakes or potential future outcomes, which takes their attention away from their current performance.

Mindfulness practice is grounded in two central elements: acceptance and awareness. Acceptance refers to the process of letting go, or willingly allowing whatever cognition or emotion presents itself in a given moment (Siegel, 2012). Accompanying acceptance is the removal of any effort to avoid, ignore, or change the present experience. Finally, acceptance is meant to represent a nonjudgmental frame of mind, meaning individuals do not place value judgments such as ‘good’ or ‘bad’ on their perceptions, feelings, and thoughts; they are simply allowing them to exist (Baer, 2003; Gardner & Moore, 2007). The second core component, awareness, is defined as the “conscious registration of stimuli, including the five senses, the kinesthetic senses, and the activities of the mind” (Brown et al., 2007, p. 212). In order to cultivate mindful awareness, individuals are encouraged to focus the breadth of their attention on one of these areas of their experience, including somatic, cognitive, emotional, and environmental elements (Baer, 2003).

In the past thirty years, mindfulness training and practice has gained clinical and scientific attention as a promising psychotherapeutic approach (Baer, 2003; Brown et al., 2007).

Benefits to mindfulness-based interventions have been displayed in a variety of populations, including educators, Marines, mental health professionals, doctors, nurses, and veterans (Bhatnagar et al., 2013; Di Benedetto & Swadling, 2014; Guidetti et al., 2019; Ireland et al., 2017; Johnson et al., 2014; van der Riet et al., 2018). Some of the benefits experienced following mindfulness interventions included reduced stress and anxiety, chronic pain, borderline personality disorder symptoms (Hayes et al., 2012; Hoffman et al., 2019; Kabat-Zinn, 1982; Linehan, 1993a).

As the field of sport psychology has grown in popularity, various approaches to mental skills training, including mindfulness practice, have emerged as potential avenues to enhanced performance. However, despite this recent surge of interest in mindfulness approaches, coaches, and their unique needs, have largely been ignored (Giges et al., 2004; Gould et al., 2002). Considering that coaches do not simply manage their team, but also deal with pressure from both on and off-field sources, their performance (e.g., decision making, emotional control) has the potential to profoundly influence the outcomes of the athletic contests they oversee (Vealey, 1988; Vernacchia et al., 1996). Furthermore, many coaches, especially at the youth club level, are called upon to fill multiple roles, including teacher, mentor, surrogate parent, administrator, and performer, often resulting in excess levels of stress and burnout (Giges et al., 2004).

Statement of Purpose

Researchers and consultants alike agree that coaches are principal factors in the sport environment and are fit to be recipients of interventions based upon enhancing their performances and lowering the presence of negative emotional and physiological states (Fletcher & Scott, 2010; Giges et al., 2004; Kelley et al., 1999; Raedeke et al., 2000). Furthermore, while there is an abundance of research reporting the multitude of stressors in the coaching

environment, few studies have presented strategies for coaches to help manage their stress (Longshore & Sachs, 2015). Mindfulness training has been shown to increase well-being, reduce stress, anxiety, and burnout levels, while also increasing emotional regulation (Baer, 2003). As such, the purpose of this study is to explore the effects of a mindfulness-based intervention on coaches' emotional regulation, amount of stress and levels of burnout.

Research Questions and Hypotheses

1: Do coaches report difficulty in regulating emotions, high burnout levels, high levels of stress, and low levels of mindfulness?

H1: Coaches who are surveyed prior to the mindfulness-based intervention will report difficulty in emotional regulation as measured by the Difficulties in Emotional Regulation Scale (DERS; Gratz & Roemer, 2004).

H2: Coaches who are surveyed prior to the mindfulness-based intervention will report high levels of burnout as measured by the Stanford Professional Fulfillment Index (PFI; Trockel et al., 2018)

H3: Coaches who are surveyed prior to the mindfulness-based intervention will report high levels of stress as measured by the Perceived Stress Scale (PSS; Cohen & Williamson, 1988).

H4: Coaches who are surveyed prior to the mindfulness-based intervention will report low levels of mindfulness as measured by the Mindfulness Inventory for Sport scale (MIS; Thienot et al., 2014).

2: Will a mindfulness-based intervention result in increased emotional regulation and decreased burnout in coaches?

H5: Coaches who participate in the mindfulness-based intervention will display lower levels of difficulty in regulating emotion compared to baseline.

H6: Coaches who participate in a mindfulness-based intervention will display lower levels of burnout after the intervention compared to before the intervention.

3: Will a mindfulness-based intervention result in decreased levels of stress?

H7: Coaches who participate in a mindfulness-based intervention will display lower levels of stress after the intervention compared to before the intervention

Definition of Terms

For the purpose of this study, the following terms are defined.

Burnout. The rate to which an individual reports fulfillment from their profession, exhaustion as a result of their work, and interpersonal disengagement within their career as measured by the Stanford Professional Fulfillment Index (PFI; Trockel et al., 2018) with higher scores on professional fulfillment being more favorable, and higher scores on work exhaustion and interpersonal disengagement being less favorable.

Emotion Management. The ability to regulate, including control and stabilize, one's affect and affective reactions, as measured by the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004), with higher scores indicating a greater ability to manage emotions.

Mindfulness. The ability to be aware of and attend to the present moment with acceptance or non-judgment as measured by scores on the Mindfulness Inventory for Sport (MIS; Thienot et al., 2014), with higher scores meaning greater ability to be mindful.

Mindfulness Training for Coaches (MTC) Program. The MTC program is an intervention for coaches seeking to reduce stress, increase emotion management, and enhance coaching through the practice of mindfulness and meditation exercises (MTC; Longshore & Sachs, 2015).

Stress. The amount a person feels overwhelmed, fatigued, and anxious in daily life, as measured by the Perceived Stress Scale (PSS; Cohen & Williamson, 1988), with higher scores meaning higher amounts of stress.

Delimitations

1. Participants will be limited to full-time coaches
2. Participants will coach youth-level athletes between the ages of 5-19
3. Participants will have been in their current position for a duration of at least one year

Assumptions

1. Participants will attend all the sessions of the training program and do all the activities required outside of the sessions.
2. It is assumed that participants will provide honest feedback in relation to their adherence to the assigned mindfulness program
3. It is assumed that participants will provide honest answers

Limitations

1. Recruiting a large enough sample size desired for experimental designs may prove to be a difficult task, given the lack of previous research examining coaches and the well-documented lack of available time that coaches perceive as a supplemental aspect of their profession.
2. A second limitation will be the potential for drop out or retention of the participants. In the initial MTC study (Longshore & Sachs, 2015), multiple participants dropped from the study.
3. Another limitation may be reflected in the experimental population. By focusing exclusively on swimming coaches, the results may not extend beyond the sport of

swimming. Furthermore, results may not apply to coaches outside of the realm of youth sports.

4. Finally, the novel coronavirus (COVID-19) may impact the results due to unique stressors the disease may reasonably expect to pose upon the participants, which may not be applicable to future coaches.

Significance of the Study

The results of this study will directly contribute to the field of sport psychology by adding to the relatively new area of research regarding the intersection of mindfulness and sport performance. To date, there is only one study that examined the impact of mindfulness training on the coaching population. This study will help to fill a gap in the literature examining the effect of mindfulness training in coaches. Coaches are commonly called upon to fill numerous additional roles, including teacher, mentor, surrogate parent, administrator, and performer. These additional roles, combined with the regular pressures of athletic performance such as winning or losing, often result in excess levels of stress and burnout, for which the coaching population is often not equipped to manage (Giges et al., 2004). Results of this study will provide insight to the benefits of mindfulness training on coaches' emotion regulation and overall well-being.

CHAPTER TWO

Literature Review

Over the past forty years, mindfulness has risen to prominence as a counseling intervention and has subsequently been studied in a variety of settings. Given the abstract nature of mindfulness, testing for efficacy in its ability to help alleviate presenting problems can prove to be difficult. In order to help explain the current discussion surrounding mindfulness, the literature review for this study is presented in the following sections: defining mindfulness, mindfulness interventions, benefits of mindfulness-based interventions, limitations of mindfulness approaches, and mindfulness and athletics. The literature review demonstrates support for mindfulness as an effective intervention strategy for improving psychological problems as well as improving one's ability to regulate their emotions. Similarities between athletes and coaches are discussed, and a justification for coaches as a viable population for mindfulness interventions is presented.

Defining Mindfulness

In its most fundamental formulation, mindfulness refers to attentional awareness and acceptance to experience. Though its origins are tied to ancient Eastern religious traditions, it is important to note that modern mindfulness, as practiced in Western societies, has separated itself from its Buddhist roots and emphasizes a secular configuration (Baer, 2003). Jon Kabat-Zinn (1994), one of the primary individuals responsible for introducing the concept of mindfulness to modern Western populations, defined mindfulness as, "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (p. 4). He later expanded the definition to include non-judgmental awareness of present moment experience (Kabat-Zinn, 2000).

The two components cited in Kabat-Zinn's conceptualizations of mindfulness, awareness and acceptance, have remained sustained foundational blocks from which others have elaborated upon in efforts to form an operational definition. Bishop (2004) proposed a two-component model for mindfulness, focusing on both self-regulation of attention and the adoption of an open and accepting orientation towards one's experiences. Brown and Ryan (2004), who combined the two major components to form a singular conceptualization, define mindfulness as a "combination of receptive awareness to and awareness of events and experiences as they naturally occur" (p. 242). Langer (2000) broadened the language surrounding awareness and acceptance in relation to mindfulness, citing a state of mind that is actively engaged in present experiences and reacting to context as necessary components of a mindful state.

In an effort to build upon the foundational blocks of awareness and attention, several authors have provided necessary criteria to operationally define each component (Baer, 2003; Bishop, 2004; Brown & Ryan, 2004; Langer, 2000). Perhaps more importantly is acknowledging their inherent connection; that is, one cannot occur without the other. Though separate mechanisms, one must first become aware of their experience in order to attend to each moment. Across the many definitions for awareness provided in literature, special emphasis is placed on the present moment experiences of individuals. Kabat-Zinn (1994) referred to awareness as an active, moment-by-moment activity, while Brown and Ryan (2004) focused on the ongoing nature of being aware as it relates to the constantly shifting and changing stimuli impacting individual experience. The simple acknowledgment of stimuli, both external and internal, is the first step toward developing a mindful state.

After achieving awareness, mindful individuals strive for acceptance of present experiences, regardless of their orientation. The ebb and flow of negative, positive, and neutral

experience is unavoidable, and mindful acceptance promotes a manner of allowing for all ranges of experiences to exist as separate from the individual. Within the literature, acceptance is often tied to a state of welcoming and nonjudgment. Baer (2003) promotes an awareness that is lacking in judgment, avoiding evaluations of experience in favor of open acceptance to all experience. Bishop (2004) emphasize the need to maintain an attitude of curiosity in relation to experience of any given moment, allowing each mental state to exist without making an effort to produce a different experience. Central to the idea of acceptance in relation to mindfulness is the concept of allowing each cognition, sensation, or emotion making up an experience to exist without judgment nor making an effort to change or delete the present stream of consciousness.

The final component to conceptualizing and operationally defining mindfulness is an understanding of its antithesis: mindlessness. Mindless experience is characterized by a lack of awareness and a more favorable view of past behavior as opposed to present moment attention. Langer (2000) notes that to act in a mindless manner treats behavior as pre-programmed and rule or routine governed. This definition, which notably employs a lack of awareness and attention in order to form its criteria, gives further insight to the concept of mindfulness, and begins to shed light on the potential benefits it may provide.

Mindfulness-Based Interventions

As practiced within psychotherapy, there are four major intervention programs and approaches utilizing mindfulness: Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1982), Mindfulness-Based Cognitive Therapy (MBCT; Segal, Williams, & Teasdale, 2002), Dialectical Behavior Therapy (DBT; Linehan, 1993a, 1993b), and Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999). Both MBSR and MBCT approaches are grounded strictly in mindfulness as the primary intervention component, while DBT and ACT

utilize the concept of mindfulness in order to promote broader forms of therapy. Notably, all four approaches apply to group settings, while ACT was constructed as a form of individual therapy that can also be applied to groups.

Mindfulness-Based Stress Reduction (MBSR)

Originally developed in a behavioral medicine setting, MBSR has grown to become the most frequently cited method of mindfulness training (Baer, 2003). The program began as a means of providing therapy to populations with wide ranges of chronic pain and stress-related disorders who had expressed discontent with traditional medical treatments. Kabat-Zinn (1982) developed MBSR as a way of teaching meditation as a means of encouraging well-being through the acceptance of pain or discomfort. MBSR programs typically last 8-10 weeks and consist of weekly 2-2.5 hour instructional and practice sessions as well as homework assignments. Participants are instructed in several meditation skills, including body-scan, hatha yoga poses, and breathing exercises. Throughout the program, participants are encouraged to detach from negative sensations by allowing them to exist in a nonjudgmental state of mind. Through this process, participants may come to understand thoughts and experience as constantly evolving processes that do not necessarily need to be acted upon.

Mindfulness-Based Cognitive Therapy (MBCT)

Teasdale, Segal, and Williams (1995) developed the MBCT program in order to test whether mindfulness meditation could help to prevent relapse of major depressive episodes. Two pillars of MBCT are the teaching of decentered and detached approaches to cognitions. Mindfulness practice delivers these teachings via the elements of non-judgmental awareness and observation that serve as foundational blocks to the therapy. More specifically, the MBCT program uses the mindfulness element of non-identification of thoughts and feelings, teaching

participants to simply view them as mental events (Baer, 2003). In developing MBCT, the researchers leaned upon the hypothesis that the separation from, and deintensification of negative thoughts and emotions leads to decreased depressive relapse (Teasdale et al., 1995).

MBCT is based largely on Kabat-Zinn's (1982) MBSR program and is an 8-week group intervention that incorporates elements of cognitive therapy to promote detachment from one's thoughts. Formal practice exercises such as body scanning, hatha yoga, and sitting meditation are taught to participants, as well as informal practice in daily activities such as walking or driving, during which participants attempt to embody a detached state of mind. Detachment from cognitions are achieved through nonjudgmental acceptance of present thoughts and feelings, as they are reframed into existing simply as mental events (Baer, 2003). MBCT varies from MBSR in that it is meant for smaller groups, ideally a maximum of 12 participants, and is aimed specifically at treating depression rather than a more generalized group of populations and presenting problems (Siegel, 2012).

Baer (2003) reviewed two MBCT empirical studies and noted both showed significantly lowered relapse rates of depression. In a more recent review of mindfulness-based intervention programs, Marchand (2012) found a multitude of studies supporting the efficacy of MBCT, focusing primarily on its evidenced ability to prevent relapse among patients suffering from unipolar depressive disorder. Additionally, MBCT has been shown to be successful in promoting a reduced facilitation of attention for negative information and a reduced inhibition of attention for positive information in people with a history of major depressive disorder, thus signaling toward the program's ability to promote more open attention towards all emotional information (De Raedt, 2012).

Dialectical Behavior Therapy (DBT)

DBT was originally created by Linehan (1993) for the purpose of treating suicidal ideation and borderline personality disorder. More recently, it has been adapted to meet the needs of various populations, including those with multiple problems or diagnoses (Linehan, 2012). Multifaceted in its approach, DBT is based on the premise that one's reality is constantly in flux, changing due to the constant and continual synthesis of opposing, dialectic forces encountered in everyday experience. For patients undertaking DBT training, a principle beginning step is the acknowledgement of these opposing forces, and the possibility for them both to be true simultaneously. As an example, a participant can be pleased with their progress in therapy, yet also strive for more improvement at the same time. Highlighted by this example is the dialectic of acceptance and change, which represents the core focus of DBT (Baer, 2003). In order for the treatment to be successful, patients must learn to balance the act of accepting present moment experiences and sensations while simultaneously working to change them. Mindfulness, through its emphasis on nonjudgmental acceptance and observation of present moment experience, plays a primary role within DBT. Specifically, mindfulness is used to help clients attend to present moment experience, accepting the presenting reality. It is from this state of acceptance that patients are freer to work toward meaningful change within their lives. Given that DBT utilizes a number of cognitive and behavioral treatment procedures aimed at facilitating a change in thoughts, emotions, and behaviors, mindfulness is incorporated less as a perspective of the therapy and more as technique used to teach the synthesis of acceptance and change (Neasciu et al., 2012).

In a typical DBT protocol, clients are taught mindfulness skills in a weekly skills training group, which additionally covers skills for emotion regulation, interpersonal effectiveness, and distress tolerance. Specifically pertaining to mindfulness skills, clients are taught to observe,

describe, and participate in their present experiences (“what” skills) as well as instructed on attitudes conducive to mindful practices, such as nonjudgement (“how” skills). The skills group meets weekly and has no definitive timeframe for its therapy (Siegel, 2012).

In a review of 10 randomized control studies for Borderline Personality Disorder, Neacsiu et al. (2012) found significant reductions in suicidal behaviors and greater social adjustments among DBT participants compared to a control group. In a more recent assessment of DBT’s ability to lead to clinical change, Zeifman et al. (2020) found improvements in mindfulness and distress tolerance among DBT skills training participants compared to an active waitlist control. These findings support the significance of mindfulness and distress tolerance in DBT skills training for patients with Borderline Personality Disorder.

Acceptance and Commitment Therapy (ACT)

Hayes et al. (1999) derived ACT from the foundations of behavior analysis, and originally intended for it to be universally applicable to all people with any range of presenting problem (Hayes et al., 2012). By focusing on the ways that clients understand and perpetuate their difficulties through language, ACT addresses the problem of psychological suffering by altering the very ground on which rational change strategies rest (Hayes et al., 1999). The core components of ACT, acceptance and commitment, attempt to promote the simultaneous nonjudgmental acceptance of cognitions with committed actions toward value-based behaviors.

The concept of psychological flexibility is central to the foundation of ACT. Psychological flexibility refers to the desired ability to stay in contact with the present moment regardless of associated negative thoughts, feelings, or sensations. Additionally, successful application of psychological flexibility contains the conscious decision of choosing to either maintain or adapt behaviors based on the situation and personal values (Hoffmann et al., 2019). ACT conceptualizes

the teaching of psychological flexibility through six core themes: contact with the present moment, values, committed action, self as context, defusion, and acceptance. The themes are often illustrated within a “hexaflex” (Figure 1), a visual representation of the program’s goals, which allows patients to view each theme as a psychological skill that collectively lead to psychological flexibility. The six themes represented in the hexaflex can be distributed among the two core components of ACT, acceptance and commitment, with some themes being associated with each component. ACT utilizes mindfulness teaching of acceptance to teach an alternative to experiential avoidance, encouraging patients to live with all presenting physical and emotional experiences. Commitment is tied to value-based behaviors, and patients are taught to select qualities of purposive action that are unable to be quantified (Hayes et al., 2012). Once values are selected, patients learn to develop patterns of effective action that link back to their desired outcomes. Though it does not explicitly cite mindfulness as a described technique, ACT does promote actions that align with the aforementioned definition of mindful behavior (Hayes et al., 2012).

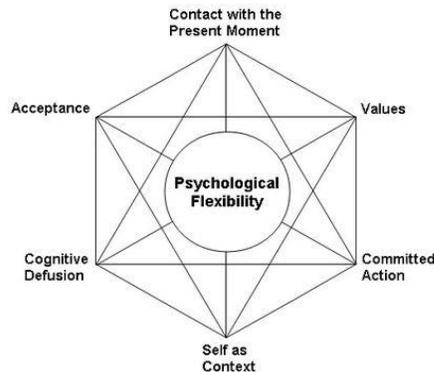


Figure 1: *Hexaflex*

Those partaking in ACT are taught in an individual psychotherapy environment, instructed by a therapist on each of the six dimensions of the hexaflex, leaning primarily on established metaphors and interventions (Hayes et al., 2012). Participants are taught to cultivate

an observant self who is capable of separating oneself from their sensations, thoughts, and emotions (Baer, 2003). Furthermore, mental states such as acceptance and nonjudgment are encouraged, as well as observation of thoughts instead of becoming absorbed by them. Notably, ACT is highly individualized to meet the needs of a client, as opposed to group settings of previously mentioned approaches (Longshore, 2015).

ACT has shown efficacy across various conditions, including chronic pain, depression, and anxiety (Hayes et al., 2012). A review of 21 randomized trials revealed a meaningful effect size of .66 at post-treatment and .65 at follow-up (Hayes et al., 2006). As it related to sport, Gardner and Moore (2007) applied ACT to the athletic performance arena by developing a seven-week program consisting of largely the same organizational format and goals of individual ACT therapy (i.e., interventions, metaphors). Data suggested that the application of ACT to sport resulted in improved performance via reduced psychological disturbance (Gardner & Moore, 2007).

Benefits of Mindfulness-Based Interventions

Baer (2003) was among the first to conduct a meta-analysis on the potential benefits of mindfulness-based intervention programs in psychotherapy. For this review, Baer examined the four major mindfulness-based intervention programs covered previously, and he included studies focusing on various populations, in both clinical and nonclinical settings. For clinical populations, benefits included reduced anxiety, decreased levels of depression, and increased psychological health. Among non-clinical populations, participants reported increased psychological health and well-being, decreased stress levels, and increased empathy.

More recently, a variety of new populations have been examined, and specific benefits of mindfulness-based intervention programs have been discovered, both psychological and

physiological in nature. In line with the original treatment goals of MBSR, a recent meta-analysis found mindfulness-based interventions to be moderately effective in lowering pain levels and symptoms of depression compared with all types of control among 30 randomized controlled trials (Hilton et al., 2017). While mindfulness practice has been examined for both psychological and physiological benefits, among the most cited benefits of mindfulness-based interventions are psychological in nature. Frequently studied population groups include those in the helping professions, specifically teachers and health care professionals. In a review of eight separate studies, mindfulness training was found to demonstrate significant decreases in job burnout for teachers and health care professionals (Luken & Sammons, 2016). Elaborating on psychological benefits of mindfulness training, a review of 20 studies demonstrated mindfulness training positively impacts nurses' and nursing students' stress, anxiety, depression, burnout, sense of well-being and empathy (van der Riet et al., 2018).

The effectiveness of mindfulness successfully decreasing characteristics of burnout has emerged as a particular area of interest into the benefits of mindfulness, as several studies have shown its efficacy in this area among various populations, including mental health professionals and doctors (Di Benedetto & Swadling, 2014; Ireland et al., 2017). Additionally, research has examined the psychological benefits for various other populations, including educators, Marines, and veterans (Bhatnagar et al., 2013; Guidetti et al., 2019; Johnson et al., 2014).

Limitations of Mindfulness-Based Interventions

While numerous benefits of mindfulness interventions have been demonstrated in the literature, they are not without limitations. One substantial limitation lies in the integration or application of mindfulness. While each of the four reviewed approaches utilize the application of mindfulness, there are differences in the way mindfulness is implemented across each approach.

Notably, MBSR and MBCT place mindfulness at the center of the intervention, classifying them as true mindfulness-based approaches (Baer, 2003). DBT and ACT include mindfulness within their approaches, but more so as a supporting role serving the underlying foundation for the intervention (Brown et al., 2007). This prominent difference in the position of mindfulness within the core components of each program complicates comparisons by demanding more than simple comparisons of results in clinical trials. Relatedly, it is unclear in DBT and ACT how to attribute measured therapeutic benefits between mindfulness and other factors of the program (Baer, 2003).

A lack of randomized control trials with appropriate comparison groups in empirical research examining mindfulness-based interventions has been reported as an additional major limitation (Marchand, 2012). Thus, when considering demonstrated benefits, it is difficult to determine whether they are due to the treatments or simply having increased attention paid to participants. Small sample sizes also reflect a limitation within the empirical study of mindfulness. This observation has primarily made findings difficult to generalize. In terms of critically examining the programs themselves, there has been a strong reliance upon self-report measures, which can complicate the reading of reported benefits. Relatedly, to date, little attention has been paid to adherence to programs during trials, long-term adherence to programs and/or mindfulness practices, and lasting benefits (Longshore, 2015).

Numerous studies have indicated that self-reported mindfulness increases with mindfulness training and meditation experience (Baer et al., 2008; Brown & Ryan, 2003; Chambers et al., 2007). These increases in mindfulness have also been correlated with several desired outcomes of mindfulness treatment programs, including decreased burnout and stress (Roeser et al., 2013) and decreased anxiety (Derosiers et al., 2013). However, subjective scales

are not without limitations. Presently, different scales are in use among researchers, each measuring different facets of mindfulness (e.g., awareness, attention, etc.), thus making it challenging to compare findings across studies. Furthermore, no subjective scale currently exists that comprehensively measures all aspects of mindfulness (Bergomi et al., 2013). Self-report measures are vulnerable to various forms of response bias (Grossman, 2008). One such demonstrated example included participants' responses to the Mindful Awareness and Attention Scale (MAAS) correlating to social desirability (Brown & Ryan, 2003). Additionally, the exposure to mindfulness training may itself prompt participants to self-report increased levels of mindfulness as a result of increasing familiarity with the concepts of the practice (Grossman, 2008).

In response to limitations of self-report measures used for studying mindfulness, alternatives have been proposed, including qualitative assessment and assessment by others (Grossman, 2008). Specific to mindfulness, no objective measures are being widely used. One measure gaining attention is the breath-counting task (BCT), which has been proposed as a reliable and valid candidate for objective measurement. In a recent study, BCT performance showed good test-retest reliability and a trend toward significant correlation with subjectively measured mindfulness (MAAS) scores (Wong et al., 2018).

Mindfulness and Sport

Performance Enhancement

While mindfulness as a performance enhancement strategy in the field of athletics is relatively new, parallels between traditional sport psychology techniques and the core tenets of mindfulness training can be identified. For example, promotion of present moment attention, letting go of past performances and future worries, focusing on processes instead of outcomes,

and controlling controllables can be viewed through the lens of mindfulness training (Kaufman et al., 2009). Despite these similarities, mindfulness training differs most strongly from traditional Psychological Skills Training (PST) in its approach to internal processes of thoughts and emotions. PST, which is rooted in Cognitive Behavior Therapy (CBT), stresses the importance of controlling internal processes through techniques such as self-talk and arousal regulation. However, mindfulness training argues that seeking to control internal processes does not lead to performance enhancement and may in fact be impossible (Moore, 2009). In response, mindfulness training for athletes promotes the acknowledgement and nonjudgmental acceptance of internal processes. This is attained through a full awareness in the present moment, an understanding of the ebb and flow of experience, and psychological flexibility from moment to moment. Finally, PST has been known to address performance-based behaviors, while mindfulness practices are intended to have positive benefits on the overall well-being of the performer as well (Kaufman et al., 2009; Moore, 2009).

Gardner and Moore's Mindfulness-Acceptance-Commitment (MAC) approach to performance enhancement has emerged as the premiere mindfulness-based approach applied in the field of athletics. The approach borrows heavily from the principles of Acceptance and Commitment Therapy (ACT) and helps athletes and performers increase their self-awareness and practice of nonjudgmental reaction to whatever state may be present (Schwanhausser, 2009). Another core component of the approach seeks to draw a distinction between rule-governed behavior and goal-directed behavior. Athletes are taught to recognize and detach from rule-governed behaviors which have developed over time based on past experiences (e.g., feeling anxiety in the face of a skilled opponent and subsequently playing less aggressively). Alternatively, goal-directed behaviors are behaviors based on values and are used as a way to

promote self-regulation in each present moment rather than relying on experiences of the past. Central to the idea of goal-directed behaviors is connecting athletes with their values, which helps to distinguish between everchanging moment to moment experiences and keep them focused on their long-term developmental goals (Gardner & Moore, 2004).

Recently, sport psychologists have begun examining the effects of mindfulness-based approaches in athletics, and similarly have advocated for approaches to enhanced performance that differ from traditional PST (Gardner & Moore, 2004). Rather than attempting to control thoughts and emotions, athletes have been taught to recognize that positive, negative, and neutral thoughts and emotions will rise and fall with the ebb and flow of experience, apart from any effort from the individual. Practitioners have instead focused on providing athletes with psychological space to observe and respond to their internal and external environments (Baltzell et al., 2014; Gardner & Moore, 2007; Kaufman et al., 2009). By increasing an athlete's ability to tolerate a wide spectrum of emotions and thoughts by cultivating a space through which they can nonjudgmentally observe their experience, individuals are thought to be better suited to handle the presence of unwanted thoughts and emotions.

To date, varied populations have been examined for potential benefits of utilizing mindfulness interventions to enhance performance. Findings have included improved self-report of concentration and experiential acceptance in adult weightlifters, increased mindful awareness, attention and flow among elite adolescent swimmers, and greater self-control within performances among university athletes across multiple sports. (Aherne et al., 2011; Gardner & Moore, 2004; Schwanhausser, 2009).

Coaches

Historically, in the field of sport and exercise psychology, regardless of traditional psychological skills training or mindfulness-based approaches, the focus of attention has been primarily on performance and dedicated toward assisting the athletes. Consequently, coaches have gone largely ignored (Gould et al., 2002). This is in part because coaches have rarely been categorized as “performers” in the same way as athletes were. Despite this, researchers have called for the need to frame coaches as performers as well as understand their unique needs (Giges et al., 2004). Rationale for this perspective derives from considering the many duties of a coach, including, but not limited to, managing the team, handling pressure both on- and off-the field, as well as their performance (e.g., decision making, emotional control, etc.). The coach’s ability to manage those duties have the potential to affect the outcome of an athletic contest or performance (Vealey, 1988; Vernacchia et al., 1996).

Considering the sizable influence that coaches have upon their athletes and the performance environment, coaches may be excellent candidates for sport psychology services (Giges et al., 2004; Gilbert & Trudel, 2012; Virgili, 2013). A possible point of entry for sport psychologists may be to investigate ways of mitigating unwanted outcomes common to the profession such as stress and burnout rates (Dale & Weinberg, 1990; Kelley et al., 1999; Raedeke et al., 2000). While each of these studies acknowledge the prevalence of stress and burnout among various coaching populations, they do little to address potential solutions to these problems (Giges et al., 2004). The role of emotional regulation in coaches has also been highlighted for its impact on coaching performance and well-being (Hill & Davis, 2014). Nonetheless, a clear gap in the literature exists relating to examining potential interventions that may be targeted at coaches in helping them to address these variables of concern. Furthermore,

coaches are not well equipped to handle the anxiety they encounter on behalf of the job, and often fail to prioritize their own well-being (Giges et al., 2004).

Burnout and Emotional Regulation for Coaches

Coaches regularly experience high levels of stress as they seek to balance team and athlete performance-related demands, tactics and decision making, all while attempting to maintain outward composure and confidence (Thelwell et al., 2008). Furthermore, due to the rapid rate of change in contemporary sport, researchers have called for the constant monitoring of stress in coaches, as well as support calls for helping interventions (Fletcher & Scott, 2010). Burnout is defined as, “a psychological syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with people in some capacity” (Maslach & Jackson, 1984, p. 134). Recently, coaches have been examined for evidence of burnout, and in some cases have been found to report levels comparable to those working in the helping professions (Kelley et al., 1999). Studies have identified a reduced sense of personal accomplishments, including lack of financial satisfaction from one’s job and lack of motivation efficacy leading to feelings of being professionally undervalued and burnout in coaches (Sas-Nowosielski et al., 2018). While the majority of the research on burnout in coaches has surrounded individual factors, organizational factors such as perceived support have been associated with self-reported levels of burnout (Kilo & Hassmen, 2016). However, while the prevalence of coaches’ burnout has been well established, there is a clear gap in the literature in presenting coaches with potential interventions to help curb the risk of burnout (Giges et al., 2004; Raedeke et al., 2000).

Managing and controlling emotions, also known as emotion regulation, is critical to successful sport performance (Hanin, 2000). For coaches in particular, emotional regulation is

paramount for success due to its ability to influence how athletes attempt to manage their emotions and determine subsequent emotional experiences and performances (Davis and Jowett, 2010; Lafreniere et al., 2011). Surprisingly, much of the research relating to the role of emotion regulation in athletics has been dedicated to athletes, while coaches have been largely ignored (Lane et al., 2012). One of the few studies focusing on emotion regulation in coaches provided evidence for perfectionism influencing emotional regulation among coaching populations. Furthermore, the study found that subtypes of perfectionism, specifically personal standards and evaluative concerns, gave further insight into capacity for emotional regulation, with high standards and low concerns leading to the most favorable results (Hill & Davis, 2014). Yet, while emotional regulation is recognized as important to coaching performance and well-being, only one study has proposed an intervention to assist coaches in employing stronger emotion regulation strategies (Longshore & Sachs, 2015).

Coaches may experience stress due to performance-related demands related to the surrounding environment, which can subsequently affect their performance (Thelwell et al., 2008). However, researchers have argued that coaches who are effective in addressing stressful situations are not only better equipped to perform their job, but they are also better equipped to help their athletes subsequently handle stress (Hanin, 2008). This connection may lead coaches to seek ways to improve their own stress management strategies as opposed to focusing strictly on their athletes.

Mindfulness Training for Coaches Program

Longshore and Sachs (2015) conducted the first and only study examining a mindfulness-based intervention for coaches. The researchers, drawing from mindfulness literature and mindfulness-based psychotherapy approaches, created a mindfulness training program geared

specifically toward coaches, the Mindfulness Training for Coaches (MTC) program. The program integrated teaching and training participants in various mindfulness practices first through an exploratory pilot study, which laid the foundation for their primary study.

Longshore and Sachs (2015) conducted their study using a mixed-methods approach. The quantitative portion of the program utilized a pretest-posttest design, while the qualitative portion followed a prospective cumulative case study design. A total of 16 Division I, II, and III college coaches participated in the study. An initial 1.5-hour introductory session educated participants on mindfulness, the rationale of their training, and a handful of introductory breathing exercises. Participants were then instructed to partake in a 6-week home program consisting of daily practices of 20 minutes delivered via a USB obtained at the introductory session. In addition to the home program, participants were also asked to attend two bi-weekly group sessions to discuss the program among each other and the researcher. Following the final day of the home program, a final concluding session was held to discuss how the coaches may take their training forward in their careers, as well as perform the qualitative portion of the study.

The authors found that the MTC program lead to various benefits, including improved mindfulness and emotion management, stress reduction, and enhanced coaching behaviors at the end of the program compared to baseline. However, due to a smaller sample size than expected, no control group was able to be included. As a result, the researchers were unable to compare results of coaches who completed the training versus those who did not. Therefore, no definitive statements can be made regarding the benefits displayed in the participants and their relation to the MTC program. Consequently, future studies should aim for larger sample sizes.

Furthermore, while the program touched on a variety of outcomes of interest within the coaching population, such as stress reduction, the researchers suggest adding burnout and job

satisfaction to the list of variables to be examined in the future. This, the researchers presume, may assist in the recruitment of future participants.

Finally, the initial MTC study examined collegiate coaches only, providing only a small window into the broader population of coaches. In the future, researchers may benefit from targeting coaches at the youth club level of varying sports. Additionally, selecting participants from a specific sport rather than a mixed sample may allow the researchers to account for sport-specific concerns within its coaching populations.

Conclusion

Mindfulness, a state of being characterized by an emphasis on attentional awareness and acceptance of experiences in the present moment, has gained popularity recently as a counseling intervention. There are four major intervention programs that utilize mindfulness: Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1982), Mindfulness-Based Cognitive Therapy (MBCT; Segal, Williams, & Teasdale, 2002), Dialectical Behavior Therapy (DBT; Linehan, 1993a, 1993b), and Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999). Though varying in their application and descriptions of mindfulness techniques, each of the four major mindfulness-based intervention programs have displayed reductions in a variety of problematic conditions, such as pain, stress, anxiety, and depressive relapse (Kabat-Zinn, 1982; Kabat-Zinn et al., 1992; Teasdale et al., 1995). However, mindfulness intervention programs are not without limitations, including whether mindfulness is the central tenet of the program or simply an accompanying tool, lack of randomized controlled trials present in the literature, and a reliance on self-reporting measures (Baer, 2003; Bergomi et al., 2013; Marchand, 2012). Despite these limitations, researchers are continuing to advocate alternative ways of measuring mindfulness to advance the literature (Grossman, 2008).

Benefits to mindfulness-based interventions have been displayed in a variety of population settings (Bhatnagar et al., 2013; Di Benedetto & Swadling, 2014; Guidetti et al., 2019; Hilton et al., 2017; Ireland et al., 2017; Johnson et al., 2014; van der Riet et al., 2018). The application of mindfulness in an athletic setting has gained popularity recently, with a strong emphasis on its effect of performance (Gardner & Moore, 2004). Studies aimed at exploring the effect of mindfulness training on athletic performance have displayed benefits including improved self-report of concentration and experiential acceptance in adult weightlifters, increased self-reported mindful awareness, attention, and flow among elite adolescent swimmers, and greater self-reported self-control within performances among various university athletes across multiple sports. (Aherne et al., 2011; Gardner & Moore, 2004; Schwanhausser, 2009).

The field of sport psychology has long placed emphasis on studying athletes, while an attempt to understand the unique needs of coaches has largely been unexplored. (Gould et al., 2002; Giges et al., 2004). The purpose of this study is to examine coaches for potential psychological benefits to be gained as a result of a mindfulness-based intervention program. Considering the sizable influence that coaches have upon their athletes and the performance environment through self-regulation of emotion, as well as high rates of stress and burnout within the coaching profession, coaches may be excellent candidates for mindfulness training. (Dale & Weinberg, 1990; Giges et al., 2004; Gilbert & Trudel, 2012; Longshore & Sachs, 2015; Virgili, 2013). To date, only one study has proposed a mindfulness-based intervention aimed specifically at coaches (Longshore & Sachs, 2015). This initial study was limited to strictly to the population of collegiate coaches, and it remains yet to be seen how coaches at different levels of competition and employment (e.g., professional, youth/club) will respond to mindfulness training. The purpose of this study is to examine potential benefits of a mindfulness-based

training program directed toward youth club swimming coaches. In addition to being previously unexamined in mindfulness-oriented studies, youth coaches are an important population to focus on due to the multiple roles they are commonly called upon to fill, including teacher, mentor, surrogate parent, administrator, and performer (Giges et al., 2004). Due to the likelihood of these multiple responsibilities resulting in excess levels of stress and burnout, mindfulness practice may prove to be beneficial to this population.

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Chapter 3

METHOD

The purpose of this study is to explore the effects of a mindfulness-based intervention on coaches' emotional regulation, burnout, and perceived levels of stress. Furthermore, the study is intended to add to the literature on the efficacy of the Mindfulness Training for Coaches (MTC, Longshore & Sachs, 2015) program.

Participants

The researcher will aim to recruit a total of 70 full-time, male or female, elite-level youth club swimming coaches. The researcher anticipates participants ranging in age from approximately 22-60 years old. The researcher anticipates allocating 35 participants into the experimental group, and 35 into a waitlist group that will serve as a control. The waitlist group will be given the opportunity to complete the training after the experimental group completes the program. The researcher will strive to retain a minimum of 15 coaches per group in the event of participants dropping out of the program.

To be eligible for the study, coaches must (a) be designated as a full-time employee by their club or team, and (b) have worked in their current position for at least one year. The inclusion criteria have been selected for the purpose of designating coaching as the primary occupation of each participant, replicability of the study in differing locations, and stability of the working environment. Full-time coaches working are subjected to the highest number of sport-related potential stressors compared to part-time coaches, including, but not limited to, performance concerns, demands of practice schedules, lack of time off, and personal fulfillment over time. Coaches who report having a psychological disorder or currently attending therapy will be excluded from the study.

Instrumentation

The following instruments will be used to gather demographic information from the participants, as well as measure state and trait levels of emotional regulation, characteristics of burnout, and levels of stress.

Coach Participant Information Sheet (CPIS, Appendix A)

The CPIS will gather demographic information from the participants, including age, gender, sport, total years coaching, number of years in current position, and approximate age range of athletes they coach.

Mindfulness Inventory for Sport (MIS, Thienot et al., 2014, Appendix B)

The MIS is a 15-item self-report measure of one's awareness level, as well as non-judgment and refocusing. Each item is rated on a 6-point Likert-type scale ranging from 1 (*not at all*) to 6 (*very much*). The measure features three subscales: Awareness, Non-judgmental, and Refocusing. Each subscale was determined to be internally consistent by the researchers with reliability coefficients of .77 for the subscale of awareness, .78 for non-judgmental, and .77 for refocusing (Thienot et al., 2014). The MIS has been validated with populations of student athletes and elite athletes, including preliminary validation that showed little evidence of invariance across sport type and partial invariance across gender (Thienot et al., 2014).

Difficulties in Emotion Regulation Scale (DERS, Gratz & Roemer, 2004, Appendix C)

The DERS is a 36-item dispositional measure of functional and dysfunctional regulation with strong internal consistency ($\alpha = .93$) and test-retest reliability ($r = .88$; Gratz & Roemer, 2004). Each item is rated on a Likert scale ranging from 1 (*almost never*) to 5 (*almost always*). The measure features six subscales which were found to sustain good internal consistency and acceptable test-retest reliability (Gratz & Roemer, 2004): Nonacceptance of Emotional

Responses ($\alpha = .85$; $r = .69$), Difficulties in Engaging in Goal-Directed behaviors? ($\alpha = .89$; $r = .69$), Impulse Control Difficulties ($\alpha = .86$; $r = .57$), Lack of Emotional Awareness ($\alpha = .80$; $r = .68$), Limited Access to Emotion Regulation Strategies ($\alpha = .88$; $r = .89$), and Lack of Emotional Clarity ($\alpha = .84$; $r = .80$). Upon completion, items are summed to obtain an overall score.

Subscale scores are found by summing the items within each subscale.

Perceived Stress Scale (PSS, Cohen, Kamarck & Mermelstein, 1983, Appendix D)

The PSS is a 10-item global measure of perceived stress. Items are rated on a 5-point Likert-type scale, ranging from 0 (*never*) to 4 (*very often*). Scores are obtained by summing all items with higher total scores indicating higher perceived stress. The PSS has been found to be internally consistent ($\alpha = .85$) and reliable ($r = .85$) in two samples of college-aged students ($n = 332$ & $n = 114$; Cohen, Kamarck & Mermelstein, 1983). The PSS was subsequently tested among a stratified random sampling ($N = 2,387$) of the general population ages 18-65 which found the scale to have suitable internal consistency ($\alpha = .75$; Cohen & Williamson, 1988).

Stanford Professional Fulfillment Index (PFI, Trockel et al., 2018, Appendix E)

The PFI is a 16-item survey that measures two aspects of wellbeing: burnout and professional fulfillment. Burnout is measured via two subscales: work exhaustion and interpersonal disengagement. Professional fulfillment is measured in a separate subscale. Items are rated on a five-point Likert scale ranging from 1-5 (“*not at all true*” to “*completely true*”) for the professional fulfillment subscale, and 1-5 (“*not at all*” to “*extremely*”) for the work exhaustion and interpersonal disengagement subscales. Scale scores are calculated by averaging the scores of all items within the corresponding scales, with higher scores on the professional fulfillment scale being more favorable and higher scores on work exhaustion and interpersonal disengagement scales being less favorable. The PFI was originally developed for physicians. A

select number of items on the scale were adjusted to better fit the population of this study (i.e., “patient” was changed to “athlete”). The measure demonstrated good internal consistency and test-retest reliability within an original sample of 185 residents and 65 practicing physicians for each subscale (Troemel et al., 2018): work exhaustion ($\alpha = .80$; $r = .86$), interpersonal disengagement ($\alpha = .71$; $r = .92$), and professional fulfillment ($\alpha = .91$; $r = .82$).

Intervention

The Mindfulness Training for Coaches (MTC) program (Longshore & Sachs, 2015) was developed and subsequently revised based upon participant feedback. The program aims to teach and train coaches in various components of mindfulness practices. Longshore and Sachs created their program based on the Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1982) program, personal communications with one of the creators of Mindful Sport Performance Enhancement (MSPE) training program (Kaufman et al., 2009), and personal communications with an expert Mindfulness-Based Stress Reduction teacher. For this study, elements of the original MTC program were modified based upon participant feedback, personal communications with the original researchers, and perceived benefits from the current researchers’ perspective. The details of the program are presented next.

Participants will partake in an initial MTC training session, which will be delivered virtually and completed at the participant’s own discretion prior to a pre-established program start date. In the original MTC study, the initial session took place in-person, and lasted approximately 90 minutes. The current version is switching to electronic delivery of content due to concerns surrounding finding time for all participants to meet in-person. Additionally, the current program is opting for self-paced completion of the initial session in order to allow for more flexibility on the part of the participant regarding when they choose to complete the

session. Finally, by switching to electronic delivery of content, the researcher believes the session will be able to drop in length from 90 minutes to under 30 minutes.

The initial session will introduce coaches to the concept of mindfulness, key definitions and terms, and the rationale for the training. Additionally, the introductory session will include samples of the five mindfulness exercises that the participants will complete for the study: Body Scan, Metta: Compassion and Befriending, Awareness of Breath, Open Awareness, and a brief explanation of Walking Meditation. At the conclusion of the initial session, the home-program will be explained in detail, including the schedule of meditations to be used. Participants will have the option to send questions, comments, or concerns to the researcher via email or telephone call.

The home program will be 6-weeks in length and will consist of daily mindfulness practices lasting from 5 to 20 minutes. In the original MTC program, participants were assigned one mindfulness practice to complete each day for the entire duration of the six-week program. Coaches who completed the original program reported completing meditations on average 3-7 days per week ($M = 4.56$, $SD = 2.00$; Longshore & Sachs, 2015). For the current study, participants will similarly be encouraged to practice mindfulness at least four days per week, and the program will provide an outline for completing a mindfulness practice every day.

Participants will be given a workbook with educational materials. In the original MTC program, participants were given a USB which featured complementary recordings of the assigned mindfulness exercises. For the current study, the researcher will electronically deliver the daily assigned mindfulness practice via audio file to each participant's email address. This change is intended to provide both daily reminders to each participant, as well as provide them

with the convenience of having recordings delivered rather than needing to keep track of them throughout the program.

In the original MTC program, participants were asked to attend two bi-weekly 1-hour group sessions at the beginning of weeks 3 and 5 of the program to practice their mindfulness skills and receive social support from the researcher and other participants through the answering of questions and exploration of experiences. Due to concerns surrounding the ability to schedule in-person meetings among all active participants, these bi-weekly group sessions will be replaced by bi-weekly messages sent from the researcher to each participant asking for feedback, offering support, and asking whether there are any areas of concern that need to be addressed with the program moving forward.

Procedure

The researcher will begin by obtaining IRB approval from the university. Next, the researcher will obtain permission to communicate with potential participants via email communication with the Executive Chairperson of the American Swim Coaches Association (ASCA). Once permission is obtained, a standardized email will be drafted and sent to all coaching members of ASCA. The email will explain the purpose of the study, potential benefits to be gained from participation, and what would be required from those who take part in the study. The researcher will also individually email select full-time coaches via a recruitment letter. Individuals who are interested in participating will be asked to respond directly to the introductory email.

The researcher will collect demographic (CPIS), state (PSS), and trait (DERS, MIS, PFI) measures, which will be sent to the participants electronically via Qualtrics. Each individual will be required to complete the surveys prior to the start of the home program. The recordings for the

home program will be delivered via an email delivery service. Relatedly, the specific links for each meditation practice will be monitored for total number of plays, which will be useful in determining how many participants complete the training each day.

State (PSS) and trait (DERS, MIS, PFI) measures will be collected from each participant on a bi-weekly schedule and will be collected via Qualtrics. Following the final day of the home program, there will be a wrap-up message sent to the participants thanking them for their participation. Post-program state (PSS) and trait (DERS, MIS, PFI) measures will also be collected via Qualtrics at this time.

Research Design & Analysis

The research will follow an experimental design, specifically a stratified pretest-posttest design.

In order to be counted for analysis, participants must self-report a minimum completion of 18 meditation practices throughout the six-week program (average of three meditation practices per week). To objectively measure this requirement, the researcher will count the number of video views on each daily meditation across the six-week intervention to cross reference with the self-reported number of completed meditations across the group of participants.

The researcher will utilize the Difficulties in Emotion Regulation (DERS; Gratz & Roemer, 2004), Stanford Professional Fulfillment Index (PFI; Trockel et al., 2018), and Perceived Stress Scale (PSS; Cohen & Williamson, 1988) to investigate whether coaches report difficulty regulating their emotions, high burnout levels, and high levels of stress (research question 1). The researcher will utilize SPSS to run a series of Repeated-Measures Analyses of Variance (RM ANOVA) to investigate the effects of the mindfulness training program on state

and trait mindfulness. Additionally, a series of RM ANOVA will be used to assess whether coaches who participate in a mindfulness-based intervention display decreased difficulties regulating emotions (research question 2), decreased levels of burnout (research question 2), and decreased levels of stress (research question 3). Analyses will be conducted separately for total scores and subscale scores for mindfulness, emotional regulation, burnout, and perceived stress. Alpha level will be set at .05 for all analyses.

CHAPTER FOUR

Research Manuscript

Exploring Potential Benefits of a Mindfulness-Based Intervention for Coaches

Submission to the Journal of Applied Sport Psychology

Exploring Potential Benefits of a Mindfulness-Based Intervention for Coaches

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Abstract

The purpose of this study was to examine the effect of an online mindfulness-based intervention on perceptions of stress, emotion regulation, and burnout among full-time coaches. Sixteen full-time coaches ($n_{\text{female}} = 9$, $n_{\text{male}} = 7$) from the sport of swimming completed a six-week online mindfulness-based intervention program, an adaptation of the Mindfulness Training for Coaches program. Participants completed online questionnaires gauging mindfulness, emotion regulation, burnout levels, and stress prior to the intervention, during weeks 3 and 5 of the program, and after the intervention. The baseline data indicated that full-time coaches report low levels of mindfulness, elevated difficulties in emotion regulation, high stress, and high burnout levels. Results revealed that, after the program, coaches experienced (a) a strong decrease in difficulties regulating emotions ($p = .02$) and stress ($p < .001$), (b) a trend towards an increase in mindfulness scores ($p = .08$), and (c) a trend towards a decrease in burnout ($p = .08$). Findings illustrate the relevance of participation in mindfulness for increased well-being in full-time coaches.

Exploring Potential Benefits of a Mindfulness-Based Intervention for Coaches

Historically, in the field of sport and exercise psychology, the focus of attention has been primarily on performance and dedicated toward assisting the athletes. Consequently, coaches have gone largely ignored (Gould et al., 2002). In response, researchers have called for the need to recognize coaches as performers as well as understand their unique needs (Giges et al., 2004). Rationale for this perspective derives from considering the many duties of a coach, including, but not limited to, managing the team, handling pressure both on- and off-the field, as well as their performance (e.g., decision making, emotional control, etc.). The coach's ability to manage those duties have the potential to affect the outcome of an athletic contest or performance (Vealey, 1988; Vernacchia et al., 1996). Studies have found coaches regularly experience psychological challenges, including the presence of stress, difficulties in regulating their emotions and anxiety, and combating burnout (Thelwell et al., 2008, Giges et al., 2004, Kelley et al., 1999). A gap in the literature exists in relation to the proposal of interventions that may be targeted at coaches in helping them to address these variables of concern.

Over the past forty years, mindfulness has risen to prominence as a counseling intervention and has subsequently been studied in a variety of settings. Fundamentally, mindfulness refers to attentional awareness and acceptance to experience. Jon Kabat-Zinn (1994) defined mindfulness as, "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (p. 4). He later expanded the definition to include non-judgmental awareness of present moment experience (Kabat-Zinn, 2000).

As practiced within psychotherapy, there are four major intervention programs and approaches utilizing mindfulness: Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1982), Mindfulness-Based Cognitive Therapy (MBCT; Segal, Williams, & Teasdale, 2002,

Dialectical Behavior Therapy (DBT; Linehan, 1993a, 1993b), and Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999). Both MBSR and MBCT approaches are grounded strictly in mindfulness as the primary intervention component, while DBT and ACT utilize the concept of mindfulness in order to promote broader forms of therapy. Notably, all four approaches apply to group settings, while ACT was constructed as a form of individual therapy that can also be applied to groups.

Baer (2003) conducted a meta-analysis on the potential benefits of mindfulness-based intervention programs in psychotherapy, including studies focusing on various populations, in both clinical and nonclinical settings. For clinical populations, benefits included reduced anxiety, decreased levels of depression, and increased psychological health. Among non-clinical populations, participants reported increased psychological health and well-being, decreased stress levels, and increased empathy.

While mindfulness practice has been examined for both psychological and physiological benefits, among the most cited benefits of mindfulness-based interventions are psychological in nature. Frequently studied population groups include those in the helping professions, specifically teachers and health care professionals. The effectiveness of mindfulness successfully decreasing characteristics of burnout has emerged as a particular area of interest into the benefits of mindfulness, as several studies have shown its efficacy in this area among various populations, including mental health professionals and doctors (Di Benedetto & Swadling, 2014; Ireland et al., 2017). Additionally, research has examined the psychological benefits for various other populations, including educators, Marines, and veterans (Bhatnagar et al., 2013; Guidetti et al., 2019; Johnson et al., 2014).

In the context of sport, mindfulness as a performance enhancement strategy in the field of athletics is relatively new. Parallels between traditional sport psychology techniques and the core tenets of mindfulness training can be identified, such as the promotion of present moment attention, letting go of past performances and future worries, and focusing on processes instead of outcome can be viewed through the lens of mindfulness training (Kaufman et al., 2009).

To date, a variety of sport-based populations have been examined for potential benefits of utilizing mindfulness interventions to enhance performance. Findings have included improved self-report of concentration and experiential acceptance in adult weightlifters, increased mindful awareness, attention and flow among elite adolescent swimmers, and greater self-control within performances among university athletes across multiple sports. (Aherne et al., 2011; Gardner & Moore, 2004; Schwanhausser, 2009).

Considering the sizable influence that coaches have upon their athletes and the performance environment, coaches may be excellent candidates for sport psychology services (Giges et al., 2004; Gilbert & Trudel, 2012; Virgili, 2013). A possible point of entry for sport psychologists may be to investigate ways of mitigating unwanted outcomes common to the profession such as stress and burnout rates (Dale & Weinberg, 1990; Kelley et al., 1999; Raedeke et al., 2000). While several studies acknowledge the prevalence of stress and burnout among various coaching populations, little has been proposed to address potential solutions to these problems (Giges et al., 2004).

The role of emotional regulation in coaches has also been highlighted for its impact on coaching performance and well-being (Hill & Davis, 2014). Nonetheless, a clear gap in the literature exists relating to examining potential interventions that may be targeted at coaches in helping them to address these variables of concern. Furthermore, coaches are not well equipped

to handle the anxiety they encounter on behalf of the job, and often fail to prioritize their own well-being (Giges et al., 2004).

Coaches regularly experience high levels of stress as they seek to balance team and athlete performance-related demands, tactics and decision making, all while attempting to maintain outward composure and confidence (Thelwell et al., 2008). Furthermore, due to the rapid rate of change in contemporary sport, researchers have called for the constant monitoring of stress in coaches, as well as support calls for helping interventions (Fletcher & Scott, 2010). Burnout is defined as, “a psychological syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with people in some capacity” (Maslach & Jackson, 1984, p. 134). Recently, coaches have been examined for evidence of burnout, and in some cases, have been found to report levels comparable to those working in the helping professions (Kelley et al., 1999). Studies have identified a reduced sense of personal accomplishments, including lack of financial satisfaction from one’s job and lack of motivation efficacy leading to feelings of being professionally undervalued and burnout in coaches (Sas-Nowosielski et al., 2018). While the prevalence of coaches’ burnout has been well established, there is a clear gap in the literature in presenting coaches with potential interventions to help curb the risk of burnout (Giges et al., 2004; Raedeke et al., 2000).

For coaches, emotional regulation is paramount for success due to its ability to influence how athletes attempt to manage their emotions and determine subsequent emotional experiences and performances (Davis and Jowett, 2010; Lafreniere et al., 2011). Surprisingly, much of the research relating to the role of emotion regulation in athletics has been dedicated to athletes, while coaches have been largely ignored (Lane et al., 2012), and only one study has proposed an

intervention to assist coaches in employing stronger emotion regulation strategies (Longshore & Sachs, 2015).

Coaches may experience stress due to performance-related demands related to the surrounding environment, which can subsequently affect their performance (Thelwell et al., 2008). However, researchers have argued that coaches who are effective in addressing stressful situations are not only better equipped to perform their job, but they are also better equipped to help their athletes subsequently handle stress (Hanin, 2008). This connection may lead coaches to seek ways to improve their own stress management strategies as opposed to focusing strictly on their athletes.

Longshore and Sachs (2015) conducted the first and only study examining a mindfulness-based intervention for coaches. The researchers, drawing from mindfulness literature and mindfulness-based psychotherapy approaches, created a mindfulness training program geared specifically toward coaches, the Mindfulness Training for Coaches (MTC) program. The program integrated teaching and training participants in various mindfulness practices first through an exploratory pilot study, which laid the foundation for their primary study.

The authors found that the MTC program lead to various benefits, including improved mindfulness and emotion management, stress reduction, and enhanced coaching behaviors at the end of the program compared to baseline. However, due to a smaller sample size than expected, no definitive statements can be made regarding the benefits displayed in the participants and their relation to the MTC program. The initial MTC study examined collegiate coaches only, providing only a small window into the broader population of coaches.

The purpose of this study is to examine potential benefits of a mindfulness-based training program directed toward youth club swimming coaches. In addition to being previously

unexamined in mindfulness-oriented studies, youth coaches are an important population to focus on due to the multiple roles they are commonly called upon to fill, including teacher, mentor, surrogate parent, administrator, and performer (Giges et al., 2004). Due to the likelihood of these multiple responsibilities resulting in excess levels of stress and burnout, mindfulness practice may prove to be beneficial to this population.

Method

Participants

A recruitment letter was distributed among several swimming coaching listservs, including the American Swim Coaches Association (ASCA), which has approximately 10,000 members, per direct conversation with the ASCA executive director. The researcher also contacted approximately 100 individuals directly based on his personal professional network. After a recruitment period of two months, 26 coaches responded expressing interest in participating in the study. A total of 21 ($n_{\text{female}} = 11$, $n_{\text{male}} = 10$) full-time youth-level swimming completed pre-intervention measures for the study. Among the 21 participants who agreed to participate and completed the baseline psychological measures, 16 ($n_{\text{female}} = 9$, $n_{\text{male}} = 7$) completed the measures at all time points (pre-intervention, beginning of week 3, beginning of week 5, post-intervention) and thus were considered for statistical analysis. Five coaches completed the pre-test psychological measure but failed to complete the subsequent measures and did not respond to communication from the researchers. Thus, they were not considered for statistical analysis.

Participants considered for statistical analysis reported a mean age of 44.85 ($SD = 11.07$) and a mean number of years coaching of 17.60 years ($SD = 10.58$). They were working in their

current coaching role for an average of 6.55 years ($SD = 5.21$), and reported working with athletes ranging from 5-19 years old.

Instrumentation

Coach Participant Information Sheet (CPIS, Appendix A)

The CPIS gathered demographic information from the participants, including age, gender, sport, total years coaching, number of years in current position, and approximate age range of athletes they coach.

Mindfulness Inventory for Sport (MIS, Thienot et al., 2014, Appendix B)

The MIS is a 15-item self-report measure of one's awareness level, as well as non-judgment and refocusing. Each item is rated on a 6-point Likert-type scale ranging from 1 (*not at all*) to 6 (*very much*). The measure features three subscales: Awareness, Non-judgmental, and Refocusing. Each subscale was determined to be internally consistent by the researchers with reliability coefficients of .77 for the subscale of awareness, .78 for non-judgmental, and .77 for refocusing (Thienot et al., 2014). The MIS has been validated with populations of student athletes and elite athletes, including preliminary validation that showed little evidence of invariance across sport type and partial invariance across gender (Thienot et al., 2014).

Difficulties in Emotion Regulation Scale (DERS, Gratz & Roemer, 2004, Appendix C)

The DERS is a 36-item dispositional measure of functional and dysfunctional regulation with strong internal consistency ($\alpha = .93$) and test-retest reliability ($r = .88$; Gratz & Roemer, 2004). Each item is rated on a Likert scale ranging from 1 (*almost never*) to 5 (*almost always*). The measure features six subscales which were found to sustain good internal consistency and acceptable test-retest reliability (Gratz & Roemer, 2004): Nonacceptance of Emotional Responses ($\alpha = .85$; $r = .69$), Difficulties in Engaging in Goal-Directed behaviors? ($\alpha = .89$; $r =$

.69), Impulse Control Difficulties ($\alpha = .86$; $r = .57$), Lack of Emotional Awareness ($\alpha = .80$; $r = .68$), Limited Access to Emotion Regulation Strategies ($\alpha = .88$; $r = .89$), and Lack of Emotional Clarity ($\alpha = .84$; $r = .80$). Upon completion, items are summed to obtain an overall score.

Subscale scores are found by summing the items within each subscale.

Perceived Stress Scale (PSS, Cohen, Kamarck & Mermelstein, 1983, Appendix D)

The PSS is a 10-item global measure of perceived stress. Items are rated on a 5-point Likert-type scale, ranging from 0 (*never*) to 4 (*very often*). Scores are obtained by summing all items with higher total scores indicating higher perceived stress. The PSS has been found to be internally consistent ($\alpha = .85$) and reliable ($r = .85$) in two samples of college-aged students (Cohen et al., 1983). The PSS was subsequently tested among a stratified random sampling ($N = 2,387$) of the general population ages 18-65 and the scale was found to have suitable internal consistency ($\alpha = .75$; Cohen & Williamson, 1988).

Stanford Professional Fulfillment Index (PFI, Trockel et al., 2018, Appendix E)

The PFI is a 16-item survey that measures two aspects wellbeing: burnout and professional fulfillment. Burnout is measured via two subscales: work exhaustion and interpersonal disengagement. Professional fulfillment is measured in a separate subscale. Items are rated on a five-point Likert scale ranging from 1-5 (“*not at all true*” to “*completely true*”) for the professional fulfillment subscale, and 1-5 (“*not at all*” to “*extremely*”) for the work exhaustion and interpersonal disengagement subscales. Scale scores are calculated by averaging the scores of all items within the corresponding scales, with higher scores on the professional fulfillment scale being more favorable and higher scores on work exhaustion and interpersonal disengagement scales being less favorable. The PFI was originally developed for physicians. Individuals who score equal or more than 13.3 on the combined work exhaustion and

interpersonal disengagement subscales are said to be reporting the presence of burnout (Trockel et al., 2018). A selected number of items on the scale were adjusted to better fit the population of this study (i.e., “patient” was changed to “athlete”). The measure demonstrated good internal consistency and test-retest reliability within an original sample of 185 residents and 65 practicing physicians for each subscale (Trockel et al., 2018): work exhaustion ($\alpha = .80$; $r = .86$), interpersonal disengagement ($\alpha = .71$; $r = .92$), and professional fulfillment ($\alpha = .91$; $r = .82$).

Procedure

Approval to conduct this study was obtained from the University’s Institutional Review Board. The study was administered utilizing online surveys via Qualtrics and daily meditation videos were uploaded to Vimeo and emailed to participants using the researcher’s personal email account. Full-time coaches were contacted directly via email and asked to respond if interested in participating. The researcher also created a recruitment letter and delivered it to the operators of a coaching listserv who sent the letter to approximately 10,000 members. The recruitment letter and direct messages to coaches included a summary of the purpose and methods of the study.

Coaches who elected to participate signed an informed consent and completed the demographic questionnaire via an online survey distributed through Qualtrics. Baseline state (PSS) and trait (DERS, MIS, PFI) measures were collected via a separate online questionnaire on Qualtrics prior to the start of the online program. Lastly, participants were directed to watch a twenty-minute psychoeducational video created by the researcher introducing the theory and application of modern mindfulness training as well as providing instruction on how to complete the MTC training program.

The researcher delivered daily meditation practice videos via email to the participants for six weeks. The researcher replicated the five meditations utilized by the authors of the original

MTC study, each centered on a different theme, and followed the same order of delivery as the original study. Four videos ranging from 15-17 minutes long were created, featuring an audio recording of the author of the original MTC study leading the meditation practice. Themes of the meditation practices were: Awareness of Breath, Body Scan, Open Awareness, and Meta Meditation. The fifth meditation practice, a Walking Meditation, was administered via written instruction.

State (PSS) and trait (DERS, MIS, PFI) measures were collected from each participant on a bi-weekly schedule throughout the program (start of weeks 3, 5) via Qualtrics. Following the final day of the home program, a wrap-up message sent to the participants thanking them for their participation. Post-program state (PSS) and trait (DERS, MIS, PFI) measures were collected via Qualtrics at this time.

Data Analysis

The findings from a pre-test post-test model were used to evaluate the effect of an online meditation program on coaches' perceived stress, burnout and emotion regulation. Descriptive statistics were computed to analyze the following data: (a) demographic of the respondents (i.e., gender, age, years coaching, sport); (b) baseline mindfulness; (c) baseline emotion regulation; (d) baseline perceived stress; and (e) baseline burnout and professional fulfillment. To test the hypotheses, RM ANOVAs were used to investigate the effects of the mindfulness training program on state and trait mindfulness, emotion regulation, stress, burnout, and professional fulfillment. Analyses were conducted separately for total scores and subscale scores for all variables. All statistical analyses were computed using the Statistical Package for the Social Sciences Software (SPSS), and alpha level was set at .05 for all analyses.

Results

Participant's means and SDs for all the variables and time points are displayed in table 1.

Baseline Scores of Emotion Regulation, Burnout, Stress, and Mindfulness

Participants reported a baseline mean DERS score of 86.31/180 ($SD = 18.40$), a baseline mean MIS score of 63.88/87 ($SD = 9.96$), and a baseline mean PSS score of 21.44/40 ($SD = 2.38$). Finally, participants reported a baseline mean PFI subscale of burnout 21.25/40 ($SD = 9.00$), consistent with the presence of burnout as defined by the authors of the PFI scale as being scores exceeding 13.3.

Table 1

Mean (SD) scores of mindfulness, emotional regulation, stress, burnout, and professional fulfillment before, during, and after the intervention

| | Mindfulness (MIS) | Emotion regulation (DERS) | Stress (PSS) | Burnout (PFI) | Professional Fulfillment (PFI) |
|-----------|----------------------|---------------------------------|-----------------|------------------|--------------------------------------|
| Pre-test | 63.88 (9.96) | 86.31 (18.40) | 21.44 (2.34) | 21.25 (9.00) | 11.69 (5.36) |
| Week 3 | 67.06 (7.94) | 74.94 (15.62) | 16.38 (5.06) | 16.25 (5.14) | 13.12 (4.41) |
| Week 5 | 68.25 (8.23) | 74.19 (12.84) | 15.94 (6.13) | 14.94 (7.08) | 13.50 (6.18) |
| Post-test | 73.56 (8.87) | 65.63 (14.91) | 14.00 (5.60) | 13.56 (6.76) | 12.94 (6.72) |

Meditation Sessions Completed

The current program relied on the researcher sending daily meditation practices for participants to complete. The researchers asked the participants to estimate their average weekly meditations completed ($M = 3.93$, $SD = 1.55$) and compared to the cumulative number of video views compiled throughout the program ($n = 245$). Given the number of participants ($n = 16$)

assuming an average of 3.93 meditations per week, it can be assumed that 384 meditations would be necessary. Considering one of the five meditations in the program was unable to be measured, it can be reasonably assumed that participants were relatively accurate in their estimation of number of meditations completed.

Effect of Program Participation on Mindfulness

The findings revealed no significant effect of participation in the MTC program on mindfulness, Wilks' $\lambda = .60$, $F(3, 13) = 2.90$, $p = .07$, $\eta_p^2 = .401$, although a trend was found for an improvement from pre- ($\bar{x} = 63.88$; $\sigma = 9.96$) to post- ($\bar{x} = 73.56$; $\sigma = 8.87$) intervention.

Post-hoc analyses revealed a significant effect of program participation on mindfulness from week 5 to post-intervention ($p = .03$). Additionally, a trend emerged for an improvement in mindfulness scores from pre-intervention to week 3 ($p = .08$), and week 3 to week 5 ($p = .08$).

Effect of Program Participation on Emotion Regulation

The findings revealed a significant effect of program participation on emotion regulation, Wilks' $\lambda = .48$, $F(3, 13) = 4.70$, $p = .02$, $\eta_p^2 = .401$. Specifically, participants experienced a decreased in difficulty regulating their emotions from pre- ($\bar{x} = 86.31$; $\sigma = 18.40$) to post- ($\bar{x} = 65.63$; $\sigma = 14.91$) intervention. Post-hoc analyses revealed a significant effect of program participation on decreasing difficulties regulating emotion from pre-intervention to week 3 ($p = .01$) and week 5 to post-intervention ($p = .01$). No difference was found in decreasing difficulties regulating emotions from week 3 to week 5 ($p = .78$).

Subscales analyses revealed that Difficulty in Engaging in Goal-Based Behaviors (GOALS) subscale scores decreased from pre- ($\bar{x} = 13.81$; $\sigma = 5.08$) to post-intervention ($\bar{x} = 11.00$, $\sigma = 2.83$; $p = .01$). Similarly, Impulse Control Difficulties subscale (IMPULSE) scores decreased from pre- ($\bar{x} = 11.38$; $\sigma = 4.79$) to post-intervention ($\bar{x} = 7.94$; $\sigma = 1.98$; $p = .03$).

Scores on the Lack of Emotional Awareness (AWARENESS) subscale also significantly decreased from pre- ($\bar{x} = 17.56$; $\sigma = 4.41$) to post-intervention ($\bar{x} = 12.88$; $\sigma = 4.38$; $p = .01$). Subscale of Limited Access to Emotion Regulation Strategies (STRATEGIES) scores also decreased from pre- ($\bar{x} = 18.56$; $\sigma = 7.10$) to post-intervention ($\bar{x} = 14.19$; $\sigma = 5.64$; $p = .04$), as did the subscale of Lack of emotional clarity (CLARITY) from pre- ($\bar{x} = 11.25$; $\sigma = 2.82$) to post-intervention ($\bar{x} = 8.44$; $\sigma = 1.79$; $p = .01$). The subscale of Nonacceptance of Emotional Responses (NONACCEPT) failed to show any significant difference across all measurement points ($p = .18$).

Effect of Program Participation on Stress

The findings revealed a significant effect of participation in the program on stress, Wilks' $\lambda = .36$, $F(3, 13) = 7.62$, $p < .001$, $\eta_p^2 = .638$. Over the course of the program, stress scores decreased from pre- ($\bar{x} = 21.44$; $\sigma = 2.34$) to post- ($\bar{x} = 14.00$; $\sigma = 5.60$) intervention. Post-hoc analyses revealed a significant effect of the program in decreasing stress from pre-intervention to week 3 ($p < .01$). No stress reduction was reported from week 3 to week 5 ($p = .71$), or week 5 to post-intervention ($p = .08$), although a trend emerged for the last time frame.

Effect of Program Participation on Burnout

The analyses revealed no effect of participation in the MTC program on burnout, although a trend was found for a decrease in burnout from pre- ($\bar{x} = 21.25$; $\sigma = 9.00$) to post- ($\bar{x} = 13.56$; $\sigma = 6.76$) intervention, Wilks' $\lambda = .60$, $F(3, 13) = 2.94$, $p = .07$, $\eta_p^2 = .401$. Professional Fulfillment scores failed to display any significant change ($p = .33$).

Discussion

The purpose of this study was to explore the effects of an online mindfulness-based intervention on coaches' emotional regulation, amount of stress, and levels of burnout. The

Mindfulness Training for Coaches (Longshore & Sachs, 2015) program was modified to fit an online delivery, allowing for a more geographically diverse group of participants. Specifically, the original MTC program was tested among a population of NCAA-level coaches. The current study focused on youth-level full-time coaches, a population that have found to report high levels of stress and burnout (Dixon & Turner, 2018; Price & Weiss, 2000).

The current study's conclusions about the impacts of the MTC program mirror those of the original MTC study (Longshore & Sachs, 2015). The original MTC study displayed correlation between participation in the MTC program and increases in mindfulness, emotion control, as well as decreases in stress. Taken together, the current and original study represent a growth of evidence relating to the efficacy of the MTC program in impacting coaches' mindfulness, emotion regulation, and perceived stress.

The current study's results also reflect similar conclusions found in previous mindfulness-based interventions (Baer, 2003). Specifically, studies of mindfulness-based approaches have found reduction of stress levels (Chiesa & Serritti, 2009, Khoury et al., 2015), improved emotion regulation (Aikins et al., 2014; Hofmann et al., 2010) and enhanced athletic performance (Gardner & Moore, 2007).

Mindfulness

The findings revealed that, after participation in the modified MTC program, coaches did not experience a change in mindfulness scores, even though a trend towards improvement was observed. These findings are consistent with the original MTC program study, which revealed a non-significant effect ($p = .26$) for mindfulness among participants (Longshore & Sachs, 2015). The current study did, however, display a more substantial trend ($p = .07$). It is difficult to discern the reason for this difference, but it could be attributed to one of the many differences

between the studies, including the current study's online format, which allowed the participants to receive their daily meditations through their email rather than having to remember to complete them on their own. This may have led to an increase in participation or more frequent mindfulness sessions each week. The authors of the original MTC study did not report session attendance, thus weakening the ability to draw conclusions on the impact of the program. Additionally, the original study had eight participants drop out (50% drop out rate), while the current study had five participants complete pre-test measures but fail to complete the program in full (24% drop out rate). Another possibility is the youth-level coach participants being more motivated to engage in the mindfulness sessions than college coaches. Additionally, effect sizes among the three MIS subscales were larger than in the original study, yet failed to approach significance. Within the current study, subscale of Awareness reported an effect size of .72 compared to an effect size of 0 in the original study. Additionally, subscales of Nonjudgement (.68) and Refocusing (.53) were larger in the current study than in the original study (.43 and .37, respectively).

The current study's findings fail to align with other mindfulness-based interventions in the sport context regarding changes in mindfulness. The Mindful-Acceptance-Commitment (Gardner & Moore, 2007) program has been shown to significantly increase mindfulness among various populations of athletes, including track and field athletes and divers (Ajilchi et al., 2021; Schwanhausser, 2009). The current findings do not mirror the aforementioned studies in their ability to produce significant changes in mindfulness, which may be attributed to several factors, including the lack of a control group and small sample sizes. Additionally, the aforementioned studies focused on athletic performers and not coaches, which may impact the results. Despite

the lack of a significant change in mindfulness in the current study, the emergence of a trend strengthens the case for further studies to examine the effectiveness of the MTC program.

Emotion Regulation

The current results revealed that coaches experienced a significant decrease in difficulties regulating emotions after participating in the program. These results align with the original MTC program, though several differences emerged among the emotion regulation subscales. While both studies revealed a significant positive change in overall emotion regulation, the original study only revealed significant differences in two subscales, Lack of Emotional Awareness and Limited Access to Emotion Regulation Strategies. The current study also revealed significant differences in the Lack of Emotional Awareness and Limited Access to Emotion Regulation Strategies subscales, as well as in the Difficulty Engaging in Goal-Directed Behavior, Impulse Control Difficulties, and Lack of Emotional Clarity subscales. Neither study revealed significant changes within the Nonacceptance of Emotional Responses subscale. These findings suggest that an online format of the program strengthens its impact, while there also exists a possibility that the population of club-level coaches are more responsive to emotion regulation changes than college coaches. Furthermore, the current sample reported higher baseline measures of the DERS total score and six accompanying subscales than the original sample, suggesting that the current sample possessed greater difficulties with emotion regulation prior to the program than the sample in the original sample, and thus had more room to improve.

Mindfulness has been a subject of interest among numerous populations, including military servicemen and women (Charbonneau, 2019). In the military context, leaders have long searched for ways to instill resilience, defined as the ability to bounce back and recover from adversity, conflict, and failure (Fletcher & Sarkar, 2013). Charbonneau (2019) found that

soldiers who tested higher in trait mindfulness displayed a greater likelihood for employing resilient behaviors and being able to maintain a calm and steady composure, thus suggesting that the military would be well served to train its cadets in mindfulness. While the current study did not measure resilience, its results came to similar conclusions in terms of the role mindfulness can play in helping individuals maintain control over their emotions despite an unpredictable environment. Coaches regularly encounter frequent changes and unpredictable stressors, including parent demands, performance concerns, and business-related items, such that maintaining emotional control may be seen as a form of establishing resiliency. The current study indicates that increasing mindfulness may help coaches better control their emotions, which would serve the population of coaches as they navigate their ever-changing environments.

Stress

The current findings suggest that participation in the MTC program contributed to participants experiencing a significant reduction in their stress levels at the end of the program compared to before starting. These findings are consistent with the original MTC program study (Longshore & Sachs, 2015) that showed a significant decrease in stress from pre- to post-intervention.

One population that has gained attention in mindfulness-based interventions literature is medically-based professionals (Ergoul et al., 2014; Ireland et al., 2019). Medical professionals encounter similar stressors to coaches, including the demands of caring for others and performing as part of their profession. Ergoul et al. examined the impact of an 8-week Mindfulness-Based Stress Reduction (MBSR) intervention on 58 medical professionals, and found significant reductions in stress. The current results mirror the findings of the MBSR intervention, thus strengthening the credibility of the MTC program's ability to reduce stress.

Given that stress and emotion mismanagement are common symptoms of burnout (Raedeke et al, 2000), the reduction of stress may be seen as a pathway to the reduction of burnout.

Burnout

The findings support previous studies suggesting that coaches experience a prevalence of stress, burnout, as well as emotion regulation difficulties (Giges et al., 2004; Hill & Davis, 2014). Scores reported by coaches in this study indicated the presence of burnout as defined by the authors of the Professional Fulfillment Index. Results did not reveal a significant change in burnout, although a trend did emerge in the reduction of burnout scores from before to after the intervention.

This trend is consistent with other studies who reported significant results among teachers (e.g., Flook et al., 2013). Coaching and teaching professions have similar requirements, including educating, managing groups of individuals, creating relationships, motivating, and being judged on the performance of the group they lead. Flook et al. found that teachers who underwent a mindfulness-based intervention improved attention, reduced symptoms of burnout, and increased classroom management.

The current study adds to the argument previously stated in research that coaches, not just athletes, would likely benefit from performance enhancement or sport psychology interventions (Frey, 2007; Giges et al., 2004; Gilbert & Trudel, 2012; Sharp et al., 2013; Virgili, 2013).

Limitations

Despite the promising results of this study, several limitations should be stated. Firstly, due to a small sample size, no control group was included in the current study as originally planned. Thus, comparison between coaches completing the training against coaches who had no mindfulness training was not possible, meaning no statement of causation can be made.

Secondly, outcome variables were collected via self-report measures, which are known to be vulnerable to various forms of response bias (Grossman, 2008). One possible self-report bias applicable to the current study is the Hawthorne effect, or the adjustment of behavior as a result of being studied. Given the participants understood their levels of stress were being monitored, they may have taken measures to reduce their stress separate from the intervention. Relatedly, at the conclusion of the study, the researchers relied on participants' memory to gain an estimate of the number of meditations completed per week. While the researcher was able to perform a manipulation check by counting the number of video views over the six-week period, there remains no definitive way to ascertain that participants completed the number of meditations they claimed. By placing ample responsibility on the participants to complete the meditations throughout the program as instructed, it was difficult to estimate to what extent participants received the intervention. Finally, ethnicity and perceived culture were also not assessed in this study, and these variables may impact the perception of unwanted psychological states.

Future Research and Implications

Given the relatively recent nature of the MTC program, a number of recommendations for future research can be considered. First, researchers would benefit from conducting a randomized controlled trial (RCT), which would allow for further determining causation between outcome variables and the program.

Future researchers would benefit from continuing to expand upon the types of coaches they study. The current study introduced a new type of full-time coach to the program (youth-level swimming coaches) compared to the original study (collegiate coaches). The ability to compare groups (e.g., team sport vs individual sport) would allow for nuances to emerge, if they exist, between different coaches completing the MTC program.

Finally, a longitudinal design would greatly strengthen future investigations of the MTC program. Such study would help to discern whether coaches continue to practice mindfulness after the training, whether the impacts of the training endure, and whether unseen impacts emerge over time. Studies of habit formation and exercise interventions indicate that forming a practice such as daily meditation requires intentionality and a time of roughly six months (Dishman, 1991; Gardner et al., 2012). The ability to follow-up with coaches upon the program's completion may provide insight into the idea length for the MTC program.

Conclusion

The modified MTC program was shown to positively impact youth coaches, specifically improving mindfulness and emotion regulation, as well as stress and burnout reduction. Specifically, coaches improved in their ability to maintain awareness and be accepting of thoughts and emotions, and gained experience in thoughtfully responding rather than reacting. Further, coaches improved their ability to sustain focus on a broader perspective of a given situation, and cultivated a capacity for letting go of a desire to control as well as accepting of things outside of their control. Finally, they learned to promote a nonjudgmental perspective toward themselves, opening them up to accept what is present at a given moment.

Kabat-Zinn (1990) said, "It's not that mindfulness is the 'answer' to all life's problems. Rather, it is that all life's problems can be seen more clearly through the lens of a clear mind" (p. 25). The MTC program did not extinguish any of the participants' problems, struggles, or worries, but perhaps instead opened them up to accessing new coping skills and perspectives for viewing their various stressors. The aim of the MTC program is to help coaches approach difficult situations with an open, more aware and accepting, and less reactive mind (Longshore &

Sachs, 2015). It is hoped that this study will serve as a springboard for future research aiming to improve the well-being of coaches, and ultimately those they serve.

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Appendix A

Coach Participant Information Sheet

Name _____ Participant # _____

Swim Club (please include city & state) _____

Full-time Coaching Position (circle): Yes No

Years coaching (total) _____

Years in current position _____

Age _____ Gender (circle): Male Female

Marital Status (circle) Married Single Other

Have you ever meditated before (circle): Yes No

If yes, which best describes your experience (circle):

Tried it once/twice Occasional use Practice Regularly (please circle): weekly/daily/other

Would you like a daily reminder to complete the daily mindfulness exercise? Yes No

If yes, via (circle): Email Text message Both

If email, preferred email: _____

If text, preferred number: _____

If yes, preferred time of day (circle): Morning Mid-day Evening

Appendix B

Mindfulness Inventory for Sport (Thienot et al., 2014)

The statements below describe a number of things that one may experience just before or during a sport performance. Please select the number that best indicates how much each statement is generally reflective of your experience. There are no right or wrong answers. Please use a response scale from 1 (not at all) to 6 (very much).

| | 1 = Not at all 6 = Very much |
|--|---|
| 1. When I become aware that I am really excited because I am winning, I stay focused on what I have to do | 1 2 3 4 5 6 |
| 2. When I become aware that I am thinking about a past performance, I criticize myself for not being focused on my current performance | 1 2 3 4 5 6 |
| 3. I am able to notice the intensity of nervousness in my body | 1 2 3 4 5 6 |
| 4. When I become aware that I am thinking about how tired I am, I quickly bring my attention back to what I should focus on | 1 2 3 4 5 6 |
| 5. When I become aware that I am angry at myself for making a mistake, I criticize myself for having this reaction | 1 2 3 4 5 6 |
| 6. I am able to notice the sensations of excitement in my body | 1 2 3 4 5 6 |
| 7. When I become aware that some of my muscles are sore, I quickly refocus on what I have to do | 1 2 3 4 5 6 |
| 8. When I become aware that I am tense, I am able to quickly bring my attention back to what I should focus on | 1 2 3 4 5 6 |
| 9. When I become aware that I am not focusing on my own performance, I blame myself for being distracted | 1 2 3 4 5 6 |
| 10. I am aware of the thoughts that are passing through my mind | 1 2 3 4 5 6 |
| 11. When I become aware that I am not focusing on my own performance, I am able to quickly refocus my attention on things that help me to perform well | 1 2 3 4 5 6 |
| 12. I am able to notice the location of physical discomfort when I experience it | 1 2 3 4 5 6 |
| 13. When I become aware that I am thinking of the final result, I blame myself for not being focused on relevant cues for my performance | 1 2 3 4 5 6 |
| 14. I pay attention to the type of emotions I am feeling | 1 2 3 4 5 6 |
| 15. When I become aware that I am really upset because I am losing, I criticize myself for reacting this way | 1 2 3 4 5 6 |

Appendix C

Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2004)

Please indicate how often the following 36 statements apply to you by circling the appropriate number from the scale below (1-5).

| | 1 | 2 | 3 | 4 | 5 |
|---|-----------------|-----------|---------------------|---------------------|------------------|
| | Almost Never | Sometimes | About ½ the time | Most of the time | Almost Always |
| 1. I am clear about my feelings. | 1 | 2 | 3 | 4 | 5 |
| 2. I pay attention to how I feel. | 1 | 2 | 3 | 4 | 5 |
| 3. I experience my emotions as overwhelming and out of control. | 1 | 2 | 3 | 4 | 5 |
| 4. I have no idea how I am feeling. | 1 | 2 | 3 | 4 | 5 |
| 5. I have difficulty making sense out of my feelings. | 1 | 2 | 3 | 4 | 5 |
| 6. I am attentive to my feelings. | 1 | 2 | 3 | 4 | 5 |
| 7. I know exactly how I am feeling. | 1 | 2 | 3 | 4 | 5 |
| 8. I care about what I am feeling. | 1 | 2 | 3 | 4 | 5 |
| 9. I am confused about how I feel. | 1 | 2 | 3 | 4 | 5 |
| 10. When I'm upset, I acknowledge my emotions. | 1 | 2 | 3 | 4 | 5 |
| 11. When I'm upset, I become angry with myself for feeling that way. | 1 | 2 | 3 | 4 | 5 |
| 12. When I'm upset, I become embarrassed for feeling that way. | 1 | 2 | 3 | 4 | 5 |
| 13. When I'm upset, I have difficulty getting work done. | 1 | 2 | 3 | 4 | 5 |
| 14. When I'm upset, I become out of control. | 1 | 2 | 3 | 4 | 5 |
| 15. When I'm upset, I believe that I will remain that way for a long time. | 1 | 2 | 3 | 4 | 5 |
| 16. When I'm upset, I believe that I'll end up feeling very depressed. | 1 | 2 | 3 | 4 | 5 |
| 17. When I'm upset, I believe that my feelings are valid and important. | 1 | 2 | 3 | 4 | 5 |
| 18. When I'm upset, I have difficulty focusing on other things. | 1 | 2 | 3 | 4 | 5 |
| 19. When I'm upset, I feel out of control. | 1 | 2 | 3 | 4 | 5 |
| 20. When I'm upset, I can still get things done. | 1 | 2 | 3 | 4 | 5 |
| 21. When I'm upset, I feel ashamed with myself for feeling that way. | 1 | 2 | 3 | 4 | 5 |
| 22. When I'm upset, I know that I can find a way to eventually feel better. | 1 | 2 | 3 | 4 | 5 |
| 23. When I'm upset, I feel like I am weak. | 1 | 2 | 3 | 4 | 5 |
| 24. When I'm upset, I feel like I can remain in control of my behaviors. | 1 | 2 | 3 | 4 | 5 |
| 25. When I'm upset, I feel guilty for feeling that way. | 1 | 2 | 3 | 4 | 5 |
| 26. When I'm upset, I have difficulty concentrating. | 1 | 2 | 3 | 4 | 5 |
| 27. When I'm upset, I have difficulty controlling my behaviors. | 1 | 2 | 3 | 4 | 5 |
| 28. When I'm upset, I believe there is nothing I can do to make myself feel better. | 1 | 2 | 3 | 4 | 5 |
| 29. When I'm upset, I become irritated with myself for feeling that way. | 1 | 2 | 3 | 4 | 5 |
| 30. When I'm upset, I start to feel very bad about myself. | 1 | 2 | 3 | 4 | 5 |
| 31. When I'm upset, I believe that wallowing in it is all I can do. | 1 | 2 | 3 | 4 | 5 |
| 32. When I'm upset, I lose control over my behaviors. | 1 | 2 | 3 | 4 | 5 |
| 33. When I'm upset, I have difficulty thinking about anything else. | 1 | 2 | 3 | 4 | 5 |
| 34. When I'm upset, I take time to figure out what I'm really feeling. | 1 | 2 | 3 | 4 | 5 |
| 35. When I'm upset, it takes me a long time to feel better. | 1 | 2 | 3 | 4 | 5 |
| 36. When I'm upset, my emotions feel overwhelming. | 1 | 2 | 3 | 4 | 5 |

Appendix D

Perceived Stress Scale (Cohen & Williamson, 1988)

The questions in this scale will ask you about your feelings and thoughts during the last two weeks. In each case, you will be asked to indicate by circling *how often* you felt or thought a certain way.

0 = Never 1 = Almost Never 2 = Sometimes 3 = Fairly Often 4 = Very Often

- | | | | | | |
|--|---|---|---|---|---|
| 1. In the last two weeks, how often have you been upset because of something that happened unexpectedly? | 0 | 1 | 2 | 3 | 4 |
| 2. In the last two weeks, how often have you felt that you were unable to control the important things in your life? | 0 | 1 | 2 | 3 | 4 |
| 3. In the last two weeks, how often have you felt nervous and “stressed”? | 0 | 1 | 2 | 3 | 4 |
| 4. In the last two weeks, how often have you felt confident about your ability to handle your personal problems? | 0 | 1 | 2 | 3 | 4 |
| 5. In the last two weeks, how often have you felt that things were going your way? | 0 | 1 | 2 | 3 | 4 |
| 6. In the last two weeks, how often have you found that you could not cope with all the things that you had to do? | 0 | 1 | 2 | 3 | 4 |
| 7. In the last two weeks, how often have you been able to control irritations in your life? | 0 | 1 | 2 | 3 | 4 |
| 8. In the last two weeks, how often have you felt that you were on top of things? | 0 | 1 | 2 | 3 | 4 |
| 9. In the last two weeks, how often have you been angered because of things that were outside of your control? | 0 | 1 | 2 | 3 | 4 |
| 10. In the last two weeks, how often have you felt difficulties were piling up so high that you could not overcome them? | 0 | 1 | 2 | 3 | 4 |

Appendix E

Professional Fulfillment Index (Trochel et al., 2018)

How true do you feel the following statements are about you at work during the past two weeks?

0 = Not at all true 1 = Somewhat true 2 = Moderately true 3 = Very true 4 = Completely true

| | | | | | |
|---|---|---|---|---|---|
| a. I feel happy at work | 0 | 1 | 2 | 3 | 4 |
| b. I feel worthwhile at work | 0 | 1 | 2 | 3 | 4 |
| c. My work is satisfying to me | 0 | 1 | 2 | 3 | 4 |
| d. I feel in control when dealing with difficult problems at work | 0 | 1 | 2 | 3 | 4 |
| e. My work is meaningful to me | 0 | 1 | 2 | 3 | 4 |
| f. I'm contributing professionally in the ways that I value most | 0 | 1 | 2 | 3 | 4 |

To what degree have you experienced the following?

During the past two weeks I have felt...

| | | | | | |
|--|---|---|---|---|---|
| a. A sense of dread when I think about work I have to do | 0 | 1 | 2 | 3 | 4 |
| b. Physically exhausted at work | 0 | 1 | 2 | 3 | 4 |
| c. Lacking in enthusiasm at work | 0 | 1 | 2 | 3 | 4 |
| d. Emotionally exhausted at work | 0 | 1 | 2 | 3 | 4 |

During the past two weeks my job has contributed to me feeling...

| | | | | | |
|--|---|---|---|---|---|
| a. Less empathetic with my athletes | 0 | 1 | 2 | 3 | 4 |
| b. Less empathetic with my colleagues | 0 | 1 | 2 | 3 | 4 |
| c. Less sensitive to others' feelings/emotions | 0 | 1 | 2 | 3 | 4 |
| d. Less interested in talking with my athletes | 0 | 1 | 2 | 3 | 4 |
| e. Less connected with my athletes | 0 | 1 | 2 | 3 | 4 |
| f. Less connected with my colleagues | 0 | 1 | 2 | 3 | 4 |

Appendix F

Meditation Transcripts (Longshore, 2015)

21 Breaths (Brief)

Take a moment to establish your posture, back straight, shoulders relaxed, eyes forward, feet on the floor, hands resting easily on your lap or knees...now let your eyes close...take a moment to find the present and find your breath...

(Pause 2 breaths)

On your next in breath, begin counting your breaths on the out breath...breathing in...breathing out...one...

(Pause 2 breaths)

Counting each breath that comes in, as it leaves...

(Pause 2 breaths)

If you lose count or something draws your attention away from the breath, simply note it, and gently bring yourself back to your breath...

(Pause 2 breaths)

As you reach 10 breathe, begin to count back down towards zero...

(Pause 2 breaths)

Simply breathing and counting...allowing thoughts or emotions to rise and fall...returning each moment to the breath...

(Pause 5 breaths)

As you reach zero...taking a few moments to enjoy the experience...

When you feel ready...slowly opening your eyes...

Body Scan

Take a moment to establish your posture, if you are sitting in a chair, back straight, shoulders relaxed, eyes forward, feet on the floor, hands resting easily on your lap or knees...if you are laying down, legs straight, arms laying straight at your sides, eyes toward the ceiling...now let your eyes close...take a moment to find the present and find your breath...

(pause)

As we move down the body, just noting what is present in that area without any attempts to change or alter it...seeing if we can sit with whatever is there...not judging the experience...just allowing it to unfold...

(pause)

Let's start by placing attention on the top of your head...to the weight of your hair...becoming aware of any sensation...any tension...just noticing what is present in this area of the body...

(pause)

Moving down to the forehead...noticing what is present...moving to your eyes...what sensations arise as you place your attention on your eyes...now to your nose...to your cheeks...to your lips...the inside of your mouth...taking in your whole face...noticing any sensations...without judgment...without haste...taking your time to explore...

(pause)

Remember if your attention gets drawn away...just gently direct it back to the body, to wherever you left off...continually bringing your mind back to the present moment is an act of mindfulness...

Moving now to your ears...noticing any sensations present...how sounds rise and fall...

Coming now to your throat and neck...how the breath moves in and out...the sensations of swallowing...the weight of your head...

(pause)

Now bringing your attention to your upper limbs...spending a moment with each area...from your shoulders... to biceps... triceps...elbow joints...forearms...wrists... hands... to the palms of your hands...down to your fingers...

(pause)

Moving to your upper torso...your chest and the sensations of breathing...the breath coming in and out without your conscious control... upper abdomen...and upper back...

(pause)

Remember if your attention gets drawn away...just gently direct it back to the body, to wherever you left off...continually bringing your mind back to the present moment is an act of mindfulness...

Now becoming aware of your lower torso...from your lower abdomen...to lower back...

(pause)

Continuing down to your lower limbs...taking a moment with each area...from your hips...to thighs...to your knee joint...the front and back of the knee...to your calf...and your shin...to your ankle...the heel of your foot...ball of your foot...and toes...

(pause)

As you finish with your toes...taking a few moments to enjoy the experience...revisiting any areas of your body that want more attention...and when you feel ready slowly opening your eyes...

Metta: Compassion & Befriending

Take a moment to establish your posture, back straight, shoulders relaxed, eyes forward, feet on the floor, hands resting easily on your lap or knees...now let your eyes close...take a moment to find the present and find your breath...

(pause)

Starting by cultivating compassion towards oneself by simply repeating the following phrases... May you be well and free from suffering...May you be peaceful and happy...may you live life with ease and with kindness...

(pause)

With each phrase noticing what effect it might have on you...staying with the words and sensations...bringing the mind back gently when it wanders...

(pause)

Now bringing to mind a friend or acquaintance...just such a person who you have positive feelings towards...allowing a clear picture of them to appear, their features coming in crisp...evoking the positive feelings...

(pause)

Now look into their eyes and tell them...May you be well and free from suffering...May you be peaceful and happy...may you live life with ease and with kindness...

(pause)

Now bringing to mind someone you have neutral feelings towards...perhaps a coworker or a neighbor...someone neither evokes pleasant or unpleasant feelings...allowing a clear picture of them to appear, their features coming in crisp...

(pause)

Now look into their eyes and tell them...May you be well and free from suffering...May you be peaceful and happy...may you live life with ease and with kindness...

(pause)

Finally bringing to mind you find difficult...not your most difficult person or relationship...but someone who evokes some unpleasant thoughts or feelings... allowing a clear picture of them to appear, their features coming in crisp...

(pause)

Now look into their eyes and tell them...May you be well and free from suffering...May you be peaceful and happy...may you live life with ease and with kindness...

(pause)

Taking a few moments to complete the experience...and when you feel ready slowly opening your eyes...

Awareness of Breath

Take a moment to establish your posture, back straight, shoulders relaxed, eyes forward, feet on the floor, hands resting easily on your lap or knees...now let your eyes close...take a moment to find the present and find your breath...

(pause)

Connecting with the breath...noticing the in and the out...paying attention particularly to the in breath now...noticing where it hits you...is it most prominent in the chest and the movement of the ribs...or does the breath expanding the stomach and rising the diaphragm attract your attention...or is it the nose and nostrils...air being drawn in, flaring the nostrils...where does the in breath command your attention... take a moment to be curious...without changing it or attempting to breath a certain way...just allowing the in breath to come as it will...

(pause 1.5 minutes)

Moving to noticing the out breath specifically...is our awareness drawn to a different part of the process...perhaps the breath escaping the lips is most prominent...the stomach emptying and the diaphragm returning to stillness... take a moment to be curious.....without changing it or attempting to breath a certain way...just allowing the out breath to go as it will...

(pause 1 minute)

What about the in-between moments...are you present for the whole breath...the whole experience...take a moment to be curious...without changing it or attempting to breath a certain way...just allowing the breath to come and go as it will...

(pause 2.5 minutes)

Bring your focus back each time the mind has wandered...congratulate yourself for noticing...that is an essential part of cultivating mindfulness...noticing when we are no longer in

the present...attending to our breath...and gently...without judgment...without frustration...bringing self back to the breath...which is always available to us...

(pause 2.5 minutes)

Just this one breath...this one moment...simply sitting and breathing with no agenda...nothing to achieve...only resting in the generous present moment...where all possibilities exist...choosing where to place your attention...and thus where to place your energy...in the now...

(pause 3.5 minutes)

Coming to a close now...taking a moment to take in the experience...sitting with the present...and when you are ready, slowly, gently, opening your eyes...

Open Awareness

Take a moment to establish your posture, back straight, shoulders relaxed, eyes closed, facing forward, feet on the floor, hands resting easily on your lap or knees...now let your eyes close...take a moment to find the present and find your breath...

(pause)

Letting your attention go inward...dropping in on the breath as it comes in and goes out...finding the breath and following it for a few moments...riding the waves of air as it comes in, circulates, and leaves only to be followed by the next one... and when our mind has wandered away...we can simply place our attention back on the breath because the breath is always available to us...it is a constant...it is an anchor...reminding us we are alive...

(pause 1 minute)

Establishing that anchor...the breath...settling into the present moment...

(pause 2 minutes)

Now allowing your awareness and attention to open...taking the opportunity to observe the activities of the mind...the thoughts, feelings, sensations, memories...knowing that you can always return to the breath and reground yourself in the present moment...seeing that you can become aware of your thoughts, feelings, without being swept away by them...you are more than your thoughts and feelings...you can have them and also just be able to notice and observe them with acceptance and without attachment...they are only one part of your ongoing experience...and in the next moment they may be gone...

(pause)

Remembering you can return to the breath at any time...

(pause)

When your awareness opens...recognizing what presents itself...perhaps naming the activity of the mind, “feeling” or “remembering” or “worrying”...noting the event as it comes and goes...accepting that it is only that...an event...perhaps even becoming curious about the event...where do you feel it in the body...what images does it evoke...is this a common event...and then gently letting the thought or emotion float away...as easily as it comes...as easily it goes...

(pause 3 minutes)

If you find yourself getting swept away in the process...reacting to thoughts or emotions...remembering to reground yourself in the present moment...following your breath for a few waves before opening your awareness...cultivating your ability to respond...once again...

(pause 3.5 minutes)

Returning to the breath...to this moment...coming to a close now...taking a moment to take in the experience...sitting with the present...and when you are ready, slowly, gently, opening your eyes...

Appendix G

Study recruitment emails for coaches

To whom it may concern:

My name is Brian Tremml, and I am a member of the Sport & Exercise Psychology graduate program at Ball State University. After swimming collegiately (University of Iowa, 2008-2012), I transitioned to the field of coaching and went on to work for clubs in Iowa, North Carolina, Missouri, and Indiana over a period of eight years. During this time, I enjoyed countless positive experiences which led to joy and elation. However, I also experienced situations that caused me to feel significant amounts of exhaustion and professional burnout.

In transitioning to the field of sport and performance psychology, I am interested in helping coaches discover new ways to help diminish the occurrence of those negative emotions associated with exhaustion and burnout that are all too frequent in the field of club swimming coaching.

As a result, I am actively seeking participants for my graduate thesis study, Exploring Potential Benefits of a Mindfulness-Based Intervention for Coaches, and I am wondering if you, or someone from your staff, would be interested in participating.

Here are the requirements for participation in the study:

- Participants must be designated as full-time compensated coaches
- Participants must have held their current position within the club for at least one year

- Participants must spend the majority of coaching time each week working with swimmers aged 5-18 years old
- Participants must work with both male and female swimmers simultaneously

The study will include a self-paced introductory session delivered electronically and lasting 20 minutes. Beyond that, participants will practice daily meditations lasting between 5-20 minutes.

The hope of this study is to learn whether meditation provides tangible benefits to club swimming coaches in the form of reducing unwanted emotions such as exhaustion and burnout.

If you are interested in being part of this study, please feel free to reach out for more information.

Sincerely,

Brian Tremml