

“Mindfulness isn’t just for basketball. It’s like an everyday thing”: An Interpretative
Phenomenological Analysis of Adolescent Basketball Players in a Mindfulness-Based
Intervention

by

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Abstract

Background

While mental skills are regarded as a crucial element for achieving optimal sport performance, psychological preparation is often neglected in athletic training. Consequently, many athletes encounter psychological barriers that impede performance. Mindfulness is a way of being present, open, and non-judgmental, and has gained increasing attention in sport psychology as a strategy to support performance and well-being. Numerous sport mindfulness-based interventions (MBIs) have recently been developed and a range of benefits have been demonstrated in adult populations. However, less is known about how adolescent athletes experience and apply mindfulness when participating in a sport MBI. Research is needed to examine how adolescent participants understand and apply mindfulness to improve their sport performance, and whether mindfulness learned in sport can be applied in daily life contexts.

Aims: (1) To qualitatively explore how adolescent athletes in a sport MBI understand and applied mindfulness over time. (2) To examine how mindfulness influences adolescents' athletic and daily experiences.

Methods: Four adolescent male basketball players from a club team in Winnipeg, Canada (all aged 16; 75% Filipino, 25% German and British) participated in a MBI. Data were gathered through semi-structured interviews at three time points (T1: pre-MBI, T2: mid-MBI, and T3: post-MBI) and analyzed using an interpretative phenomenological analysis (IPA). The themes were organized by interview timepoint.

Results: The results demonstrate that adolescent athletes' understandings and applications of mindfulness progressed across the MBI. Before the MBI, most athletes had no previous

experience with psychological skills training and had a limited understanding of mindfulness. At the midpoint of the MBI, athletes developed a greater understanding of mindfulness and began applying it in competition in various ways. At the end of the MBI, athletes had increasingly integrated mindfulness into their sport, described becoming more comfortable with its application, and applied it outside of sport. Adolescent athletes also expressed intentions to continue being mindful beyond the MBI.

Conclusion: Mindfulness training is a valuable and applicable approach for improving adolescent athletes' sport performance and well-being. A sport MBI may provide adolescents with mental skills that support their sporting experiences and personal development.

Keywords: mindfulness; athlete well-being; sport performance; adolescent development; a Phenomenological Analysis

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Chapter I: Introduction

The pursuit of optimal athletic performance stands as an objective for athletes in competitive sport settings (Su et al., 2019). Accordingly, there are various factors that influence athletic performance, including physiological attributes (such as fitness and athleticism), biomechanical aspects (such as technique and skill), and psychological components (such as emotion regulation and attention regulation) (Davies & Armstrong, 2021). Athletes are encouraged to adopt a holistic training method that integrates these dimensions to attain peak performance (Ohuruogo et al., 2016). However, despite the fundamental role of psychological factors in athletic success, the development of mental skills is often neglected within training programs (Davies & Armstrong, 2021). This pervasive oversight of psychological training among athletes has been referred to by Kaufman et al. (2018) as the “mental training paradox” (p. 178). As a result of this widespread underemphasis on mental training, some athletes struggle to function at the upper limits of performance due to psychological barriers, even when they possess adequate physical fitness and technical proficiency (Hardy et al., 1996).

Real-world examples at the highest levels of competition exemplify the profound impact of psychological processes on athletic performance. Serena Williams, a renowned professional tennis player, experienced a series of psychological reactions that disrupted her ability to adapt to the dynamic performance requirements in her 2018 US Open Final loss. In the second set of the match, Williams received a coaching code violation that she regarded as unexpected and unjust (Kaiseler, 2018). This appeared to provoke cognitive preoccupation with the umpire’s decision and intensified emotional responses throughout the remainder of the contest which were externally manifested through visible behaviours, such as her notable racket-smashing incident (Kaiseler, 2018). This example demonstrates that even elite athletes’ performances may decline

when their mental state is not aligned with the demands of competition. Thus, the skills required to manage one's psychological processes are widely recognized as foundational for achieving consistent and effective performance (Davies & Armstrong, 2021).

Today, an increasing amount of research supports the importance of training athletes' psychological abilities to enhance athletic performance through the application of mindfulness (Ajilchi et al., 2019). Although the positive outcomes of mindfulness have been observed across various sport settings (Gardner & Moore, 2012), there is currently a lack of in-depth research conducted among adolescent athletes. Previously, researchers have evaluated numerical ratings of adolescent athletes' experiences with a mindfulness-based intervention (MBI) (Worthen & Luiselli, 2016), and employed open-ended program evaluation questionnaires (Augustus & Zizzi, 2022). Findings from this line of research suggest that adolescent athletes perceived MBIs as beneficial across various sport-related domains (Augustus & Zizzi, 2022; Worthen & Luiselli, 2016). However, greater depth is needed to explore how adolescent athletes understand mindfulness and how these understandings and applications develop over time within and beyond sport contexts.

The aim of this study is to add depth to the existing literature by exploring the lived experiences of adolescent athletes participating in a MBI before, during, and after its implementation through one-on-one semi-structured interviews. Accordingly, this study seeks to answer the following research question: How do adolescent athletes' understandings and applications of mindfulness evolve over the course of the MBI? In line with this research question, the objectives of the study are to: (a) explore how adolescent athletes conceptualize mindfulness when introduced through a sport MBI, and (b) examine how adolescent athletes apply and perceive mindfulness as shaping their personal and athletic lives.

Chapter II: Review of the Literature

In this literature review, I will first delineate the school of thought within which mindfulness is conceptualized. Furthermore, I will introduce mindfulness as a psychological construct to promote sport performance, outline meditative practices to cultivate mindfulness, present evidence on sport MBIs, and consider the role of mindfulness in promoting athlete well-being beyond the sporting context. Finally, I will discuss the gaps in the adolescent sport mindfulness literature that motivate the current study.

Mindfulness Schools of Thought in the Current Literature

Mindfulness has become prevalent in contemporary culture and therapeutic practice, and there is a growing interest in its application within sport psychology (Bishop et al., 2004; Zizzi & Andersen, 2010). Despite its widespread adoption, mindfulness is not uniformly conceptualized within the academic literature (Mortlock, 2023). Academic perspectives on mindfulness are predominantly shaped by two major schools of thought (Ivztan & Hart, 2016; Kabat-Zinn, 1994; Langer 1989). The first is the Western socio-cognitive approach, developed by Langer and colleagues, which is grounded in experimental psychology (Burgoon & Langer, 1995; Langer, 1989; Langer & Moldoveanu, 2000). The second is the meditative approach, advanced by Kabat-Zinn and his associates, which draws upon Buddhist contemplative traditions (Kabat-Zinn, 1990; Kabat-Zinn, 2013). Although these approaches share some conceptual overlap (discussed in more detail below), each paradigm is grounded in distinct theoretical foundations, operative mechanisms, and practices to embody mindfulness (Hart et al., 2013). Accordingly, these schools of thought have predominantly operated in parallel for several decades of research, with minimal cross-disciplinary dialogue and little effort on the part of scholars to explain their relationship (Hart et al. 2013; Mortlock, 2023).

The socio-cognitive area of mindfulness research pioneered by Langer and her colleagues conceptualizes mindfulness as a cognitive state (Langer, 1989; Langer, 1992). Langer (1992) defined mindfulness as “a state of conscious awareness in which the individual is implicitly aware of the context and content of information” (p. 289). In Langer’s school of thought, this mindful state involves active engagement with the present moment by remaining attentive to informational content by noticing novel distinctions, being cognizant of situational context while remaining free from past categorizations and habitual assumptions, and by adopting multiple perspectives on a subject (Langer, 1989; Langer & Moldoveanu, 2000).

A central component of Langer's framework is the distinction between mindfulness and mindlessness (Langer, 1992). According to Langer (1992), mindlessness is “characterized by an over-reliance on categories and distinctions drawn in the past” (p. 289), whereby individuals discount alternative aspects of the present context. With this distinction, Langer's concept of mindfulness posits that mindful presence can be obscured by a confinement to predetermined categories, inflexibility in reevaluating one’s position, and a divided attention that deters engagement in the moment (Fatemi, 2016).

Through empirical work grounded in Langer’s approach to mindfulness, researchers have sought to disrupt mindless cognitive habits through instructional interventions that foster contextual awareness and flexibility (e.g. prompting individuals to explicitly attend to task components and underlying rules to reduce reliance on automatic behavioural scripts; Langer & Imber, 1979), with findings from these studies suggesting benefits such as enhanced alertness, happiness, and increased short-term and long-term memory (Langer & Rodin, 1976; Langer et al., 1979; Langer et al., 1988). Accordingly, Langer’s form of mindfulness is centered on

deliberate cognitive engagement with novelty and situational contexts, and does not originate in meditative traditions (Hart et al., 2013; Ivztan & Hart, 2016; Lakatos et al., 2019).

Distinct from Langer's perspective, Kabat-Zinn's conceptualization of mindfulness is rooted in Buddhist meditative traditions, yet it is presented within a secular context (Kabat-Zinn, 1990; Kabat-Zinn, 1994). Kabat-Zinn (1994) defines mindfulness as "the awareness that arises from paying attention in a particular way: on purpose, in the present moment, and non-judgmentally" (p. 4). Grounded in this definition, a fundamental component of Kabat-Zinn's framework is the self-regulation of attention to attend to moment-to-moment internal and external experiences (Kabat-Zinn, 2001). Furthermore, Kabat-Zinn (1994) outlines seven interdependent foundational attitudes that underpin the cultivation of mindfulness and guide its integration into daily experience. These attitudes include non-judging (observing without labeling as 'good' or 'bad'), acceptance (allowing things to exist without resistance), letting go (releasing attachments to thoughts or emotions), non-striving (letting go of outcomes), patience (allowing things to unfold), trust (relying on one's inner wisdom), and beginner's mind (approaching experience as if seeing them for the first time) (Kabat-Zinn, 1994). Collectively, these attitudes orient individuals toward relating to their experiences without habitual evaluation, and fostering a perspective that allows experiences to be seen "as they are" rather than judged or controlled (Kabat-Zinn, 1994, p. 13). Taken together, this present-centred attention and attitudinal stance foster a receptive and non-reactive awareness of one's moment-to-moment experience (Kabat-Zinn, 1990; Kabat-Zinn, 2021).

According to Kabat-Zinn (1994), mindful awareness in the present moment is disrupted by habitual reactivity, mind wandering, and attachment to thoughts or outcomes. To cultivate this form of mindfulness, Kabat-Zinn developed the eight-week Mindfulness-Based Stress Reduction

(MBSR) program, where individuals can develop present-moment attention and non-judgmental awareness through formal and informal meditation practices (Kabat-Zinn, 1990; Kabat-Zinn, 2003; see *Cultivating Mindfulness and Mindfulness Interventions to Cultivate Greater Mindfulness*). In subsequent sections, I will provide a comprehensive examination of the empirical research that underpins Kabat-Zinn's conceptualization of mindfulness.

Despite being influenced by Buddhist tradition, Kabat-Zinn (2015) highlights that being mindful is a universal quality that can be cultivated by anyone, regardless of their religious beliefs or cultural orientation. He further suggests that mindfulness has more of a connection to the inherent workings of the human mind than any particular religion or philosophical perspective. Supporters of secular mindfulness thus propose that stripping mindfulness of its religious underpinnings allows for its adoption among diverse populations and argue it is time to develop empirical evidence for the compatibility of mindfulness with clinical practice (Gordon et al., 2014; Wilson, 2014). However, critics of secularized mindfulness argue that modifying traditional Buddhist principles to fit Western approaches to wellbeing oversimplifies the concept and provides an incomplete description of the phenomenon (Dreyfus, 2011; Monteiro et al., 2015). Mainly, secularized versions teach mindfulness as a standalone practice serving as a therapeutic tool to augment one's general wellness (Monteiro et al., 2015). In contrast, mindfulness in Buddhist contexts moves beyond merely being therapeutic, serving as one aspect of the Noble Eightfold Path aimed at achieving enlightenment (bodhi) and liberation from suffering (nirvana) (Bodhi, 2000). Additionally, some scholars express vexation about the cultural appropriation of traditional mindfulness as it is stripped of its deeper spiritual meanings (Monteiro et al., 2015). They contend that the cultural appropriation of mindfulness commercializes Buddhist customs for profit and neglects the significance of the practice as a way

of life (Ishikawa, 2018). This ongoing debate regarding the secular application of mindfulness situates the present study within broader discussions of its use in non-Buddhist contexts.

Comparing Langerian and Kabat-Zinn Mindfulness

While both mindfulness approaches stem from different theoretical backgrounds, Hart et al. (2013) suggest that Langer’s socio-cognitive framework and Kabat-Zinn’s meditative approach converge primarily in their emphasis on the self-regulation of attention as a mechanism for invoking mindful modes of awareness. Lakatos (2019) provided empirical evidence for this shared self-regulatory mechanism and found that scores on the Five-Facet Mindfulness Questionnaire, a questionnaire based on Kabat-Zinn’s approach, and the Langer Mindfulness Scale are moderately correlated and partially mediated by attentional self-regulation. Moreover, each school of thought conceptualizes mindfulness in contrast to a way of functioning characterized by limited awareness and unexamined modes of engagement, described as “mindlessness” by Langer (1992, p. 289) and “autopilot” by Kabat-Zinn (1994, p. 30).

Although both approaches emphasize attentional self-regulation and reduced automaticity, these two schools of thought diverge in several respects (Hart et al., 2013). With regard to cultivating mindfulness, Langer’s socio-cognitive approach does not view mindfulness as a product of meditative practice, but rather as an active mental state achieved through drawing novel distinctions that situate individuals in the present moment. Thus, from Langer’s perspective, mindfulness can be enacted immediately within everyday activities, without requiring prior engagement with meditative practice. With repeated engagement, this mindful mode of attending is theorized to become a dispositional trait (Carson & Langer, 2006; Langer & Moldoveanu, 2000). In contrast, Kabat-Zinn’s meditative approach closely intertwines mindfulness with specific practices, particularly formal and informal meditation, through which

individuals learn, over time, to stabilize attention in the present moment, adopt a non-judgmental stance, and ultimately carry this quality of awareness into everyday life (Kabat-Zinn, 1990; Kabat-Zinn, 2001; see *Practices to Cultivate Mindfulness*).

A second point of divergence across the schools of thought concerns the primary objects of mindful awareness (Baer, 2003; Bishop et al., 2004; Hart et al., 2013). Baer (2003) noted that Langerian mindful awareness is largely oriented towards external stimuli, and does not emphasize a sustained monitoring of internal cognitive and emotional states as primary objects of attention. In contrast, Kabat-Zinn's approach incorporates ongoing attentional awareness of both external and internal experiences (e.g., thoughts, emotions, and bodily sensations). Relatedly, these two approaches differ in their engagement with thought content. Specifically, the Langerian approach involves an active engagement with thoughts through the generation of novel distinctions and perspectives, while Kabat-Zinn's tradition transforms one's relationship to thoughts by cultivating non-reactive and metacognitive observation rather than altering thoughts. As Crum and Lyddy (2014) similarly note, "Eastern mindfulness shines a clear light of unbiased and unattached awareness on existing mindsets whereas Langerian mindfulness involves a continual process of restructuring and creating mindsets anew" (p. 954).

Throughout this thesis, the term mindfulness is used to refer to Kabat-Zinn's meditative conceptualization of the construct rather than to Langer's socio-cognitive framework. Kabat-Zinn's (1994) definition of mindfulness is among the most widely cited conceptualizations in contemporary research, with numerous scholars across different domains adopting or adapting this definition (Bishop et al., 2004; Chiesa & Seretti, 2011; Shapiro et al., 2006). Moreover, Kabat-Zinn's MBSR program has served as a template for numerous MBIs, including the sport-specific adaptation, Mindful Sport Performance Enhancement (MSPE), used in the present study

(Creswell, 2017; Kaufman et al., 2018). Grounding the present study in Kabat-Zinn's framework and the widely adopted definition of mindfulness, therefore, supports conceptual and methodological comparability within the existing literature.

Mindfulness to Promote Sport Performance

Kabat-Zinn et al. (1985) conducted the first study of mindfulness in sports among collegiate rowers. They found significant improvements in the rowers' abilities to manage sport-related pain and negative thoughts, as well as increased concentration and relaxation after a MBI (Kabat-Zinn et al., 1985). Since this initial study, there has been a surge of interest in exploring the connection between mindfulness and sports performance (Jones et al., 2020; Mohammed et al., 2018). Birrer et al. (2012) conceptualized mindfulness as a "meta-technique" that operated across multiple psychological domains by shaping several interrelated impact mechanisms that influence a range of performance-relevant psychological skills (Birrer et al., 2012, p. 237). They proposed nine impact mechanisms through which mindfulness may exert performance-relevant effects: attention, an accepting and non-judging attitude, clarification of values, self-regulation, clarity of internal experience, exposure to challenging internal states, cognitive-emotional flexibility, non-attachment, and reduced rumination. Each impact mechanism is described below.

Mindfulness practice is associated with enhanced attentional control and perceptual-cognitive functioning (Chambers et al., 2008; Chiesa et al., 2011). Importantly, when athletes can better direct their attention to performance cues, with less focus on irrelevant stimuli, more attentional resources are available for assessing situations, and may lead to enhanced problem-solving and improved athletic outcomes (Carmody, 2009). Thus, Birrer et al. (2012) suggested that athletes who practice mindfulness are better able to minimize distractions and focus their attention on cues that are relevant to their performance.

Birrer et al. (2012) proposed that acceptance and non-judgmental attitudes constitute a second pathway through which mindfulness may influence athletic performance. Drawing on research linking mindfulness practice to greater experiential acceptance (Hayes et al., 1999), they argued that athletes who practice mindfulness may be more adept at coping with discrepancies between their actual performance and expectations. Birrer et al. (2012) suggested that this attitude may limit athletes' tendencies to consciously exert declarative control over well-learned motor skills in response to deviations from performance expectations. For example, in a basketball context, an athlete may be less inclined to overanalyze or consciously adjust their shooting mechanics after a missed shot, and instead allow the movement to unfold naturally on subsequent attempts. As a result, these athletes may be less susceptible to performance breakdowns that emerge from overcorrection and disrupted movement patterns, and instead support a more stable execution of automatic motor processes when responding to performance discrepancies (Birrer et al., 2012).

Mindfulness practice is also theorized to facilitate a clarification of one's values (Shapiro et al., 2006). Building on this perspective, Birrer et al. (2012) proposed that mindfulness enables athletes to recognize and correct misalignments between personal values and performance goals. Greater alignment between values and goals may enhance athletes' self-concordance (Koestner et al., 2011) and the degree of self-determined behaviour, thereby supporting need satisfaction (Deci & Ryan, 1985). In turn, Birrer et al. (2012) argue that this process may contribute to more robust and sustainable forms of motivation among athletes.

Birrer et al. (2012) further suggest that self-regulation represents a pathway through which mindfulness may support sport performance. They proposed that an increased self-regulation cultivated through mindfulness practice (Carmody et al., 2009; Coffey et al., 2010;

Shapiro et al., 2006) may enable athletes to manage negative emotions, such as anger and fear, more effectively, and thus support psychological skills, including coping, arousal regulation, communication, and leadership abilities, as well as various “self” constructs (e.g., self-awareness, self-efficacy, and self-confidence; Birrer et al., 2012, p.237).

Mindfulness was found to be associated with greater clarity regarding internal experiences and more effective regulation of negative emotional states (Coffey et al., 2010). Birrer et al. (2012) theorized that this greater internal clarity may support personal development, recovery, and coping skills, thereby reducing the likelihood of overtraining and dropout.

Mindfulness practice is posited to increase exposure to strong or difficult emotions, thoughts, or body sensations (Shapiro et al., 2006). By deliberately and non-judgmentally attending to internal states during mindfulness practice, one can learn experientially that these states are transient and can be approached without immediate withdrawal (Segal et al., 2002). Thus, Birrer et al. (2012) propose that, through this process, athletes may develop their volitional capacity and pain management skills, thereby becoming less inclined to avoid negative emotions, physical discomfort, and other aversive internal states encountered in sporting contexts. Consequently, athletes are better equipped to persist in the face of competitive pressure and actively participate in uncomfortable training environments more effectively (Birrer et al., 2012).

Mindfulness is shown to foster cognitive, emotional, and behavioural flexibility by enabling more effective responses to changing internal and external demands (Carmody et al., 2009). Birrer et al. (2012) theorized that this increased flexibility, developed through mindfulness practice, may lead to greater personal development and interpersonal skills for athletes within and outside of sporting contexts.

Non-attachment (to outcomes and ideas) is theorized to be a pathway through which mindfulness influences athletic performance (Birrer et al., 2012), and mindfulness practice is associated with increases in non-attachment (Coffey et al., 2010). Birrer et al. (2012) suggested that athletes who practice mindfulness may engage in competition with a more stable and less ego-involved sense of self as they reduce the extent to which their emotional states and self-concept become contingent on achieving specific performance outcomes. As a result, this may reduce their likelihood of engaging in counterproductive self-regulatory behaviours and excessive conscious monitoring of motor execution (Birrer et al., 2012).

Mindfulness practice has been associated with reductions in ruminative thinking, or at a minimum, a decreased sense that such thoughts are uncontrollable (Coffey et al., 2010; Raes & Williams, 2010). Consistent with these findings, Birrer et al. (2012) proposed reduced rumination as the final pathway through which mindfulness may influence performance-relevant psychological skills. By limiting repetitive psychological engagement with past performance moments and stress-provoking thoughts, they suggested that this mechanism supports athletes' arousal regulation, coping, and recovery skills.

Collectively, these nine impact mechanisms shed light on the psychological processes through which mindfulness may shape performance-relevant skills. In particular, these mechanisms highlight how mindfulness may enhance athletes' attentional control, emotional regulation, psychological flexibility, and their relationship with internal experiences, all of which are central to effective athletic performance. This framework therefore provides a conceptual foundation for understanding how mindfulness may support athletes in competitive contexts. It should be noted, however, that Birrer et al.'s (2012) theoretical considerations are presented here

to map the possible pathways linking mindfulness and sport performance, and are not employed as an analytic framework for the interpretation of participants' accounts.

Mindfulness Risks

Despite the promising benefits of mindfulness, it is imperative to note the presence of risks and adverse events in practice. Unlike the rapidly increasing research on its benefits, the “attempts to study its potential harmful or negative effects are nearly absent” (Karremans & Papies, 2017, p. 15). Therefore, this absence can bring forth misconceptions regarding its impact where individuals can be “harmed, cheated, disappointed and/or disaffected” (Van Dam et al., 2015, p. 37). Adverse events including anxiety, depression, stress, cognitive abnormalities, and hallucinations during or following a meditation session are occasionally described but remain underreported (Farias et al., 2020). Importantly, case studies of practitioners experiencing adverse events delineate that most individuals did not have prior mental health problems, indicating the risk present for all individuals (Farias et al., 2020). Despite these adverse events, some scholars propose that these events can be viewed as early challenges that are constructive in the long term process of self-actualization (Lomas et al., 2015; Shapiro et al., 1992; Walsh et al., 1977). Lindahl et al. (2019) advocates for a person-centred approach to comprehend the variability of meditation-related challenges as either normative or an adverse event that relies upon situational context and the practitioner's classification of the experience. Nonetheless, these perspectives underscore that mindfulness practice is not uniformly benign.

Cultivating Mindfulness

Kabat-Zinn (2009) acknowledged that mindfulness has been used in the scholarly literature as both an umbrella and operational term. Specifically, mindfulness has been used to

encompass multiple referents, such that it is described as the “aim, the methods or practices, and the outcome or consequences all wrapped up together” (Kabat-Zinn, 2009, p. xxix). This broad and overlapping use of the term has contributed to conceptual ambiguity in the literature, particularly with respect to distinguishing mindfulness as a phenomenon from the meditative practices used to cultivate it (Brown et al., 2007). Accordingly, both *mindfulness* and *meditation* have been used interchangeably (Chiesa et al., 2011; Didonna, 2009; Greeson, 2009). In light of this ambiguity, the current study differentiates between these two constructs by drawing on Kabat-Zinn’s (2003) clarification that meditation practices are not equivalent to mindfulness itself. According to Kabat-Zinn (2003), mindfulness denotes the quality of awareness that arises from non-judgmental, present-moment attention, while meditations are structured practices or “particular kinds of scaffolding” designed to cultivate this mode of awareness for prolonged periods in everyday life (p. 147).

Mindfulness has also been outlined as both a state (i.e. being mindful during a particular point in time) and a trait (i.e., a predisposition to be mindful across various situations) (Tomlinson et al., 2018). Several meditation approaches exist for practitioners to cultivate both their state and trait mindfulness (Kabat-Zinn, 2015; Siegel et al., 2009). First, practitioners can develop their mindfulness through informal mindfulness meditations (Siegel et al., 2009). Such meditations are performed by integrating awareness to routine tasks (e.g., walking, washing dishes, and eating) by paying intentional attention to the sensations present during these experiences instead of drifting into thought or automaticity (Siegel et al., 2009). In addition, individuals can cultivate mindfulness through formal mindfulness practices, which require a dedicated period to practice outside of routine daily activities (Siegel et al., 2009). Formal meditation practices have been classified into several categories, with focused attention (FA) and

open monitoring (OM) representing among the most widely studied (Lippelt et al., 2014). Novice practitioners are typically first introduced to FA meditation before progressing to OM meditation (Lutz et al., 2008; Vago & Silbersweig, 2012).

In a FA meditation, individuals first direct their attention to a chosen object (e.g., one's breathing, a mantra, or a sound; Siegel et al., 2009). Next, they monitor their attention, noticing when internal or external stimuli arise that divert attention from the intended object (Wimmer et al., 2020). When exposure to such stimuli results in mind wandering, cognitive inhibition can be engaged to minimize subsequent distractions and allocate their attention back to the chosen object (Lippelt et al., 2014). Through this repeated process of focusing, mind wandering, and refocusing, individuals develop a greater capacity to attend to the present moment and become increasingly aware of the mind's tendency to wander and engage in stimulus-independent thoughts (Siegel et al., 2009; Wimmer et al., 2020).

Practitioners advance to OM meditation once they can sustain attention on an object for an extended period during FA practice (Lippelt et al., 2014). Unlike FA meditation, OM does not require the practitioner to direct attention toward any specific object (Lippelt et al., 2014). Instead, OM meditation emphasizes sustaining an open and accepting awareness by allowing thoughts, feelings, and sensations to emerge without judgment, criticism, or attempts to suppress them, even when they are challenging (Baer, 2003). Within OM sessions, meditators commonly begin with a brief period of FA meditation to stabilize attention before transitioning to the ongoing observation of experiences that emerge in their awareness (Lippelt et al., 2014).

MBIs to Cultivate Greater Mindfulness

Practitioners can develop greater mindfulness through MBIs, like the MBSR developed by Kabat-Zinn (Mistretta et al., 2017). Initially designed for the public, especially those dealing with everyday stress or those seeking to enhance their overall well-being, the MBSR has gained widespread acceptance and is increasingly used in sports environments (Kaufman et al., 2018). Several MBIs have been developed specifically for athletes (Anderson et al., 2021). For instance, the Mindfulness Acceptance and Commitment (MAC) approach and the MSPE focus on developing mindfulness skills within sports contexts and have been employed for athletes across various sports. These MBIs have demonstrated the potential to enhance athletes' competitive performances (Glass et al., 2019; Kaufman et al., 2009; Wolanin, 2005; Zhang et al., 2016), and athlete participation in these interventions can be a valuable tool to effectively manage the psychological challenges of competitive sports (Baltzell, 2017).

The MAC program is based on the Acceptance and Commitment Therapy (ACT) principles, an approach involving commitment to actions aligning with an individual's personal values (Hayes et al., 1999). ACT is a form of cognitive behavioural therapy that uses acceptance and mindfulness strategies, together with commitment and behaviour change strategies, to increase psychological flexibility (Hayes et al., 1999). The MAC program, developed by Gardner & Moore (2004), is designed to help athletes improve their sports performance and overall psychological well-being using mindfulness and acceptance techniques. The program has evolved from its original intent as an acceptance-based behavioural intervention for athletes to encompass a more comprehensive strategy for improving athletic performance (Kaufman et al., 2018). Today, the MAC is widely studied across a variety of sports.

Several studies, including case studies, open trials, and randomized control trials (RCTs), have revealed the effectiveness of MAC in improving athletic performance (Moore, 2009). Case studies on MAC across swimmers and springboard divers have found increases in mindfulness components like awareness, attention and acceptance (Schwanhausser, 2009), as well as increased engagement in athletic activities, sport enjoyment, and behaving in alignment with athletic goals (Gardner & Moore, 2004). A MAC open trial, where both the researchers and participants are aware of the intervention administered to participants (Jones, 2022), in Division I field hockey and volleyball athletes found an improvement in both self and coach evaluations of performance compared to a control group receiving no treatment (Wolanin, 2005). RCTs on MAC have found improvements in sports performance like dart throwing compared to a control treatment receiving attentional control training (Zhang et al., 2016), and higher self and coach-rated sports performance compared to a treatment group receiving the psychological skills training (PST) program (Lutkenhouse et al., 2007). When comparing MAC to the PST program across several sports, Josefsson et al. (2017) found the MAC to be more effective in decreasing difficulties in emotion regulation and improving mindfulness abilities related to sports and perceived performance. When considering the collective findings, these studies indicate that MAC may be effective in improving competitive athletic performance (Moore, 2009).

MSPE emerged in response to a demand for an innovative and more efficient treatment in the field of sport psychology (Kaufman et al., 2018). Like MAC, MSPE places a strong emphasis on the cultivation of mindfulness skills and practicing acceptance (Kaufman et al., 2009). Unlike the MAC framework, the MSPE framework does not incorporate an emphasis on behaviour driven by values (Kaufman et al., 2009). The MSPE is a versatile and customizable program to

suit any sport or a combination of sports, making it suitable for athletes at all levels, ranging from recreational enthusiasts to professional competitors (Kaufman et al., 2009).

A growing body of research over the past decade supports the effectiveness of MSPE as an effective intervention for improving athletic performance across various sports and countries (De Petrillo et al., 2009; Glass et al., 2019; Kaufman et al., 2009; Kaufman et al., 2018; Thompson et al., 2011). The initial open trial of MSPE conducted on long-distance runners found promising results in increasing mindfulness, as well as decreasing perfectionism and sport-related anxiety in the experimental MSPE group compared to a wait-list control (De Petrillo et al., 2009). Despite these benefits, they found no significant differences between the groups on sport performance, including changes in mile running time, average running distance, or average running frequency per week. In recent years, more rigorous RCTs on several athletic populations across multiple sports have found the MSPE to increase self-rated sport performance (Glass et al., 2019), mental toughness, and emotional intelligence (Ajilchi et al., 2019), sport enjoyment (Hut et al., 2023), and decrease the influence of negative internal states on performance (Hut et al., 2023). Athletes in a case study conducted by Pineau et al. (2019) on a NCAA Division III women's lacrosse team found that athletes experienced an enhanced ability to remain focused and composed in challenging circumstances, a decrease in nervousness and anxiety on the field, and improved interpersonal relationships within the team.

Although the MAC and MSPE programs have been widely used in various research including multiple sports, other researchers have implemented other MBIs designed specifically for their study that have demonstrated several positive outcomes across athletes in several sports. These outcomes include improvements in self-confidence (Mehrsafar et al., 2019), attention control, emotional regulation, adaptive behaviour following failure (Rothlin et al., 2020), as well

as decreases in stress-related physiological markers, competitive anxiety (Mehrsafar et al., 2019; Wolch et al., 2020), and mental fatigue (Coimbra et al., 2021). A study-specific MBI delivered in Aherne et al.'s RCT (2011) provided athletes from a university 'High Performance Centre' with a "Guided Meditation Practices" CD to guide their six-week mindfulness training to assess their achievements of flow—an optimal state of peak performance (Jackson, 2016), often characterized as the circumstance in which athletes are in "the zone" (Young & Pain, 1999). Through this, they found increases in some dimensions of achieving flow, including "Clear Goals" and "Sense of Control". However, the other flow dimensions like "Action-Awareness Merging" and "Time Transformation" were uninfluenced by the intervention.

The Role of Mindfulness in Athlete Well-Being

According to Etzel et al. (1991), improving athletic performance requires a holistic training approach that focuses on developing the individual as a whole to enhance their growth. Sport MBIs, like the MAC and MSPE, are influenced by therapeutic approaches like mindfulness meditation (Kabat-Zinn et al, 1992), ACT (Hayes et al., 1999), and self-compassion interventions (Gilbert, 2009), which can augment athletes' well-being in addition to their performance-enhancing potential (Zhang et al., 2021). Therefore, the psychological strategies employed by athletes to increase their performance can also extend to impact their overall well-being (Foster & Chow, 2020).

Although sport mindfulness training does not serve as a replacement for psychological interventions in cases of mental illness, the concept of 'mental training' for athletes can be perceived as less stigmatizing, and more socially acceptable than traditional psychotherapy (Kaufman et al., 2018), and most athletes are already familiar with the principles of sport psychology (Beauchemin, 2014). Consequently, this approach can offer a form of preventive

support for athletes who are at risk for mental health difficulties but are reluctant to pursue mental health treatment (Kaufman et al., 2018). Therefore, it is important to educate coaches and athletic administrators on the impact on both mental well-being, as well as performance, that participation in mindfulness training activities may have for its increased receptiveness into their training programs (Foster & Chow, 2020).

Several studies provide evidence supporting the idea that MBIs enhance athletes' levels of well-being and overall mental health (Evers et al., 2021; Jones et al., 2020; Macdougall et al., 2019). Mindfulness has also been found to be linked with positive aspects of well-being among numerous athletic populations across several sports, including a reduction in perceived stress (Hut et al. 2023; Vidic et al., 2017), an improvement in athletic coping skills (Jones et al., 2020; Vidic et al., 2017), social skills (Milligan et al., 2017), confidence (Milligan et al., 2017), resilience (Röthlin et al., 2020), self-compassion and psychological flexibility (Carraca et al., 2018), decreased symptoms of mental fatigue from competition (Coimbra et al., 2021), and burnout (Moen et al., 2015).

Who can benefit highly from MBI participation?

According to Humphrey et al. (2000), nearly half of male athletes and over half of female athletes surveyed in their study reported that stress associated with sport participation, such as the pressure to win, excessive anxiety, injuries, underperforming, and interpersonal conflicts with coaches and peers, considerably affected their mental and emotional well-being. Several studies across different athlete populations in various sports also support this finding (Pilkington et al., 2024; Rice et al., 2016). Importantly, athletes lack sufficient coping strategies to effectively manage these stressors (Cosh & Tully, 2015). Therefore, mindfulness education or MBI

participation holds the potential to provide athletes with effective strategies to mitigate these stressors and enhance their overall well-being (Foster & Chow, 2020).

Adolescents may also benefit from being mindful. Adolescents can experience an increased risk in psychological distress (Ma & Fang, 2019), emotional disorders including stress, anxiety, and depression during this period of rapid physical and cognitive growth (Bluth & Blanton, 2014). The dynamic and rapid neurological changes present during adolescence facilitate a period of developmental plasticity exclusive to this stage of life that makes adolescents adaptable and open to change (Spear, 2013). Therefore, the introduction of mindfulness can serve as a protective factor to distress and the promotion of well-being in adolescents where they learn to cultivate inner resources that promote adaptive coping strategies translatable to later life stages, such as adulthood (Cheng, 2024; Ma & Fang, 2019).

As millions of young individuals engage in organized sports during their adolescent years (Smith & Smoll, 1996), sport MBIs can serve as a strategy for promoting psychological well-being in adolescent athletes (Mettler et al., 2024). Importantly, poor mental well-being can subsequently hinder athletic performance (Reardon et al., 2019). Despite the potential benefits of mindfulness training and the extensive use of mindfulness in sport contexts for more than a decade (Gardner & Moore, 2012), the depth and quantity of research on mindfulness research among adolescent athletes is lacking.

In a small body of research, researchers have examined mindfulness among adolescent athletes and, taken together, the results are promising. Ivansson et al.'s (2015) RCT on junior elite soccer players' injury rates found the MBI group to experience fewer injuries compared to the control group receiving exposure to different sport psychology topics. Although Ivansson et al.'s study did not show statistically significant results, they argue that their findings are clinically

relevant to the injury rates of soccer athletes. Worthen & Luiselli's (2016) exploratory study developed a standardized questionnaire that high-school female soccer and volleyball players evaluated on various aspects of the program. The program ratings indicated that most of the formal mindfulness techniques provided during the training program were evaluated as highly beneficial for both sports and life. Although exploring the effectiveness of the program quantitatively, they did not conduct qualitative post-assessment interviews to explore the impact of the program on their performance in sports. Augustus & Zizzi's (2022) feasibility study found insignificant results for mindfulness levels and mental health symptoms for adolescent student-athletes from a sport academy who watched the Headspace 'Guide to Meditation' series in their health class. However, participants reported "calming" and "peaceful" effects during post-episode reflections (Augustus & Zizzi, 2022, p.220). Like Worthen & Luiselli (2016), Augustus & Zizzi (2023) highlighted the potential of qualitative interviews to enhance the depth of the findings by capturing participants' perspectives of mindfulness at a specific timepoint.

Addressing Research Gaps

This study seeks to contribute to ongoing efforts to advance mindfulness research in sport by examining MBIs among adolescent athletes, a population that remains underrepresented in mindfulness and sports literature. The present study's longitudinal qualitative design offers insight into the ways that athletes made sense of mindfulness, apply it within and beyond athletic contexts, and perceive it as shaping their sport participation and everyday experiences. Thus, the findings provide an experiential perspective that can clarify how mindfulness is understood over time when introduced in a sporting context and how these evolving understandings inform the ways mindfulness is applied in practice.

Chapter III: Methodology and Methods

Philosophical Positioning

The present study adopted an interpretive paradigm and was informed by relativist ontological and constructivist epistemological assumptions. Within this paradigm, I viewed reality as multiple and subjective (Guba & Lincoln, 1994), such that reality was individually constructed, and each individual's experience constituted a different reality (Scotland, 2012). This perspective required that I approached each participant's description of their experience as a distinct and analytically meaningful account. Furthermore, I viewed knowledge not as something out there to be uncovered, but rather as co-constructed between the participants and me. Specifically, participants made sense of their lived experiences, and I interpreted their accounts (Hiller, 2016). Therefore, reflexive engagement of my own assumptions and knowledge of mindfulness was required throughout the analysis to consider how my perspectives informed my interpretation of participants' accounts (See Reflexivity section below for more detail). Accordingly, the accounts of mindfulness presented in the study do not purport to reveal an unalterable truth, but rather describe participants' contextualized experiences of learning and applying mindfulness.

Design

The data collection and analytic process was guided by the principles of Interpretative Phenomenological Analysis (IPA; Smith, 1996; Smith et al., 2009). IPA is informed by three key theoretical underpinnings: (a) phenomenology, (b) idiography, and (c) hermeneutics, which together were well suited to explore the given aims of this research. Phenomenology recognizes that experience is lived, shaped by context, and evolves as individuals engage with the world

around them (Smith et al., 2009). An interpretive phenomenological lens therefore enabled an exploration of how adolescents lived and interpreted mindfulness across different moments in their sporting and everyday lives. Additionally, recognizing that learning mindfulness in a sport-context will vary across individuals, IPA's idiographic orientation offered a way to attend to the divergent and convergent aspects of the participants' experiences. Specifically, IPA's idiographic commitment involves a detailed case-by-case analysis to explore each participant's unique developmental experiences in depth (Smith et al., 2009). By grounding the analysis in the particular before moving to shared patterns, IPA supported a nuanced account that preserved the individuality of each athlete's experience while also identifying points of thematic convergence across the group. Finally, the focus on hermeneutics means that language is viewed as a medium through which the meaning of experience is communicated and interpreted (Smith et al., 2009). Central to IPA is the 'double-hermeneutic', where the researcher is attempting to make sense of the participant's attempt to make sense of their world. Therefore, meaning emerges through an intersubjective process in which both the participant and the researcher contribute to the understanding of a phenomenon (Smith et al., 2019). Because the researcher is inevitably part of this interpretative engagement, IPA acknowledges the role of the researcher as the primary analytic instrument (Larkin et al., 2006). This involves a sustained reflexivity to recognize one's own presuppositions and an effort to approach the participant's world as closely as possible on their terms throughout the research process (See Reflexivity section below for more detail).

Positionality

Attending to my positionality as a researcher was an important component of the study's constructivist epistemology and IPA methodology. I entered this research as a graduate student who valued mindfulness both personally and professionally, maintaining a daily mindfulness

practice, holding a certification to teach mindfulness, and engaging extensively with the mindfulness literature for both personal interest and the purposes of this research. Furthermore, my background in competitive basketball, both as a player and a coach, further shaped my engagement with the research context in which participants were applying mindfulness. Therefore, my close proximity to the phenomenon under study required ongoing reflexive attention to how my experiences informed the research process (See Reflexivity section below for more detail).

My combined background in mindfulness and basketball afforded me a degree of ‘insider’ status within the study (Dwyer & Buckle, 2009). This positioning facilitated rapport with participants and enabled the use of sport-specific and mindfulness-related language during interviews. Participants frequently described their experiences using performance-oriented metaphors and mindfulness terminology, which reflected their perception of a shared familiarity with the sporting and psychological contexts being referenced. Within this shared frame of reference, athletes appeared able to articulate nuanced reflection on competition and the ways mindfulness was taken up in these moments. However, this shared language also necessitated reflexive attention to the risk of assuming common meanings or prematurely interpreting participants’ accounts through my own experiential lens. Moreover, my proximity in age, as well as being of the same gender to the male adolescent participants, may have further contributed to a sense of comfort and familiarity. I was able to engage in informal conversations about their school seasons, and local teams, and players, which appeared to support relational ease during interviews.

At the same time, I occupied an ‘outsider’ position in several meaningful respects (Dwyer & Buckle, 2009), which shaped my ability to fully apprehend the lived experiences of adolescent

athletes participating in a MBI. As an adult in my mid-20s, I am no longer embedded within the competitive contexts of adolescent club sport. Additionally, I did not encounter mindfulness for the first time through a structured and guided MBI in the way participants did. This outsider positioning prompted a deliberate stance of curiosity throughout data collection, particularly when participants articulated meanings that diverged from my own prior experiences with mindfulness. My role as a trained mindfulness facilitator also positioned me in a relative position of authority, such that participants may have perceived me as a ‘teacher’. This positioning may have shaped what participants felt comfortable disclosing in interviews, particularly in relation to understanding or application, as if the interview were a form of evaluation.

Recruitment

Upon receiving ethics approval from the University of Manitoba Research Ethics Board, I used a convenience sampling strategy to recruit adolescent basketball players from a club team in Winnipeg, Canada. I contacted the head coach of a club team via social media (see Appendix A for the recruitment message) and was subsequently invited to two team practices in early March to present an overview of the study to players and any legal guardians in attendance. During these visits, I described the study procedures and distributed contact information for those interested in participating (see Appendix B for the recruitment script).

I was contacted by participants (or their legal guardians) via email and text message to indicate their interest. Those who expressed interest received a study information sheet (see Appendix C), electronic links to the assent, demographic and competition level form, and consent forms (see Appendices D, N, and E), and potential participants (i.e., adolescent players) were asked to review these materials with their legal guardians prior to deciding whether to participate. Both players and guardians had opportunities to ask questions about the study,

including during the initial information session and follow-up communication, prior to consenting. Participant assent and guardian consent were submitted electronically through SurveyMonkey prior to participation. A \$25 gift card was offered as an incentive for each completed interview.

Participants

Adolescents who were between the ages of 12-18 years old, actively engaged in basketball competition at the time of the study, and had no previous MBI experience were eligible to participate in the study. Importantly, individuals with mindfulness experience remained eligible, as long as they had not previously participated in a structured MBI. Athletes elected to participate voluntarily and were made aware that they could withdraw from the study at any time. Participants were asked to select pseudonyms and provide demographic information (Table 1). Athletes were assured that their confidentiality would be maintained and that all data would be anonymized to protect their identities throughout the research process.

Five participants initially enrolled in the study, and one participant withdrew due to scheduling constraints. Therefore, four adolescent basketball players participated in the study. For student IPA projects, Smith et al. (2009) recommend a sample of three to six participants due to the intensive nature of idiographic analysis. The present study's longitudinal design amplified this depth and generated a rich corpus of data across multiple interviews with each participant to examine how meaning-making evolved over time.

Table 1
Participant Demographics

Name	Age	Gender	Ethnicity	Highest level of basketball competition
BA	16	Male	Filipino	Club
Jake	16	Male	Filipino	Club
Mateo	16	Male	German and British	Club
C	16	Male	Filipino	Provincial

Data Collection

Participants were interviewed at three timepoints: (T1) in mid-March, before the beginning of the MBI; (T2) in mid-April after three weeks of the MBI; (T3) and in mid to late June, after the MBI. The interviews followed an individual semi-structured format. Leading IPA researchers describe this format as “the preferred means for collecting data” (Smith et al., 1999, p.58) as it closely models the double hermeneutic relationship between participants and the researcher and develops participant-researcher rapport. The longitudinal design further emphasizes the significance of rapport, as trust between the participant and researcher can foster deeper reflection and richer dialogue across timepoints. Participants were interviewed via the Zoom video conferencing program for between 39 and 85 min at T1 ($M = 56.25$, $SD = 20.42$), 41 to 60 min at T2 ($M = 49.75$, $SD = 7.97$), 44 to 60 min at T3 ($M = 53.25$, $SD = 8.06$). All of the interviews were audio recorded and transcribed verbatim.

The interview schedule was constructed in line with established guidelines for conducting IPA semi-structured interviews to allow participants to articulate their experiences comprehensively (Smith et al., 1999; See Appendix F). At the start of each interview, participants were informed that while the researcher had areas of interest to explore, they were free to guide the conversation and speak openly about any relevant experiences. The main questions asked in the pre-MBI interview explored participants’ familiarity with mindfulness, their knowledge of

sport psychology (if any), and their general experiences with basketball. Mid-intervention interviews examined any early changes in their understandings and applications of mindfulness, motivations and efforts to continue, and the difficulties experienced during practice, or when it was not practiced. Post-MBI interviews explored how participants reflected on their experiences across the full intervention. This included comparing their initial and current understandings of mindfulness, and evaluating the application and relevance of practices on sport and daily life (if any). Based on participant request, interview schedules were provided in advance for the mid-intervention (T2) and post-intervention (T3) interviews.

MBI

The MBI was implemented using a workshop format of six weekly sessions lasting 60 minutes each. Each intervention session combined educational components with experiential practices based on the MSPE framework (Kaufman et al., 2018). I facilitated the intervention and served as the trained mindfulness instructor for the MBI. Program delivery was informed by my formal training through the Canadian Mindfulness Institute to teach mindfulness to adolescents aged 12-18. At the start of each MBI session, participants were reminded that their involvement was voluntary and were responsible for maintaining the confidentiality of any information disclosed by other participants.

Each session was developed around a central theme to provide a structure that supported adolescent's learning and allowed concepts to build progressively across the MBI. All sessions were held in the team's regular practice gym to create a familiar environment and support athletes' comfort with engaging in mental training. Participants who were unable to attend a session were offered an online make-up class to ensure they received the material. All participants completed every session, whether through in-person attendance or a make-up class.

A brief description of each intervention session is presented in Table 2. For a thorough description of the MSPE training, see Appendix G.

Table 2
Themes of Each Session

Session	Central Theme
Session 1	Establishing Mindfulness Fundamentals
Session 2	Attention Strengthening
Session 3	Mindfully Stretching the Body's Limits
Session 4	Accepting and Adapting to What Is
Session 5	Becoming a Mindful Athlete
Session 6	The end of MSPE and a Beginning of Lifelong Mindfulness

Analysis

The process of analysis followed the guidelines outlined by Smith et al. (2009). During the first stage of reading and re-reading, I became immersed in the data through sustained engagement with each audio recording and transcript. I listened to audio recordings alongside the written transcripts to ensure accuracy and to capture the emotional nuance and tone of each participant's account. Each transcript was further read several times with informal note taking of the preliminary observations that emerged from the data.

Next, I engaged in initial noting through a line-by-line examination of each transcript. In this stage, I created exploratory notes to capture contextual details, language, semantic content, and meaning patterns from participants' accounts. To guide my analytic engagement, I conducted three types of commentary. First, descriptive comments focused on the content of the participant's account to explain their experience. Second, linguistic comments explored how language conveyed their meaning by attending to the repetition of certain words, metaphor use, and hesitation in their expression of ideas. Lastly, conceptual comments reflected an

interpretative engagement to consider the underlying meanings of participant's accounts beyond what was said. See the exploratory notes column in Appendix H.

The next analytic phase I undertook involved developing experiential statements that captured the core meaning of participants' accounts. At this stage, I reformulated the initial descriptive, linguistic, and conceptual comments into concise interpretative sentences to summarize segments of text. These statements served as the bridge between the participants' words and my interpretative themes. See the experiential statements column in Appendix H.

During the following phase of analysis, I searched for connections across experiential statements to construct higher-order structures of meaning. In this iterative process, I examined how individual experiential statements related to one another, organizing them into personal experiential themes that shared conceptual ground. Clustering was achieved through abstraction (grouping thematically similar experiential statements), contextualization (considering the situational context of themes), numeration (attending to the emphasis or frequency of experiential statements across the data), and function (examining the role that particular experiential statements played in participants' sense making). To facilitate this process, experiential statements were organized in a table to illustrate patterns of connection. This analytic process was conducted idiographically for each participant (see Appendix I for tables of personal experiential themes).

Next, I repeated the same procedure for the next transcript (i.e., case). To uphold idiographic commitment, I bracketed the insights arising from experiential statements and personal experiential themes that may affect the next transcript in a reflexive journal. This reflexive stance helped prevent premature cross-case comparisons and allowed new patterns of meaning to emerge for each participant (see Appendix J).

After completing the idiographic analysis for each participant, the final stage of analysis involved looking for patterns across cases to identify similarities and differences within the group. I organized personal experiential themes derived from each participant in a table and assessed for conceptual overlap to identify group experiential themes (see Appendix K). This structured comparison enabled me to capture collective meanings while remaining attentive to the individuality within each group experiential theme.

I employed this analytic process for all three timepoints. Accordingly, the results are presented in a themes tied to timepoints format, with each timepoint containing themes corresponding to that stage of the MBI (Farr & Nizza, 2019). Participants' progressions can be traced through the temporal process by following the collection of themes across all timepoints (Farr & Nizza, 2019).

Reflexivity

My reflexive engagement throughout the study was guided by the AMEE framework for reflexivity in qualitative research (Olmos-Vega et al., 2023). In line with this approach, reflexivity was not used to neutralize my subjectivity, but to make my interpretive influences visible and intentionally leveraged to elicit richer accounts during data generation and interpretation. Through this sustained reflexive engagement, I sought to present a transparent and situated account of adolescent athletes' experiences of learning and applying mindfulness.

In line with a reflexivity method outlined by Olmos-Vega et al. (2023), I engaged in reflexive writing throughout the research process (see Appendices L and M for the Researcher Reflexive Journal and MBI Facilitator Reflexive Journal). Prior to data collection, my reflexive writing focused on outlining my broader assumptions about mindfulness and its possible utility

for adolescent athletes. During data collection, I wrote reflexive journal entries prior to interviews to surface expectations about participants' developing understanding and application of mindfulness, while documenting emotional responses and prominent information following each interview. During data analysis, I returned to these entries to reflect on moments of resonance and dissonance, while considering how my background in mindfulness and sport shaped what drew my analytic attention. This sustained reflexive practice enabled me to monitor how my close proximity to mindfulness and sport shaped my interpretive focus, while intentionally re-centering participants' accounts. Moreover, in keeping with IPA's idiographic commitment, my reflexive writing further supported my temporary setting aside of analytic insights from one participant before engaging with the next.

Chapter IV: Results

The analysis generated three themes for the pre-intervention (T1) and mid-intervention (T2) interviews, and four for the post-intervention (T3) interview. These are presented in temporal order to illustrate how participants' experiences and applications with mindfulness evolved throughout the intervention. In line with IPA's idiographic focus, each theme includes detailed excerpts from participants' accounts to illustrate their lived experiences (Smith et al., 2009). These excerpts are followed by interpretive commentary to highlight linguistic and conceptual nuances, and illustrate how convergence and divergence were expressed in each theme (Smith et al., 2009). This structure seeks to capture the individuality of participants' voices and the shared trajectories that emerged through their accounts. In the excerpts presented, ellipses indicate a pause, and ellipses within brackets is used to mark small segments of speech (i.e., interviewer interjections) that have been omitted for clarity.

Timepoint 1: Pre-Intervention Interview

Theme 1: The Untrained Mental Game

Prior to the MBI, all participants reported engaging in a high volume of basketball training, up to six days per week, with a focus on both technical skill development and weightlifting. All participants had at least five years of experience in the sport, during which time they had experimented with psychological strategies to optimize their performance. Strategies included goal setting, pre-game music, prayer, positive self-talk, and breathwork. However, participants often characterized the psychological components of their performance as an aspect that has received limited structured training, which appeared to affect them to varying degrees.

For one participant, BA, the mind was identified as a “weakness” that greatly undermined the physical preparation in which he had invested:

That has been...like, my biggest struggle, like, confidence, like, believing in myself... I have all, like, the skills and all that stuff. It's just my mental game is what I need to work on the most...And, like, everyone that knows me, like, knows that's my biggest weakness.

In this extract, BA's repeated hedging phrases (“like”) and pauses (...) suggested the uneasiness he felt in the idea of having his technical abilities weakened by his lagging mental skills. BA's reflections highlighted a tension between his mental barriers and athletic potential. In his later T1 accounts, BA's longing to access “the best version of himself” revealed his sense of dissatisfaction with the self that surfaced on the court and his desire to unlock the self he sensed beneath the internal constraints.

Other participants reflected on their mental skills with more nuance, with one participant describing his mental game as relatively “decent”, while still recognizing where it limited his performance. For instance, Jake noted that he was “more composed than [he] used to be,” but also described how feeling nervous in high-pressure moments detracted from his execution of skills and clouded his decision-making. He shared, “Distraction [...] it's just like the nervousness. Obviously, I gotta like shake it off a little and like... I'll start playing better. But... I just had to have more confidence in myself, I'd say.” Jake's strategy reflected an approach to coping that offered him momentary relief, although his later statement, “I just had to have more confidence in myself” revealed his desire to cultivate a mental practice/state that would result in enduring self-assurance.

Taken together, BA's and Jake's reflections depict how participants differed in how they evaluated the strength of their psychological skills, but there was a common pattern whereby the mental game was experienced as an underdeveloped piece of their athletic profiles prior to the MBI. Participants' perceived gap in their physical and psychological skills fuelled their openness to mindfulness training as a way to ensure the mind supported, and no longer inhibited, their performance.

Theme 2: Early Understandings of Mindfulness

With one exception, participants entered the program without experience or a clear conceptual understanding of mindfulness. Nonetheless, this early ambiguity towards mindfulness cultivated participants' openness and curiosity to the practice and simultaneously created space for their own lived experiences to shape their meaning-making. Standing apart from the group, one participant entered with a well-formed understanding of mindfulness but struggled to apply it in practice, which motivated his willingness to participate in the program.

Like most participants, Mateo had heard of mindfulness prior to the intervention but admitted he did not know what it involved. Nonetheless, he recognized its potential link to mental training for basketball and described his initial exploratory stance with mindfulness. He shared, "I don't think I know anything about it, really [...] [I was] thinking it would, you know, overall help improve my game and my parents told me it would be good for me, so...I thought I'd try it out." Despite his unfamiliarity, its anticipated benefits and his parents' encouragement prompted him to experiment with the practice.

Jake illustrated a limited grasp of mindfulness as he drew on general ideas and stereotypes to describe the practice. He shared, "I'd say it's just like...I don't know. Just like...

like, peace. I don't know, thoughtless [...] I'm chilling. I don't know." Jake's uncertainty was highlighted in this excerpt, and his reliance on images of serenity ("peace") and relaxation ("chilling") conflate the aim of mindfulness with its potential for producing a calm state. Thus, his initial meaning making of mindfulness, shaped by stereotypical images, positioned its possible effects as its defining feature.

While most participants were minimally familiar with mindfulness, BA demonstrated some understanding of it when he defined it as "how connected your mind is to your body". However, his reflections still highlighted a gap between knowing and doing, as he shared, "I have an understanding of it. But how do I apply that?" BA's statement underscored the difficulty of incorporating his understanding of mindfulness during intense moments in sport. His plea for "how" further suggested a need for support and an openness to methods that translated mindfulness principles into actionable behaviours to support athletic performance.

Taken together, participants' accounts revealed a shared starting point of an initial unfamiliarity with mindfulness, with most demonstrating a limited conceptual understanding and one uncertain about its practical implementation. Ultimately, this baseline of ambiguity fostered all participants' willingness to explore mindfulness more profoundly.

Theme 3: Preoccupation with Mistakes and Evaluations

Prior to the MBI, athletes' reflections revealed how mistakes triggered critical thoughts that negatively impacted their confidence. Instead of moving on from mistakes made during play, mistakes resulted in negative self-talk, and led to the anticipation of future mistakes and critical evaluation by peers, which subsequently affected their performance.

C's description of his mental game illustrated how a mistake triggered withdrawal from the game when he said, "I feel like sometimes, it's very easy for me to like start fading away and just let other people do their thing because of something that happened during the game." In this statement, several linguistic markers signified C's mental approach to mistakes. His use of the phrase "very easy for me" pointed to how ingrained this response of disengagement in the face of errors had become, while the metaphor "start fading away" conveyed his mental and physical withdrawal from the game. With his disrupted engagement, it is conceivable that C became pre-occupied with critical thoughts and internal ruminations at the expense of immediate competitive demands. C's use of "because of something that happened during the game" further signaled how he attributed his withdrawal from the game to external events, while his internal agency to recover and navigate through mistakes was still in its early development.

Similarly, as mistakes occurred, a dip in performance often followed for Mateo. "I missed like an easy layup, and I got...a little mad at myself, I guess. Then I just stopped playing well [...] I got subbed out right at the end." This example reflects a momentary spike in Mateo's emotional intensity, accompanied by self-directed anger that resulted in the removal from play. In this chain of events, Mateo's description of "easy" highlighted his judgment of the miss as unacceptable, which further intensified the frustration he felt toward himself. His later description of "I just stopped playing well" after getting "a little mad" marked his self-condemnation as the pivot point for his performance decline. This highlighted the negative momentum rumination carried onto subsequent plays that lead to reduced playing opportunities.

Following errors, players anticipated external judgement or criticism. BA outlined how thoughts of negative social evaluation occupied mental space during gameplay, "I think about, like, the after facts. Like, what if I mess up? And then how are these people gonna react to that,

or how are they gonna see me and all that stuff?” In this statement, BA acknowledged the possibility of further mistakes and foregrounded their potential consequences. His temporal projection to the “after facts” signaled his anxiety into a hypothetical future that displaced his focus from the present moment and infiltrated his real-time decision making. Importantly, BA’s choice of the word “facts” linguistically framed his anticipations of others’ poor judgment of his abilities as an established truth, and not a narrative construed in his mind. This use of language revealed how attention absorbed by external evaluation diminished the mental bandwidth available for performance demands.

Altogether, participants’ accounts depicted how athletes entered the program in cycles of rumination, where mistakes magnified into catalysts for performance decline as the fear of evaluation influenced their mindset. Together, these mental preoccupations intensified participants’ self-imposed pressure, leading to eroded performance and decreased sport enjoyment. Against this backdrop of performance related-stressors, athletes envisioned mindfulness training as a potential resource to reshape their mental approach.

Timepoint 2- Mid-Intervention Interview

Theme 1: Reframing Mindfulness

Participants described how their experiences with the MBI prompted a deeper understanding and challenged their earlier views of mindfulness as merely an activity to achieve a sense of relaxation. By the program’s midpoint, all participants began to reframe mindfulness as presence and awareness. Their accounts illustrate two interconnected but distinct ways of understanding presence and awareness: one in relation to engagement in external tasks and the other directed toward both external and internal experiences.

C exemplified this newfound understanding of mindfulness as presence and awareness towards external tasks when he contrasted his previous beliefs with his new interpretation of the practice:

When I first started the program, I thought mindfulness was all about just like sitting still and meditating. Now...I understand that it's more about like being aware of what's happening in the moment... and understanding what's happening and just trying to be like present [...] paying attention to what you're doing right now and not worrying about anything else.

C's account illustrates how he reconceptualized mindfulness as more than just a fixed set of techniques as it became an applied approach to deeply attend to actions in the present-moment. His task-oriented descriptions ("what you're doing right now") highlight how mindfulness was reframed as full engagement with an activity. Linguistically, his description of "trying" for presence indicated that this was still an effortful and emerging skill at this time. Thus, C's account highlighted the value of lived experiences in reinterpreting the purpose of mindfulness, while illustrating the gradual developmental process of embodying its key principles.

For some participants, mindfulness was understood as extending qualities of presence and awareness to both external experiences and internal states. For example, Mateo's reappraisal of mindfulness included metacognition:

It helps a lot more than I thought [...] Before, I thought it was kind of like, meditating and just yoga kind of thing. But [you're] learning the way you kind of think, and the way you can change the way you think, and how you're doing things.

Mateo's account depicted his transformed view of mindfulness from a set of simple exercises to an ongoing awareness and engagement with his thought processes. Additionally, his emphasis on "learning" and "changing" reveal a broadened conceptualization of mindfulness as a reflective practice with potential to shape behaviour.

Taken together, the initial weeks of the MBI represent an opportunity for athletes to develop a more nuanced understanding of mindfulness. All participants reappraised mindfulness as a deliberate approach to outwardly engage with present-moment activities with greater attention and awareness. Nevertheless, some participants recognized it as a flexible approach to become more conscious of internal experiences. Ultimately, this theme highlights how experiential practice helped athletes move beyond their initial understandings of mindfulness.

Theme 2: Adopting Practical Mindfulness Strategies

Participants integrated mindfulness strategies into their sport experiences in a way that resonated with them and supported presence. For some athletes, mindfulness practices were valuable before games, while others benefited from integrating mindful anchors in games, particularly after mistakes. Altogether, participants adopted mindfulness strategies but applied them in different ways to suit their individual needs.

Several athletes began to incorporate meditations in their pre-game preparation and described intentions to include such practices into their routines. However, at this timepoint, their implementation remained largely ad hoc. For example, C periodically practiced the body scan meditation before he arrived at the gym to begin his physical warm-up:

I think [body scans] work best whenever I do it before games [...] because when I do it before games, it just helps me relax, calm my nerves and really stay in the present [...]

when I don't do it, I feel like I'm not like... locked in, like I'm thinking about a lot of other stuff.

In this account, C's distinction between "when I do it" and "when I don't do it" highlighted his awareness of the practice's impact on his sense of mental readiness to approach the game. This also underscored how the pre-game practice had not yet been integrated into his routine. His later reflections underscored his effort to incorporate the body scan before every game as he acknowledged it as a "free tool" that "just takes a couple of minutes" but also admitted that he could "sometimes get lazy." Therefore, C's reflection captured the nature of the mindfulness strategy as a straightforward tool but one that required an intentional choice and discipline to integrate into competition to experience its benefits.

For some participants, mindfulness strategies were utilized during games to "reset" and recenter attention in the present. Mateo described using the Flow, Feet, Focus (3Fs) mindfulness anchor when his attention drifted and mistakes occurred:

One thing I liked a lot is...the anchors, like the Flow, Feet, Focus. I like that one a lot... just like regathering myself when I'm not paying attention or not doing well [...] If I don't [...] it's like I'm going to get tunnel vision, kind of. It's like, I might put up a bad shot...if I forget about it, I don't really care. I'm going to make the best play I can.

Jake described a similar approach by using the Recognize, Release, Recenter (3Rs) mindfulness anchor:

[Before], when I make mistakes, it gets in my head all the time. I feel like when I use some of the anchors, like the 3Rs, it helps bring me back and realize, 'Okay, it happened. Just accept it and then move on.'

While each participant employed a different grounding strategy, a clear sequence was evident for both participants – they first noticed lapses in attention, then initiated the anchor, and redirected focus to the immediate play of the game.

Altogether, participants' accounts illustrate the varied ways mindfulness strategies were applied into their sporting experiences. While some athletes experimented with timing and placement in the initial weeks of the intervention, other athletes immediately identified the contexts for which mindfulness strategies were applicable. Across all participants, these strategies were flexibly adopted and tailored based on individual preference to support their sense of presence.

Theme 3: Early Relief from Pressure and Mental Clutter

Participants' accounts highlighted how a mindful approach in sport had provided them with a relief from undue pressure and stress during competition. Minimizing this psychological strain was described as facilitative of a mindset that supported enhanced performance and greater intrinsic enjoyment from participation.

Several athletes described how mindfulness oriented their attention away from others' opinions and towards the immediate demands of the game. As a result, this fostered a sense of ease and a more authentic way of playing. C described how mindfulness cultivated a feeling of freedom through decreased sensitivity to outside judgments:

I feel like now I just... I'm like, I'm more free when I play. I'm less judgmental about my mistakes and like what other people think about me when I play. It allowed me to like... play more like myself.

In this statement, C's use of the word "free" conveyed a psychological shift in his engagement with the game. Ultimately, his freedom pointed to a release from the psychological constraints of self-consciousness and the imagined gaze of others, which in turn manifested in an unencumbered physical expression of his game. C's later accounts further explained how this sense of freedom promoted performance on the court:

There's a huge difference when I'm not free. I'm like more passive, soft, and I tend to pass up shots and not play like myself. Compared to, like, when I'm free, I feel like I'm more aggressive and take more shots.

In this excerpt, the contrast C draws between "passive, soft, not play like myself" and "free, aggressive, take more shots" demonstrated how his confidence to assert himself onto the game shifted depending on whether his attention was absorbed by others' evaluations or immersed in the flow of the game. Thus, C's comparison emphasized the significance of mindfulness on his psychological approach and ability to make an impact on the game.

Similarly, BA described a sense of freedom to play with a decreased preoccupation with external judgement. He shared, "[Mindfulness] definitely, like, makes me more focused on what I'm doing, and it kind of like clears my mind of the fog." In this excerpt, his use of the "fog" illustration captured the sense of cognitive clutter from others' judgments that clouded his performance, while his ability to "clear" this was rooted in ability to be "more focused" on his actions that impact the game.

For one participant, Jake, mindfulness supported his basketball engagement through an awareness of distractions and increased attentiveness. However, his experience was uniquely characterized by managing immersion in sport amid competing external demands. Jake

singularly described the challenge of balancing academics and employment duties with his involvement in sports:

If one day I have practice and the next day I have a bunch of schoolwork stuff to do, I'll be thinking [about] school rather than my practice. So, to bring myself back and like being present, like, 'Oh, my practice, just focus on that. After practice, you can like just like focus on that stuff that's for tomorrow' has been good.

In this account, Jake illustrated how mindfulness functioned to manage the mental spillover of obligations outside of sport onto the basketball court. Importantly, he played himself in this excerpt as he described his self-directed speech in these moments of distraction and anxiety. Linguistically, his self-talk illustrates the early internalization of mindfulness into his lived sport experiences. Jake's later reflections point to its value:

When I bring myself back, I feel like less stressed, less concerned and I can have a better time when I'm at practice... it's like more fun when I'm not focusing on the schoolwork, [and] on all the upcoming events.

Evidently, Jake's ability to momentarily detach from future responsibilities to deeply engage with practice provided a release from the psychological strain caused by future demands. Accordingly, his descriptions of practice as "more fun" and "less stressed" reflected how mindfulness fostered greater enjoyment in sport through greater presence.

Taken together, athletes' early experiences with mindfulness helped to alleviate the psychological challenges that they often experienced, including the concern for external judgments, social self-consciousness, and anxiety from the demands outside of sport. In turn, some athletes experienced a sense of freedom to play more assertively, and offered one

participant the space for greater enjoyment. Thus, participants' accounts underscored how mindfulness functioned in different ways to improve their sport experiences.

Timepoint 3- Post-Intervention Interview

Theme 1: Increased Integration of Mindfulness

By the end of the MBI, all participants described how they had increasingly integrated mindfulness into their lives in different forms. Within the sport context, some athletes embedded mindfulness into their pre-game routines, which had progressed beyond their previous ad-hoc approach. Beyond the sport context, all athletes applied mindfulness into their day-to-day activities. Importantly, while athletes mentioned some transfer of mindfulness beyond sport in the previous timepoint, these applications outside the sporting context became more central at the end of the MBI. Finally, for some athletes, the application of mindfulness within and beyond sport felt more natural and less effortful.

For some athletes, meditations ranging from five to ten minutes were routinely incorporated into pregame regimens as a strategy to enter games mentally prepared. For example, Mateo reported how he had practiced the breath meditation at home before heading to each of the three games that followed the MBI to “get [himself] extra locked in.” In this brief extract, his use of the metaphor “locked in” highlighted how pre-game meditations stabilized his attention ahead of performance, while his inclusion of the word “extra” suggested that he perceived the practice as providing an additional competitive edge.

Several participants also described extending mindful present moment-attention to everyday activities, suggesting that they viewed presence not merely as a competition-focused skill but as an approach applicable beyond sport. For instance, Jake reflected, “I know

mindfulness isn't just for basketball. It's like an everyday thing. I'm just trying to do...whatever [I'm] doing, just keep going at it with 100%." Participants' intentional allocation of attention became evident in their academic responsibilities, where they began to devote full attention to one educational task at a time. BA explained how mindfulness shaped how he approached his homework, "[It helped me] with multitasking. Focusing on one thing and get that one thing done 100%, rather than, like 20% here, 30% here, 10% here, and it's just not...efficient." In this account, BA's reference to "100%" reflected his commitment to slow down and anchor his attention on the immediate task to complete each activity as he shifted away from a scattered attention devoted to multiple tasks.

For some, mindfulness moved from a mode of engagement that required repeated self-instruction into a more internalized orientation. C reflected on how mindfulness evolved throughout the intervention:

I feel like it started becoming a habit, like, towards the end. In like, the midline, I had to tell myself to do it. But, as, like, time went on, it... started becoming a habit, and, like I started doing it subconsciously.

C's reflections demonstrated his temporal trajectory of change, where mindfulness became more easily integrated into his approach to experiences and influenced his everyday conduct. C illustrated this when he said:

Being more present in conversations with other people. I feel like before, when I was having conversations with others, I'd drift off, like, my mind would wander. And I would, like... I'd just be less focused. And I've been having more meaningful and deep

conversations out of it [...] I've definitely made some, new friends, or, like... talk to new people because of it.

In this way, C's greater ease with embodying mindfulness shaped his behaviour in social contexts, where mindless attention previously dominated, allowing for greater social connection with his peers.

Altogether, exposure to mindfulness throughout the MBI allowed participants to embed mindfulness into their routines and orientation to experiences. Evidently, their early efforts to incorporate mindfulness through occasional pre-game meditations and deliberate self-reminders to remain present gradually evolved into a practice that felt habitual and transferable beyond sport. In this way, participants' experiences underscored how mindfulness developed into a more embodied orientation that influenced their performance and life beyond basketball.

Theme 2: Mindful Self-Regulation of Emotions

All athletes reported a greater ability to regulate emotions that had previously hindered their performance. In their final interviews, participants reported greater awareness of their emotional reactions, including rumination, nervousness, and frustration. Additionally, they described being less likely to get caught in emotional spirals after mistakes. By the MBI's endpoint, athletes described a shift towards a more mindful approach to emotions, characterized by greater calmness, steadiness, and the ability to relate to emotions in ways that supported performance.

Jake's account most clearly illustrated a developmental shift in how nervousness was approached across the MBI. According to Jake, nervousness was often previously left unaddressed, which "affected" his play "throughout the whole game". However, Jake described

how he learned to pause and attend to the emotions present with greater awareness and acceptance through the MBI:

I would take a moment and just really reflect on what's happening within... like, my emotions, my thoughts, [...] and being aware that I'm feeling this emotion and why I'm feeling it. And then accepting it and then playing through.

His later accounts revealed how he traced the root of his nervousness to the “crowd” and “worrying about what other people are thinking”, which he had learned to “manage a lot more” as he learned to ground himself and refocus on the game. Thus, Jake’s account reflected how he used mindfulness to shift himself away from the avoidance of nervousness to embody a more aware and accepting stance to regulate his emotions.

In a similar way, C described a shift in how he related to nervousness during competition when he shared, “I got better at handling my nervousness. Before, that nervousness would turn me passive. But now I feel like I've turned that nervousness into helping me play, like the opposite...I feel like I'm using it as a boost.” Linguistically, C's characterization of nervousness as a “boost” appeared meaningful as it reflected a shift from experiencing the emotion as debilitating to experiencing it as a facilitative energy source to aid performance. Additionally, by contrasting his previous and current experiences (“Before...but now”), C highlighted the development of a more adaptive relationship with nervousness throughout MBI. Thus, C’s account demonstrated an increased sense of agency over an internal experience that had previously hindered performance.

Moreover, for some participants, a mindful approach to emotional regulation extended beyond the sport context and was applied in challenging real-world settings. Among these

participants, self-regulation through the breath was commonly described. For instance, Mateo illustrated how he drew on mindfulness to navigate the emotional demands of his recent driver's test:

I just got my license last week... And I was really nervous. I was sitting in the waiting room, waiting for my... tester to come out. I was, like, super, super nervous...the most nervous I've been in a while. I was just, like, meditating in the waiting room, kind of. It was definitely helping, calming me a bit, I was still nervous...but yeah. I was just doing a little breath meditation, kind of just... focusing on my breath, kind of, like, closing my eyes in the waiting room...and then after I was... definitely more calm, I still had a bit of nervous, but... I felt a little bit better, for sure.

Mateo's account conveyed the persistence of nervousness during his driver's test and how meditation offered a means to ease its intensity. His use of meditation in this context suggested that he began to view meditation as a practical tool to self-regulate in situations marked by intensified emotions. Further, Mateo's description of "I was still nervous...but yeah" pointed to his mindful relationship with emotions, where nervousness was accepted and carried with him as he moved through his experience.

Participants' accounts illustrated how mindfulness reshaped their relationships with emotions that once disrupted their performance. In particular, most athletes previously relied on the avoidance of difficult emotions but displayed a greater ability to approach them with awareness, acceptance, and curiosity after the mindfulness program. Some participants described how mindfulness transformed their approach to relating to disruptive emotions, while others drew on mindfulness practices as a tool to regulate themselves when such emotions arose. For all

participants, mindfulness of their emotions supported their engagement with activities and reduced the influence of nervousness on their performance.

Theme 3: Challenges with Mindfulness

While athletes described the benefits of mindfulness, their accounts also highlighted challenges associated with integrating mindfulness tools under pressure and sustaining motivation when improvements were slow to emerge. For example, Jake acknowledged moments when his attempts to apply mindfulness anchors during “slumps” did not prevent “downward spirals” of performance lapses. In these moments, Jake described how continuing with mindfulness strategies enabled recovery:

I start to, like. I question that it's like, it doesn't work...I get in my head about it, and it's like... it's hard to dig myself out of that hole [...] I obviously still feel frustrated and everything, but I would try to stick to my mindfulness tools and just focusing on the next play...just trying to keep at it so... I've been able to, like, play through it. And once I get a good possession or do something good for the team...I'll start to ease up on myself and just use it as, like, a learning lesson.

Jake's experience emphasized how participants may doubt mindfulness strategies when shifts in their psychological states do not manifest into performance results. However, his reflections also demonstrated the benefits of persisting with mindfulness strategies. This sentiment was also expressed by C, who was initially skeptical of the benefits of a mindfulness practice:

At first, when I was doing it, I didn't see results...and I felt like it was just wasting my time. But once I started getting consistent with it. [I] noticed how useful it actually was and how it helps me.

Altogether, participants' reflections underscored the challenge of perceiving mindfulness as an effective psychological approach when its effects were not immediately present during difficult game stretches and in its initial weeks of learning. Nevertheless, participants described how sustained engagement with mindfulness was essential to create openings for benefits to emerge.

Theme 4: Mindfulness Moving Forward

All athletes intended to continue practicing mindfulness beyond the MBI. Their prospective accounts expressed how they sought to apply mindfulness for basketball, while some envisioned its usefulness in other areas of life where they had not yet applied it. For instance, BA planned to incorporate mindfulness practices into his off-season regimen. He explained he wanted to “work on everything...from the physical to the mental game [...] and like practicing every day.” BA's commitment to daily mindfulness suggested he had expanded his view of preparation beyond physical conditioning to include psychological training to aid his athletic development. He anticipated this daily commitment would translate to being “way more focused in games,” with fewer wandering thoughts and emotional disruptions, while also accepting that distractions were inevitable and could be met with the mindful act of “bringing [himself] back.” In this way, BA's foresight reflected mindfulness as an approach to meet distractions and difficult emotions with acceptance and redirection to maintain engagement in future games.

Similarly, Mateo aspired to continue his use of mindful anchors in games as they served as his “key to being consistent” when distractions and mistakes arose:

It's kind of like the key to being consistent [...] just like... playing well throughout the whole game, not letting just, like, you know, a turnover or a missed layup change my

game. Since mindfulness, I've been trying to ignore those kinds of things and just let the game go on, play my best.

This excerpt revealed how Mateo's use of mindfulness anchors had become integrated as a recovery tool to maintain steadiness amidst the fluctuations of the game. His use of the phrase "since mindfulness" marked the MBI as a turning point in how he related to mistakes and challenges with less resistance. Therefore, Mateo's intention to maintain the use of mindfulness anchors in future performances reflected his ongoing commitment to embody the quality of acceptance cultivated throughout the MBI.

Some participants, like Jake, contemplated the potential of mindfulness to impact other areas of life outside of basketball. Jake described how he had cultivated greater presence in his athletic and academic activities, and intended to apply the mindful qualities of awareness and non-judgment into his relationships as his next steps after the MBI:

I've been implementing it with, school and basketball and stuff, maybe, like, relationships [is where I will implement it more]. Whether that's, like, with family, friends... just being able to understand and be non-judgmental [...] and being aware of what someone's going through in that moment, what their emotions are, like [if] something bad happens, something good happens. It's always being aware and just, like, communicating in a way that's mindful.

Here, Jake's intention to approach relationships mindfully illustrated an expansion of mindfulness beyond an intrapersonal performance strategy to an interpersonal way of relating to others with empathy. His repetition of "being aware" conveyed his intention to remain present for others, while his acceptance of "something bad" and "something good" underscored his

equanimity across the range of others' emotional experiences. In this way, Jake saw mindfulness as a relational way of being that allowed him to carry forward the same qualities of awareness and acceptance he had cultivated within himself.

Taken together, participants' reflections underscored that they envisioned mindfulness as a key element for their sport preparation and performance beyond the conclusion of the MBI. Evidently, athletes intended to incorporate mindfulness into their athletic development as a daily discipline to cultivate presence and as an in-game resource to stay centered in moments of distraction and mistakes. Others anticipated applying mindfulness beyond sport as one participant aimed to foster deeper connections with others through its qualities of awareness and non-judgment. Ultimately, this theme captured how participants anticipated mindfulness to shape their athletic development and daily lives.

Chapter V: Discussion

Discussion of Findings

Understandings of Mindfulness Across a MBI

A central component of this study was to explore changes in adolescent athletes' understandings of mindfulness upon participating in a sport MBI. The findings suggest that participants' conceptualizations of mindfulness developed over time. Athletes initially possessed a vague understanding of mindfulness at T1 and described it as a way to achieve a relaxed state and a possible strategy to enhance athletic performance. Such interpretations of mindfulness may stem from mainstream Western media portrayals of mindfulness that emphasize serenity and tranquility (Lutkajtis, 2019; Mitchell, 2014). Correspondingly, athletes' early understandings reflect the critiques of secularized mindfulness, which argue that its presentation in non-Buddhist contexts can offer an oversimplified and incomplete account of the construct as a therapeutic tool and overlook its broader significance as a way of being (Dreyfus, 2011). Additionally, participants' associations of mindfulness with calmness and relaxation are consistent with findings reported in other studies among athletes (e.g., Costalupes, 2023; Mistretta et al., 2018). Moreover, framing mindfulness as something that could provide "peace" and help them "improve" may have offered a familiar entry point that encouraged athletes to explore mindfulness. Summer et al. (2025) note that adolescents' initial perceptions of MBIs can act as either barriers or facilitators to their engagement; therefore, although athletes' understandings were limited, their positive expectations may have supported their initial participation in the MBI.

In contrast to his peers, one athlete (BA) entered the MBI with a comparatively more developed conceptual understanding of mindfulness, rooted in prior experience and centred on the mind-body connection. However, this understanding remained partial, as he emphasized the mind-body connection without incorporating other aspects of mindfulness (e.g., non-judgmental awareness and present-moment attention) and struggled to apply mindfulness in lived contexts. His request for assistance to develop his application of mindfulness echo Costalupes et al.'s (2025) assertion that an informed guide can help athletes navigate early barriers and avoid disengaging from the practice. Additionally, his experiences echo Kabat-Zinn's (2003) view that the initial stages of learning mindfulness can bring forth discomfort and uncertainty with the practice.

By the midpoint of the MBI (T2), athletes demonstrated a clearer understanding of mindfulness as the act of attending deliberately to present-moment experience. Athletes increasingly described mindfulness as focusing on what they were doing "right now" and bringing their attention to immediate tasks, which marked a meaningful shift away from their initial outcome-oriented interpretations. Their descriptions echoed Kabat-Zinn's (2001) definition of mindfulness as an awareness that arises from paying purposeful attention to the present-moment with an orientation of openness and nonjudgment. Their consistent reference to presence implied that the attentional dimension of mindfulness was the most developmentally accessible component of the construct.

Also consistent with Kabat-Zinn's (2001) definition, some athletes articulated mindfulness as an awareness cultivated through the sustained anchoring of attention in the present moment to their thoughts. This emerging definition may, in part, reflect the experiential impact of their early meditation, which introduced them to observing their thoughts as they

unfolded moment-to-moment (Maran et al., 2021). Monshat et al. (2013) found a similar pattern, although outside of a sport context, noting that young people (16-24 years old) described mindfulness as a way to observe internal experiences after a MBI. In this study, adolescent athletes described how such awareness opened opportunities to intentionally shift how they responded to internal events. Consistently, Lutz et al. (2008) suggest that the awareness cultivated through present-moment attention can facilitate changes in cognitive and emotional habits. Overall, this suggests that cultivating present-moment awareness allowed athletes to notice their thoughts more clearly and respond to them in more intentional ways.

As athletes primarily described mindfulness in terms of present-moment attention and awareness, attitudinal qualities such as nonjudgment and acceptance did not feature in their definitions. Similarly, Costalupes et al. (2025) found that college student-athletes recognized the connection between mindfulness and a present-focused attention, but seldom referenced the attitudinal elements of awareness. Even though participants did not mention the attitudinal qualities of mindfulness when asked to define the construct, athletes in the present study described these attitudinal elements in their experiences with mindfulness. For example, they mentioned being “less judgmental” and “accepting” of mistakes to “move on” and refocus back to the present moment in their sporting experiences. These accounts suggest that these attitudinal stances were beginning to take shape; therefore, athletes’ experiential descriptions point to the emergence of nonjudgmental and accepting orientations, even if they did not articulate these qualities as part of how they conceptually understood mindfulness.

One possible explanation for this pattern is that the idea of ‘being present’ may have resonated more readily with athletes. In contrast, the attitudinal qualities of mindfulness may have been felt in practice but remained too abstract for participants to name. Consistent with this

view, Joseffson (2019) argues that acceptance represents a broad and multidimensional construct encompassing nonjudgment, nonreactivity, and openness, which are conceptually distinct from traditional PST programs, and thus may initially appear ambiguous or difficult for athletes to conceptualize, particularly at earlier stages of mindfulness engagement. Another possible explanation for this finding is that adopting a stance of nonjudgment may be particularly challenging for adolescents. Notably, adolescence marks a developmental period in which individuals are actively forming personal identities and establishing preferences, likes, and dislikes (Johnson et al., 2024). Therefore, a stance of non-judgment that encourages adolescents to notice and withhold from the automatic preoccupation to cast judgments of liking or disliking may not resonate as strongly as present-moment attention with participants in this life stage.

In line with this perspective, athletes did not describe their understandings of mindfulness in accordance with Langer's framework, which is perhaps expected, given that the MBI was based on Kabat-Zinn's conceptualization. Nonetheless, elements within one participant's narrative appeared to resonate with an aspect of Langerian mindfulness. Specifically, C recounted learning to reinterpret nervousness as a "boost" rather than something that made him "passive". From a Langerian standpoint, C's experience may exemplify the generation of alternative interpretations, as opposed to remaining constrained by a singular perspective derived from past categorizations (Langer, 1989; Langer & Moldoveanu, 2000). Therefore, while participants were not instructed to seek novelty or consider multiple perspectives, one athlete appeared to engage in a process of cognitive reframing analogous to Langer's approach. Future research may explore how adolescent athletes conceptualize and enact mindfulness when introduced through a Langerian framework.

By the end of the MBI, athletes' definitions of mindfulness remained centered on present-moment attention. Therefore, 'being present' may be the most concrete and developmentally accessible aspect of mindfulness for adolescents. Given that mindfulness is a multi-faceted construct involving attentional, attitudinal, and metacognitive elements, it is also plausible that six weeks of exposure supports familiarity with its more tangible components while leaving other facets still relatively novel or abstract (Leary & Tate, 2007). Although a few participants described mindfulness as becoming more "habitual" or "subconscious", this appeared to reflect a growing familiarity with the attentional component of mindfulness. Thus, what felt "habitual" was the act of redirecting attention, and not the fuller internalization of mindfulness as an attitudinal orientation. However, traces of these attitudinal dimensions began to be articulated in how one participant (Jake) envisioned applying mindfulness beyond the MBI. His intention to bring qualities such as awareness, nonjudgment, and acceptance into his relationships after the MBI suggested the emergence of a more relational and attitudinal orientation in its conceptualization. This subtle shift illustrates how attitudinal qualities may emerge later in adolescents' understandings of mindfulness once the attentional aspects of mindfulness feel familiar. Therefore, Jake's account may offer a glimpse into the developmental arc of mindfulness beyond the MBI. Adolescent athletes may initially anchor their understanding in the more tangible process of directing attention, and only gradually begin to understand the attitudinal stances that underpin mindfulness practice later in their development. Future longitudinal research can further examine how adolescents make sense of the different components of mindfulness over extended periods of practice.

Transforming the Mental Game

The findings illustrate that adolescent athletes entered the MBI with extensive technical and physical training backgrounds but had limited exposure to psychological training in sport. While they applied some mental strategies, it appeared that participants' mental skills were underdeveloped and this dearth impeded their performance. Athletes' desire to learn more structured psychological training methods to help meet the demands of competition reflect longstanding concerns in sport where mental skills are largely undertrained in athletic programs despite their recognized impact on performance (Davies & Armstrong, 2021; Ferraro & Rush, 2000; Rist et al., 2017; Vealey, 1988). Kaufman et al. (2018) explain that athletes and coaches often express interest in the development of psychological skills, yet limited time in their training schedules, uncertainty about how to teach mental strategies, and apprehension about entering the psychological domain restrict their uptake. The prevalent lack of formal mental skills training may account for athletes in this study depending on self-developed psychological strategies to address performance demands, though these approaches were only partially effective.

The MBI represented the first structured opportunity for athletes to develop mindfulness as a mental skill for their sports performance. Through the introduction of various meditation practices and grounding strategies in the MBI, athletes engaged with mindfulness in personally relevant ways. In their sporting experiences, the body scan and breath meditation were practiced before competitions to regulate arousal and establish a sense of readiness through a felt sense of presence. These findings parallel MBI research where pre-performance mindfulness practice has been associated with greater psychological preparedness and with the regulation of anxiety and stress to support optimal performance more broadly (Hut et al., 2023; Minkler et al., 2025; Scott-Hamilton & Schutte, 2016; Vidic et al., 2017). Also consistent with other sport MBI research, athletes in the present study used the breath and body-based grounding techniques to regulate

internal states and refocus attention on the present moment during competition (Cote et al., 2019). However, the function of these grounding strategies appeared to differ from those previously reported. Whereas Cote et al. (2019) described athletes' use of grounding techniques as a proactive coping strategy before important moments, athletes in the present study primarily applied these techniques reactively to recover focus and composure following mistakes or stressful sequences. Therefore, the current findings extend the growing evidence on the utility of mindfulness as a grounding strategy during competition.

Moreover, the integration of mindfulness facilitated a sense of relief from the pressure and mental clutter that previously accompanied competition, and fostered greater ease and enjoyment in athletes' sporting experiences. Developing a steadier present-moment attention appeared to shift their focus toward performance-relevant cues and quieted the self-conscious thoughts that once dominated their attention. For one participant (Jake), this stabilization of attention also appeared to prevent activities outside of sport from impacting the quality of his engagement in sport. These positive experiences of improved focus, goal-directed energy, stress management, and reduced self-evaluative concerns are consistent with the effects of other MBIs in sport (Cote et al., 2019; Goodman et al., 2014; Macdonald et al., 2018).

Athletes' descriptions of sport-specific gains from mindfulness echoed qualities of *flow*—a state of optimal experience in sport— such as full concentration, loss of self-consciousness, sense of control, action-awareness merging, and intrinsic enjoyment (Csikszentmihalyi, 1990). Indeed, flow and mindfulness share theoretical overlap (Gardner & Moore, 2004; Kaufman et al., 2009) and empirical studies have demonstrated increases in flow following MBI participation (Aherne et al., 2011, Liu et al., 2021; Scott-Hamilton & Schutte, 2016). This resemblance suggests that mindfulness may have supported the mental conditions for such states to emerge.

However, athletes in the present study did not explicitly mention being in the state of flow. Swann (2016) emphasized that flow depends on the interaction between internal and external factors (i.e., challenge-skill balance). Therefore, it is possible that mindfulness cultivated the internal conditions for flow to occur, while the unpredictable external demands of competition prevented its full expression. This may explain why athletes did not describe their experiences as flow, even though their experiences reflected many of its underlying qualities. Additionally, although athletes were briefly introduced to the concept of flow in the MBI, it may not have been sufficiently emphasized for them to use it to describe their experiences. Regardless of whether players' experiences met the criteria for flow, their accounts demonstrated positive shifts in how they engaged with their minds in their sporting experiences.

At the end of the MBI, some participants reported a more consistent integration of meditation practices into their existing pre-game routines. This greater independent engagement with meditation may indicate that, in the later weeks of the MBI, some athletes began to perceive mindfulness as more relevant within their own competitive contexts. Additionally, consistent with Thrower et al. (2024), athletes' self-initiated incorporation of mindfulness into their pre-game routines suggests that these practices may be drawn upon more consistently when embedded within familiar contexts. These findings suggest that creating space for adolescents to experiment with when and how mindfulness fits into their sporting experiences may be particularly valuable for establishing a personally salient routine.

Moreover, athletes described a growing awareness of emotional reactions during competitions, such as rumination, nervousness, and frustration, as well as a greater acceptance of their presence, which, in turn, facilitated more deliberate responses to improve performance. As a result, athletes appeared less disrupted by such emotions throughout the competition and

reported greater emotional steadiness. Consistent with this finding, Josefsson et al. (2017) found rumination and emotion regulation to be mechanisms in the relationship between dispositional mindfulness and sport-specific coping in competitive athletes across various sports. These findings reflect patterns similar to those reported in prior qualitative MBI research, in which athletes described heightened awareness and acceptance of emotions and a more functional way of engaging with emotional experiences in sport contexts (Baltzell et al., 2014; Goisbault et al., 2022; Vidic & Cherup, 2022).

Taken together, athletes' sport experiences across the MBI offer experiential support for several mechanisms of mindfulness that enhance athletic performance outlined by Birrer et al. (2012). In particular, mechanisms such as improved attentional control, clarity regarding internal experiences, emotion regulation, and reduced rumination appeared to support the development of athletes' performance-related psychological skills, including focus, self-awareness, self-regulation, arousal regulation, and coping. These findings provide insight into how the mechanisms proposed by Birrer et al. (2012) may operate in practice to support the development of performance-related psychological skills.

The benefits athletes reported experiencing through their mindfulness practice were not experienced without difficulty. Several athletes acknowledged the challenge of sustaining motivation and belief in the effectiveness of mindfulness as a performance-enhancing approach when it did not yield immediate results. Some athletes reported difficulties in maintaining present-moment awareness when the use of mindful anchors did not materialize into improved external outcomes. These experiences echoed Vidic et al.'s (2017) findings with women's collegiate basketball players, who similarly found that mindfulness was increasingly difficult to sustain in high-pressure situations and "when everything seems to be going wrong" (p. 155).

Additionally, participants' experiences align with foundational mindfulness literature suggesting that adopting a mindful approach may initially provoke unease and may lead beginners to question the value of their efforts (Fowler, 2020; Kabat-Zinn, 2003). Despite these challenges, athletes' continued engagement with mindfulness reflected their cultivation of the mindful attitude of *patience*, as they maintained their practice while allowing things to unfold in their own time rather than forcing immediate results (Kabat-Zinn, 1990). These early challenges illustrate the tension between athletes' initial expectations of quick improvements and the slower unfolding nature of mindfulness practice.

Upon completing the MBI, athletes described their intention to sustain mindfulness practice and the use of mindful strategies in sport. This demonstrates how initial exposure to mindfulness can lay the groundwork for ongoing development, and is consistent with Kabat-Zinn's (1990) proposition that the conclusion of a MBI can mark the beginning of one's independent journey. Additionally, while much of the existing research has focused on participants' evaluations and recommendations after the MBI (Cote et al., 2019; Goodman et al., 2014; Minkler et al., 2025; Sharp et al., 2013), this study is, to the author's knowledge, the first to illustrate how athletes conceptualized the continuation of mindfulness practice beyond the MBI. Athletes described future mindfulness practice with language akin to their physical and technical preparation. Specifically, they regarded mindfulness as a discipline to "train" and develop over time to further support performance. This view suggests that MBIs may equip athletes with a framework for mental preparation. Based on these findings, it may be useful to examine how such intentions translate into sustained practice over time and the contextual factors that facilitate its continuation. This work can provide insight into what supports long-term integration of mindfulness in athletes beyond the MBI.

Beyond Basketball: Athletes' Mindfulness Use in Daily Life

One objective of this study was to explore how adolescent athletes applied mindfulness learned through a sports MBI in their non-athletic activities. The findings indicate a gradual extension of mindfulness beyond basketball across time points, with applications outside the sport context remaining peripheral at mid-intervention but becoming integrated into participants' daily lives by the end of the MBI. Thus, the present findings extend Tremayne and Tremayne's (2004) view that sport mental training programs can foster the psychological development of youth athletes, as the strategies learned in athletic contexts can carry over into other life domains.

Most athletes extended their capacity for mindful attention to their academic tasks. The findings show that participants applied a more deliberate attentional approach in completing their schoolwork by directing focus toward a single task with less mindless task-switching, which supported greater efficiency and quality of academic work. Consistent with school-based mindfulness research among adolescents, an enhanced capacity to direct and sustain attention has been identified as an outcome of MBIs (Mrazek et al., 2013; Wisner, 2013). Given that academic expectations in K-12 settings continue to rise and place growing demands on students' attention and executive functioning, while students are seldom taught how to regulate attention (Semple et al., 2016), our findings suggest that attentional skills developed through a sport-focused mindfulness program may aid adolescent student-athletes, even when mindfulness is not framed as an academic tool.

One participant, C, applied mindfulness learned through the MBI to his social interactions. He discussed how his increased present-moment attention during interpersonal interactions improved his interpersonal relationships by supporting more meaningful conversations and new social connections. In line with this, Jones et al. (2016) found that

mindfulness is associated with greater active listening, while previous MBI research in non-sport contexts has also linked mindfulness training to enhanced social connectedness (Adair et al., 2018; Chan et al., 2013; Ho et al., 2021). Notably, the findings indicated that not all interpersonal extensions of mindfulness were enacted at the same stage or in the same way across participants. For one participant (Jake), mindfulness in interpersonal relationships was framed as an aspirational orientation to be applied in future contexts, with an emphasis placed on different mindfulness qualities such as acceptance and non-judgmental awareness. Such divergence between C's and Jake's account underscores the idiographic nature of mindfulness development in adolescent athletes and suggests that different mindfulness constructs may shape the extension of mindfulness into interpersonal relationships. Further, while Jake's accounts of mindful communication were prospective, his increasing sensitivity to others' emotional states reflected a growing capacity for empathic awareness in his relationships. In line with this orientation, previous empirical work among adolescents has linked mindfulness to greater empathy-related capacities (Barata et al., 2022; Mesbahi et al. 2020). Furthermore, Cheang et al.'s (2019) systematic review on the effect of MBIs on empathy and compassion among children and adolescents (aged 5-18 years) reported evidence that cultivating mindfulness may support empathic development. This finding suggests that adolescents may begin to form intentions to extend mindfulness into interpersonal contexts even before applications are fully enacted. Future longitudinal research may examine how adolescents' intentions to apply mindfulness interpersonally evolve into observable relational practices across time.

Lastly, the findings illustrated that athletes drew upon mindfulness to support their emotion regulation during stressful moments in daily life. Participants described orienting to the breath either by attending to its natural unfolding, through deep breathing, or engaging in a brief

breath meditation, which in turn, supported their emotional stability and physiological states. Although the breathing techniques across participants differed, it appeared that the breath was commonly seen as an accessible coping resource in emotionally demanding moments. Consistently, Kabat-Zinn's (1990) foundational mindfulness frameworks conceptualize the breath as an ever-present anchor for regaining calmness and emotional stability during stress. Similar patterns of mindful coping have been observed in MBI research in non-sport contexts. For example, Bahadir-Yilmaz and Yuksel (2024) found that nursing students used mindful breathing to manage stress following participation in an online MBI. These findings suggest that the breath may be an accessible resource for adolescent athletes to engage with stress more adaptively in daily life.

Importantly, this transfer may be understood in light of how mindfulness was introduced during the MBI. Although the MBI was sport-based, mindfulness was intentionally framed as relevant to experiences beyond sport, and athletes were encouraged to reflect on and discuss how it may be applied in personally meaningful situations across daily life. In line with this perspective, research on positive youth development (PYD) suggests that reflective practice, awareness of transfer opportunities, and recognizing similarities across contexts may facilitate youths' ability to generalize skills beyond sport (Bean et al., 2022; Jørgensen et al., 2019). From a positive youth development (PYD) perspective, the present findings may therefore suggest that mindfulness can function as a transferable skill that supports adolescents' engagement with experiences beyond sport.

Implications

Implication 1: Teaching the Attitudinal Qualities of Mindfulness

The present findings showed that adolescent athletes defined mindfulness as present-moment attention and awareness; however, attitudinal qualities were not mentioned in their definitions (e.g., non-judgment, openness, acceptance; Kabat-Zinn, 1994; Kabat-Zinn, 2003). While participants demonstrated accepting and non-judgmental responses to mistakes in competition, these components were not clearly articulated as central to their understanding of mindfulness. Thus, it might be worthwhile for practitioners working with adolescent athletes (e.g., sport psychologists, MBI facilitators, and coaches) to place greater instructional emphasis on these attitudinal qualities as core elements of mindfulness. Emphasizing this distinction may help adolescent athletes develop a more comprehensive understanding of mindfulness that integrates its attentional and attitudinal components, thereby supporting a broader application of these attitudinal components (e.g., in relation to thoughts, emotions, sensations, and interpersonal interactions).

Implication 2: Managing Expectations about Mindfulness and Sustaining Practice

The present study reveals the challenges that adolescent athletes face when applying mindfulness in sports. As several participants questioned the value of mindful anchors when instant performance gains were absent, it may be beneficial for practitioners to help athletes grasp that mindfulness can stabilize mental processes amid performance fluctuations (Birrer et al., 2012), but improvements in these internal processes do not guarantee immediate or consistent performance outcomes. Clarifying this point may help prevent athletes from prematurely dismissing mindfulness as ineffective, thereby fostering sustained engagement with practice despite natural fluctuations in performance outcomes.

Relatedly, based on the finding that commitment to mindfulness practice became challenging without noticeable changes after a few weeks, practitioners may benefit from

communicating the gradual and non-linear nature of developing mindful capacities related to greater sport performance. Informing athletes new to mindfulness about the time that it may take for noticeable effects to develop, and that progress may fluctuate over time, may help them sustain commitment to the practice.

Implication 3: Applying Mindfulness to Support Sport Performance

Adolescent athletes described brief pre-game meditation practices, ranging from five to ten minutes, as enhancing their psychological readiness and concentration upon entering competition. Hence, practitioners may consider incorporating brief mindfulness practices into existing pre-performance routines, recognizing that time-intensive sessions may not be necessary for athletes to derive sport-performance benefits.

Similarly, mindful anchors may be valuable when athletes encounter mistakes during performance. Practitioners may highlight this element of mindfulness to athletes who struggle to let go of mistakes and experience a subsequent decline in performance. Specifically, training athletes to deliberately use the breath or body as an anchor may help them interrupt maladaptive cognitive spirals and return to performance-relevant cues more efficiently. Additionally, the inclusion of mindful anchors was an adaptation made when tailoring the MSPE framework for adolescent athletes. Thus, the present findings suggest that the inclusion of attentional anchors may be a valuable component to incorporate into future sport MBIs for adolescent populations.

The findings also suggest that mindfulness supported sport performance and enjoyment through several psychological processes. While some athletes described improvements in directing attention to task-relevant cues, others reported a greater sense of freedom from external evaluation and an improved ability to manage emotions disruptive to performance. These results

suggest that mindfulness may enhance performance through different psychological pathways depending on an athletes' experiences and needs. Thus, practitioners may benefit from presenting mindfulness as a flexible mental approach that can support performance in multiple ways.

Implication 4- Transfer of Mindfulness Beyond Sport Context

Another implication of the present findings relates to the transfer of mindfulness beyond sport contexts. Several participants described applying mindfulness in situations outside of basketball, such as focusing on schoolwork, being more present in conversations, and regulating emotions in everyday situations. Future practitioners working with youth athletes should therefore prompt a group discussion on how mindfulness qualities and strategies used in sport can be applied beyond sport contexts. Accordingly, this may support holistic athlete development and encourage continued engagement with mindfulness practice.

Limitations and Future Research Directions

The limitations of this study should be acknowledged. First, the relatively small sample size ($n = 4$) may be considered a limitation, as it narrows the transferability of the findings to other populations and sporting contexts (Miller et al., 2018). However, while four may be considered a limited sample size, this was not problematic within an IPA research design, which intentionally employs small homogenous samples to extract idiographic similarities and differences to develop theoretical insights about a phenomenon (Smith et al., 2009).

Second, all participants were male adolescent club basketball players. As such, the sport-specific language and examples embedded in the MBI likely shaped how mindfulness was understood and applied. It is possible that adolescent athletes from other sports and competition levels (e.g., community) with different performance demands may have diverse understandings

and applications of mindfulness when participating in a MBI. Accordingly, the findings are most informative for athletes with similar characteristics, and future studies may enlarge the sample size across different sports, age groups, and competition levels to offer broad generalizations.

Third, the MBI was led by the author of the current study. Thus, the dual role of the researcher as both a mindfulness facilitator and an interviewer may have introduced social desirability bias, as participants may have been inclined to respond in ways that they perceived as favourable or expected by the facilitator. However, the researcher's familiarity with the MBI may have enabled more "experience-near" follow-up questions and facilitated more in-depth explorations of changes in participants' understandings and applications of mindfulness over time (Boden et al., 2019, p. 219). To mitigate this, various excerpts were chosen for analysis, including both supportive and difficult experiences with mindfulness. Accordingly, participants' accounts should be understood as co-constructed within the relational context of the study (Smith et al., 2009). Future research may benefit from employing independent MBI facilitators or interviewers to examine how variations in researcher-participant relationships influence disclosure and meaning-making.

Fourth, some participants attended several make-up MBI sessions online instead of taking part in the scheduled in-person sessions. Although participants continued to report meaningful engagement and perceived benefits from these make-up sessions, differences in delivery format may have shaped participants' experiences of mindfulness practice. For instance, online sessions offered fewer opportunities for group interaction than in-person sessions, thus shaping participants' experiences differently. Nonetheless, the availability of online make-up sessions allowed participants to be involved in the MBI and continue developing their understanding of mindfulness without missing key content. Future research may compare online and in-person

MBI delivery formats to better understand how the mode of delivery influences engagement and perceived outcomes among adolescent athletes.

Lastly, the MBI was not piloted prior to implementation. Although the MBI was grounded in the MSPE framework (Kaufman et al., 2018), and informed by the facilitator training I received through the Canadian Mindfulness Institute, the absence of a pilot phase limited opportunities to further refine session content, format and pacing based on early feedback from adolescent athletes. A pilot phase may have helped to identify elements of the program that were less clear or engaging for some participants. Future research may benefit from incorporating a pilot phase when adapting MBIs for adolescent sport contexts.

Chapter VI: Conclusion

This thesis provides insight into the evolving nature of adolescent athletes' understandings and applications of mindfulness both within and beyond sport across a MBI, and contributes to the limited in-depth knowledge on the topic among this population. The findings reveal that adolescent athletes developed individualized and experiential understandings of mindfulness through a combination of the structured educational components of the MBI and their own self-directed experimentation with the practices. Importantly, athletes' varied descriptions of applying mindfulness suggest that it became a personally meaningful and adaptable practice for navigating both sport and everyday experiences. Collectively, these findings contribute to the growing understanding of how mindfulness is experienced and integrated by adolescent athletes in youth sport contexts. These findings may inform future research investigating how mindfulness may influence adolescent athlete development and performance but may also guide the development of MBIs in youth sport contexts.

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Appendix A. Invitation to Participate in Mindfulness Training and Research Study for Basketball Players

Dear [Athletic Director/ Organizer Name],

I hope your basketball season is going well. My name is Vianney Vega, and I am currently a Master of Arts student at the University of Manitoba. I am currently conducting a research project funded by The Canadian Institutes of Health Research (CIHR) on the benefits of a sports mindfulness program for the development of youth athletes. I believe that your team, (), contributes significantly to developing young athletes in and out of sport. Therefore, I am reaching out to you to seek participation from team members in our research project.

Mindfulness teaches athletes to engage their full attention towards the present moment with an accepting and non-judgemental attitude. Research on athletes learning about mindfulness has shown that it improves their performance by improving focus, regulation of emotions, and cohesiveness with teammates, alongside other benefits in their sport. Outside of sport, mindfulness has also been shown to improve the well-being of youth athletes by reducing their stress and anxiety. Participating in our study can offer athletes from your team the benefits seen in previous participants.

Athletes participating in this study will take part in a 6-week mindfulness program led by a certified Canadian Mindfulness Institute instructor. Participants will be interviewed before, during, and after the program to gather data on their perspectives about the program. Your extension of the study's details and my contact information to athletes interested in the project is greatly appreciated. If you prefer, I can also visit your practice to speak directly with your team about the study to recruit potential participants.

Thank you for your time and consideration in partaking in this research project! If members of your team are interested in participating, kindly reply to this email!

Take care,

Vinzi

Appendix B. Recruitment Script

"Hello everyone, my name is Vianney Vega, and I'm a student at the University of Manitoba. I am here today to talk to you about a research study that I'm conducting with the help of the Canadian Institute of Health Research. First, I'd like to thank Coach [Coach's Name] for allowing me to join your practice and speak with all of you.

This study is focused on understanding the experiences of adolescent athletes participating in a mindfulness-based program. As athletes, it's important for us to not only work on our physical performance but also on our mental and emotional performance. Mindfulness can help us by improving our ability to stay present, manage emotions, and maintain focus during both training and competitions. Research on mindfulness has shown that it can help athletes with their mental performance, which is why I'm excited to invite you to participate.

I'll briefly explain the purpose, what's involved, and how you can be part of it. We're interested in seeing how mindfulness can impact performance, emotions, and well-being, both on and off the field for adolescents like you. The study will involve participating in six mindfulness sessions over six weeks, accompanied by three interviews where we discuss your experiences. For each interview you complete, you will receive a \$20 Amazon gift card. If you participate in all three interviews, you will receive a total of \$60.

There are some important things to consider. While there are no known significant risks, practicing mindfulness could bring up some challenging emotions. The goal, though, is to help you develop tools to manage these emotions better.

If you choose to participate, you're free to stop at any time, and your decision won't affect your relationship with your coach, team, or participation in your sport. I'll provide you

with detailed information in this leaflet, which you can take home and review. I encourage you to discuss this with your parents or guardians if they aren't here today.

If you have any questions or concerns after this session, feel free to contact me. My contact information is in the leaflet. I'll be here to answer any questions you have right now as well.

Thank you for your time, and I look forward to potentially working with you."

Appendix C. Research Project Information Sheet



Participate in Our Research Study!

Research Project Title: Mindfulness in Adolescent Basketball: Exploring Players' Experiences

Are you a **youth athlete** interested in learning more about mindfulness and how it can enhance your basketball performance? Join our exciting research study!

Who Can Participate?

- Adolescent athletes (ages 12-18)
- Currently active in competitive sports

What Will You Do?

- Participate in a **6-week mindfulness-based program** tailored to athletes
- Attend **weekly one hour sessions** that include mindfulness exercises and group discussions
- Share your experiences in **three interviews** to help us understand the impact of mindfulness on sports and life

When and Where?

- Sessions start in **April 2025**, Time: [TBD], Location: [TBD]

What's in It for You?

- Learn practical mindfulness techniques to improve focus and manage stress
- Contribute to important research in sports and mindfulness
- Receive a \$20 gift card for every mindfulness interview you attend. (Personal information will be required for University of Manitoba financial auditing.)

Possible Risks:

The study poses minimal risks, but mindfulness practices may sometimes bring up feelings of discomfort. Participants can skip any activity, take a break, or withdraw at any time. If needed, support resources will be provided.

How to Sign Up?

Contact: Vianney Vega

About the Researcher

This study is conducted by **Vianney Vega**, a Master's student in Kinesiology at the University of Manitoba, under the supervision of **Dr. Shaelyn Strachan**. Ethics approval has been obtained for this research.

Privacy and Confidentiality

Your participation is voluntary, and all data will be kept strictly confidential. Participants will have the opportunity to review and verify their input after sessions.

Consent & Assent Forms:

To participate in this study, both parental consent and participant assent are required. Please scan the QR codes below to access the consent and assent forms.



Appendix D. Assent Form



UM | Faculty of Kinesiology and
Recreation Management

102 Frank Kennedy Centre

University of Manitoba
Winnipeg, Manitoba

R3T 2N2

Assent Form for Athletes

Research Title: Mindfulness in Adolescent Basketball: Exploring Players' Experiences

Principal Investigator: Vianney Vega

Research Advisor: Dr. Shaelyn Strachan

Hi! My name is Vianney Vega, and I'm a student at the University of Manitoba. I'm doing a study with my advisor, Dr. Shaelyn Strachan. This form will give you information about the study and what it means if you decide to take part. Please read it carefully and if you have any questions, feel free to ask.

This study is about how **mindfulness** (paying attention to what's happening right now without judging it) can impact young athletes. We want to learn more about how athletes like you can use mindfulness in your sport and daily life. Mindfulness has been studied with adult athletes, but we don't know much about how it helps younger athletes. Researchers like us need to understand more about how adolescents respond to learning about mindfulness, if they apply it to their sport and in daily lives, and their recommendations for the program to help other young athletes learn in the future.

Your parent or guardian must agree to allow you to participate in this project, but they are not participants themselves. If you agree to participate in this study, you will be part of a **mindfulness program** that can help you in sports and life. This program includes six one-hour sessions over six weeks. The sessions will teach you mindfulness techniques and help you practice them through activities like meditation and yoga. This program will be led by Vianney Vega, who is a Canadian Mindfulness Institute certified instructor for teaching 12–18-year-olds. You will also have **three interviews**: one before the program, one halfway through, and one after the program. These interviews will take 45 to 60 minutes. For participating in each interview, you will get a **\$20 Amazon gift card** (or another gift card of your choice), for a total of \$60.

After each interview, you'll get a copy of what you said. You can review it and let us know if anything needs to be added, changed, or removed. After all interviews are done, I'll send you a summary of the main ideas from all participants and quotes. You can tell me if the ideas match your experience. If I don't hear from you, I will assume everything is correct, but I'll make changes if needed.

You will not be identified by your name in the study. Instead, your name will be replaced by a code. **Only the researchers will have access to your information.** To protect everyone's privacy, you must keep what's discussed in the program confidential. You'll also sign a separate confidentiality form. However, **if anyone breaks confidentiality** during the group sessions, there is a chance that some information may not stay private.

Your participation is completely voluntary. You do not have to participate if you don't want to, and you can change your mind at any time. Your parents may also choose to withdraw you from the study. If you want to stop the study, you can do so until **November 1, 2025** by contacting Vianney Vega or Dr. Shaelyn Strachan. If you decide to stop, your information will be deleted unless you give us permission to keep it.

By participating, you will help us learn more about how young athletes experience mindfulness programs and how to improve them. At the end of the study in **June 2025**, I can give you a short summary of the findings. You can also join my thesis defense (on Zoom) in **December 2025**, where I'll share the results. To keep your anonymity, I will show you how to change your screen name on Zoom.

There is a risk that some topics (like stress in sports) could be upsetting and cause distress. If that happens, you can skip any question during the interview, or take a break (go home if needed) during the mindfulness program, or withdraw from the study at any time without consequence. For additional support, you can contact mental health professionals at this link: [Child and Youth Services](#).

By signing this form, you agree that you understand the study and are willing to take part. You're not giving up any legal rights, and you can withdraw from the study at any time before **November 1, 2025**.

Your participation should always be based on clear and updated information. Feel free to ask any questions or get more details at any time during the study. The University of Manitoba may check the research records to make sure the study is being done safely and properly.

This study has been approved by the University of Manitoba Research Ethics Board. If you have any concerns or complaints, you can contact the Human Ethics Coordinator at 204-474-7122 or by email at humanethics@umanitoba.ca. You will be given a copy of this form to keep for your records.

A pseudonym (fake name) will be used when the results are shared for this study.

I would like my pseudonym to be _____

Please review the following statements. For each statement, please check if you agree or do not agree.

I agree to participate in this study. ☐YES ☐NO

I agree to be audio-recorded in this study. ☐YES ☐NO

I agree that my anonymized data can be kept by the researcher and shared with other organizations to help with other studies in the future. ☐YES ☐NO

Participant Name Printed

Participant Signature

Participant Email

Date

Researcher and/or Delegate's Signature

Date

☐

Yes, I would like to receive a \$20 Amazon Gift Card for each interview.

☐

No, I would not like to receive a \$20 Amazon Gift Card for each interview.

Appendix E. Consent Form



Parent Informed Consent Form

Study Title: Mindfulness in Adolescent Basketball: Exploring Players' Experiences

Student Principal Investigator: Vianney Vega, Master's Student, Faculty of Kinesiology and Recreation Management, University of Manitoba

Student Advisor: Dr. Shaelyn Strachan, Student Advisor, Faculty of Kinesiology and Recreation Management, University of Manitoba

Funder: Canadian Institute of Health Research

Conflicts of Interest and Undue Influence: Vianney Vega does not have any conflicts of interest in this study/research.

This consent form, a copy of which has been given to you or a copy of which you can download or print, is only part of the process of informed consent. If you want more details about something mentioned here, or information not included here, feel free to ask any of the people named above. Please take the time to read this document and any accompanying information carefully. It is very important that you understand:

- what is being asked of your adolescent participant,
- what the risks and benefits of participation are, and
- how the information you and your adolescent provide will be used and stored.

Purpose of the Study: Vianney Vega is doing this thesis under the supervision of Dr. Shaelyn Strachan. This research study is about exploring the experiences of adolescents participating in a sports Mindfulness Based Program (MBP). Research in other athletic populations has shown that MBPs are effective in improving emotion and attention management for sports performance and well-being, but only a few studies have assessed the experiences of adolescents. We are hoping to learn about how adolescent athletes apply mindfulness techniques in sport and life.

Study Procedures:

Program: If your adolescent decides to take part in the study, we will meet six times for one hour each over a six-week period at the [] Gym. Session one will cover mindfulness theory and how it can impact your sports performance and well-being. Session two will focus on attention strengthening. Session three will discuss how to mindfully stretch the body's limits. Session four

will consider how to accept and adapt to what is happening in the moment. Session five describes how to become a mindful athlete. Lastly, session six reviews the program and sets the stage for a lifelong mindfulness practice. The Principal Investigator (Vianney Vega) is a Canadian Mindfulness Institute certified instructor for teaching 12-18 year olds, and will be conducting the mindfulness program.

Interviews: If your adolescent decides to take part in the study, we will meet for three 45 to 60 minute interviews through Zoom. With your consent, I will audio record the meeting with your adolescent. Parents or guardians are welcome to attend the interviews to observe or provide support if they wish. After the interview, you and your adolescent will have the chance to review the transcript (the document of what you said). You and your adolescent can add, change, or delete information from the transcript as you see fit. I will email you a copy of the transcript and you and your adolescent will have one week to respond. If I don't hear from you after one week, I will assume that you are okay with the transcript as is. Any feedback received will be carefully considered, and the transcript will be adjusted if necessary to better capture your adolescent's views.

In addition, once the data analysis is complete, a summary document of the themes generated across all participants, alongside quotations, will be shared with you and your adolescent by July 1, 2025. You and your adolescent will have one week to suggest any changes or provide feedback on the findings. If no response is received within that time, we will assume that you and your adolescent agree with the analysis. Any feedback will be incorporated to better reflect your views, and you will be updated on how your feedback influenced the final analysis.

Additionally, you and your adolescent will receive a written summary of the study results by December 2025. If you and your adolescent would prefer to hear a verbal summary, I will provide a Zoom link to my master's thesis defense around the same time. To keep your adolescent's anonymity, I will send instructions on how to change their screen name on Zoom to protect their identity.

Study Benefits: The anticipated benefits of becoming a participant include learning about mindfulness practices tailored specifically for athletes and building connections with other basketball players. Although these benefits are anticipated, they are not guaranteed.

Study Risks: This study does not pose greater risk of physical harm to your adolescent compared to daily life, but there are some potential risks involved. It is possible that some topics covered (e.g., experiencing stress in sports, facing a mental block during performance) may cause emotional distress. If this occurs during the mindfulness program, participants can take a break or go home if needed. If this happens during the interview, participants can skip the interview questions that make them feel uncomfortable. They may also withdraw from the study at any time without consequence until November 1, 2025. For additional support, mental health professionals can be contacted through the following website:

<https://sharedhealthmb.ca/services/mental-health/child-youth-services/>.

To protect your adolescent's confidentiality, all participants will sign a confidentiality form to keep the information discussed in the MBI intervention sessions confidential. Despite these precautions, please be aware of the potential risk that information shared during group sessions may not remain confidential if others do not honor their commitment to privacy, so your adolescent is encouraged to only share what they feel comfortable discussing with the group.

We will do our best to maintain confidentiality, but please be aware that we cannot guarantee it. In an event where child abuse is suspected or reported, Vianney Vega is legally obligated to report the information to the Manitoba Child and Family Services or law enforcement.

Compensation:

We will need to collect additional personal information from you and your adolescent to record giving your adolescent an honorarium. The researchers will keep this information separate from any research information. This information will be kept in a secure location for 7 years in case the University of Manitoba has to account for the money during a financial audit.

To compensate for your adolescent's time and effort during the interviews, your adolescent will be compensated with a \$20.00 gift card for each interview completed. The maximum amount your adolescent can accumulate is \$60. Your adolescent will receive their compensation at the end of each interview via email. If your adolescent withdraws from the study early, your adolescent will keep all the compensation they have earned up until the dropout point.

Storage and Use of Data:

All the information your adolescent provides as part of this study is confidential. This means that only members of the research team will see your information. For safety, your adolescent's information will be kept on a UM-approved secure platform.

We will have a file that links their name to their information using a code. We will keep the file with their name, contact information, and code separate from the research information you share with us. When we share the results of this study, we will combine everybody's responses. This means no one will see their answers, name, or contact information.

At the end of the assent document (consent document for your adolescent), your adolescent will have a chance to tell us their pseudonym (fake name) to be used when we share the study results. We will not use their name or contact information when we share the study results.

At the end of this document, you will have a chance to tell us whether you will allow your adolescent's information to be shared outside of the University of Manitoba. Your adolescent must also provide their agreement, which they will have the opportunity to do through their assent form. Your adolescent's information may be shared with researchers outside UM and made publicly available. The information is being shared as part of the research study. It will not include your name or any information that could identify you.

We will do our best to keep your personal information safe. However, it is not possible to guarantee confidentiality. We will only share your personal information if the law requires us to.

The study results will be shared through 1) the publication of a master's thesis; 2) journal publications and presentations in relevant academic fields; and 3) a summarized report of the study results to be sent to interested participants.

Withdrawing:

Your adolescent's participation in this research study is voluntary. Your adolescent can choose to do only the activities and/or answer only the questions that they are comfortable with. Your adolescent may withdraw from the study for any reason and you, as a parent/guardian, may also withdraw the adolescent from participation. You do not have to explain why. Your adolescent will not be penalized in any way. Should your adolescent withdraw, you will be asked whether we have permission to retain your adolescent's data. You or your adolescent may decide to withdraw from the study until November 1, 2025. After this date, this research will be published on MSpace at the University of Manitoba and will be impossible to withdraw participants' data. To withdraw, please contact Vianney Vega or Dr. Shaelyn Strachan at the phone number, email above, or speak to us directly during a mindfulness program session.

Questions or Concerns: A designated University of Manitoba auditor may check that this study is being done safely and properly. To do this, they may visit the study site or review the research records. We will tell you if someone outside the research team will be there while your adolescent is participating. If this makes you or your adolescent uncomfortable, please tell the Principal Investigator, who will ask the auditor to return at another time.

This study has been reviewed and approved by the University of Manitoba Research Ethics Board. However, this does not mean that participation is risk-free. If you have any questions, concerns, or complaints about this study, you may contact any members of the research team listed on the first page or the Office of Human Research Ethics at humanethics@umanitoba.ca or (204) 474-7122.

Consent:

By signing this document, I have read the above information and have had the opportunity to ask and have answered any questions I may have.

I understand that:

- My adolescent will be taking part in a research study.
- My adolescent may freely leave the research study activities at any time.
- My adolescent does not waive their legal rights by participating in the study.

Please review the following statements. For each statement, please check if you agree or do not agree.

I agree to allow my adolescent to participate in this study. ☐YES ☐NO

I agree to allow my adolescent to be audio-recorded in this study. ☐YES ☐NO

I agree that the information my adolescent provided to the research team can be used for future research purposes by members of this study's research team and/or their students only if anonymized.	☐ YES ☐ NO
I agree that the information my adolescent provided to the research team can be shared with or used by other researchers, funders, research or community organizations, journals, or other third parties for any future research purposes only if anonymized.	☐ YES ☐ NO
If my adolescent chooses to withdraw partway through the study, I agree that the research team may still include the responses my adolescent has completed in their analysis.	☐ YES ☐ NO

Name of Participant

Parent's Signature

Date

Summary of Results: Please provide an email address below if you would like to be sent a summary of the study results and/or your adolescent's individual results.

Email address: _____

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Appendix F. Interview Guide

Pre-Intervention Interview

Thank you for agreeing to meet with me today! Before we begin, can you tell me your name, what team you play for and in what age group? It's nice to meet you! For the rest of the interview, I will ask you questions about your experiences and thoughts on mindfulness and its role in sports and life. If you choose not to respond to any question, that's completely fine.

You're also welcome to ask for clarification or take a break at any point.

Rapport Building Questions

1. Can you tell me a bit about why you wanted to participate in this study?
2. How long have you been playing basketball?
3. What goals do you have for your sports season?
4. How do you usually like to prepare mentally before a game or practice?

Exploring Mindfulness:

1. What does the term mindfulness mean to you?
 - Prompt A: Where have you heard about mindfulness before?
 - Prompt B: What, if anything, have you already experienced with mindfulness in your life or sport?

*Provide a definition of mindfulness after assessing participants' existing knowledge to ensure both the participant and the researcher share a clear, aligned understanding of mindfulness.

Definition given will be: Mindfulness means to pay attention to what's happening right now in the present moment and being accepting of it without judging it.

2. Why do you think mindfulness might be important in sports or daily life?

3. What motivates you to learn about mindfulness?

Stress and Mindfulness:

4. Tell me about a time you experienced stress in sports. How did you deal with it?

- Follow-up: How, if at all, do you think mindfulness could help in such situations?

Focus and Distractions:

5. Can you tell me about a time when staying focused in your sport was challenging? What did you do to manage it?

6. How do you usually handle distractions, both in sports and in daily life?

Personal and Emotional Connection:

7. What, if anything, you do to prepare mentally for your sport?

What aspects of mental preparation for sport? feel the most challenging to you?

8. How do you think learning about mindfulness could help you overcome those challenges?

9. What do you hope to gain from participating in this program?

Conclusion: Thank you for sharing your thoughts with me. Do you have any final reflections or comments about what we've discussed?

Mid-Intervention Interview

Thank you for meeting with me again! How has your season been going so far? Are you enjoying your time playing basketball? Today, I'd like to hear about how the mindfulness

program has been for you and explore your experiences applying it in sports and life. Please feel free to elaborate as much as you like and let me know if you'd like to skip or clarify any question.

Exploring Mindfulness in Practice

1. How would you describe your understanding of mindfulness now compared to when you started the program?
2. If you had to explain mindfulness to a younger player or teammate, what would you say it is or how it helps you?
3. How, if at all, have you been using mindfulness in sports or your daily life so far?
 - Tell me about a specific time where you applied mindfulness. Has it helped you in any specific moment, like in a game, at school, or in your personal life?
2. We've talked about how mindfulness allows you to be in the moment, be accepting of what's here and be nonjudgmental. What aspects of mindfulness have been most meaningful to you so far? Why?
 - Can you think of a moment where you were glad you had mindfulness in your toolkit?
 - How do you think mindfulness helps you beyond basketball?
3. If you have been practicing mindfulness on your own, what motivates you to keep practicing mindfulness outside the sessions?
 - What makes mindfulness worth doing for you?

- Do you feel different before vs after practicing?
4. What's one thing about mindfulness that surprised you?
 5. Are there certain moments when mindfulness comes to mind more naturally? (Before the game, after the game, after mistakes, after makes, etc.)
 6. Are there certain things you do now to bring yourself back when your mind wanders?

Challenges and Adaptations

1. Have you noticed anything different about how you play or think during games or practices since starting the mindfulness program?
2. Can you think of a moment where you could've used mindfulness, but didn't? What do you think mindfulness might have helped with in that situation?
3. What's been the hardest part of doing mindfulness so far?
4. What do you do when mindfulness feels tough, boring, or frustrating?
5. Is there a mindfulness practice or tool you've liked the most so far?
6. Is there anything you wish we did more or less of in the sessions?

How does mindfulness compare to other things you've tried to help with your mindset or focus?

Conclusion

Thank you for your time and reflections. Is there anything else you'd like to share about your experiences with mindfulness so far?

Final Interview

Thank you for joining me for this final interview! How has your season been? Do you have any sport highlights you'd like to share? Today, I want to talk about your overall experience with mindfulness and how it has impacted you. As always, feel free to share openly or skip any questions.

Exploring Mindfulness in Practice

1. How would you describe your understanding of mindfulness now compared to when you started the program?
2. What does mindfulness mean to you personally at this point?
3. Do you plan to continue practicing mindfulness now that the program has ended? Why or why not?
 - a. Prompt: Are there specific situations or challenges where you anticipate using mindfulness in the future?
 - b. If you plan to continue using mindfulness, what motivates you to continue practicing mindfulness now that the program has ended?
4. What aspects of mindfulness do you think will be most useful for you long-term?
5. How would you describe the overall impact of this program on you as an athlete or individual?

Reflection on Overall Experience

1. How would you describe your overall experience with the mindfulness program?
 - o Prompt A: Can you tell me about a moment when mindfulness made a difference for you?

2. Are there specific moments in your sport or life where you feel mindfulness has had the greatest impact?
3. Were there any moments where you doubted the effectiveness of mindfulness? If so, please tell me about these. Do you still feel this way and if not what has changed?

Meaning and Motivation

1. How does mindfulness compare to other mental training or strategies you've tried in the past?

Recommendations and Reflections

1. If you could improve any aspect or aspects of the mindfulness program, what would it be?
2. Were there any parts of the program that didn't resonate with you? Why?

Appendix G. MSPE Program

Session 1- Establishing Mindfulness Fundamentals

In the first session, the instructor emphasized that just like the body, the mind also benefits from systematic and challenging training that can improve sports performance. The primary objectives of the first session included acquainting group members and discussing the program's guidelines, defining the components of mindfulness (i.e., present-moment awareness, attention, acceptance and non-judgment), explaining the theoretical foundation of MSPE as a program to enhance performance, demonstrating the potential benefits of mindfulness training in participants' basketball training and games (such as incorporating mindfulness insights from prominent basketball figures like Kobe Bryant and Michael Jordan) and offering a formal mindfulness exercise.

The formal mindfulness practice begins with using the breath as an attentional anchor. Participants observed their breath and let its natural flow arise in the following five-minute breath-focused sitting meditation exercise. To conclude the first session, the daily home assignment of five-minute breath-focused sitting meditation are assigned to participants. Participants were directed to a series of five-minute guided meditation links on YouTube and were introduced to the Calm app for an unguided five-minute meditation option. This assignment is crucial to the learning process by reinforcing the session's teachings and encouraging participants to integrate mindfulness into their daily routines.

Session 2: Attention Strengthening

Session two explained the performance-enhancing effects of MSPE and centers around the significance of strengthening attention. To start the second session, participants were taught the diaphragmatic breathing exercise. This exercise is taught separately from the previous breath

meditation as it is change-focused, which does not fully align with the acceptance quality of mindfulness by teaching participants the "correct way" to breathe (Kaufman et al., 2018, p. 180). After participants learned how to perform the diaphragmatic breathing exercise, they were informed that all sessions moving forward will begin with this exercise to root their attention and presence into the mindfulness practice session.

Participants were then introduced to informal mindfulness exercises to demonstrate what it means to pay mindful attention to everyday tasks and showing the direct relevance of mindfulness to their daily lives. A passage from Kobe Bryant's "Mamba Mentality" book was read that emphasized his mindful approach in daily life. Mindful eating was practiced as an informal mindfulness meditation. Participants were then encouraged to think about ways to pay more mindful attention in daily activities, discuss them with the group, and include it in their home assignments outside the MBI.

Next, participants engaged in a group conversation about the obstacles to building a new mindfulness routine. This group conversation served as a valuable opportunity for participants to share their reflections and learn from each other. Subsequently, a description of three of the performance enhancement facilitators fundamental to MSPE were discussed, which included *concentration, letting go, and relaxation*.. The fourth and fifth performance facilitators (*forming key associations and establishing a sense of harmony and rhythm*) are typically discussed in session two but the instructor reserved this information for session three to avoid an overload of information for the adolescent participants.

The formal mindfulness practice in this session includes an introduction to the body scan and a review of the breath-focused sitting meditation to build the capacity for concentration, flexibility of attention, mind-body connection, and letting go.

Although the MSPE suggests a body scan for approximately 30 minutes followed by a breath-focused sitting meditation for ten minutes, the adapted MBI practiced a seven-minute body scan and a three-minute breath-focused sitting meditation to cater to beginner participants' experience levels and the session's length.

To conclude the second session, participants were assigned the daily home assignment of a body scan and breath-focused sitting meditation. Participants were directed to a series of five to seven minute guided meditation links on YouTube and were introduced to the Calm app for an unguided five-minute and ten-minute meditation option. Lastly, instructors provided participants with the analogy of mental mindfulness training requiring systematic practice to yield improvements, much like physical training requires "reps" (Kaufman et al., 2018, p.181).

Session 3: Mindfully stretching the body's limits

Session three began with a centring diaphragmatic breathing exercise followed by a group conversation about the home mindfulness practice from the past week. In this conversation, participants were acknowledged to realize the effects of *expectations* or our belief of how things should be. This session highlights how suffering often occurs when our expectations do not align with the reality of a situation and how this relates to performance expectations in sports. In this session, a strong emphasis on awareness and acceptance applies to dynamic, mindful movements. A focus on cultivating a connection with the body's sensations and limitations while moving is established.

The formal mindfulness practice in this session included a yoga exercise where attention was anchored within the body's physical sensations. In this exercise, participants were directed to become aware of their physical limits, respond non-judgmentally, and let go of their expectations of the body's capabilities. This practice of non-judgemental response fosters a sense of freedom

and acceptance. The MSPE suggests a yoga session for approximately 40 minutes, but a 15-minute session was conducted to cater to beginner participants' experience levels and the session's length.

To continue discussing the performance facilitators of the MSPE, *forming key associations* and *establishing a sense of harmony* were emphasized. Instructors directed participants to select an environmental cue to choose as a reminder to be mindful. Additionally, participants were taught breath and body-based grounding strategies to re-establish their attention back to the present moment. Participants were taught the *Flow, Feet, Focus* and *Recognize, Release, Refocus* to use the breath and body as anchors whenever they noticed a general lack of awareness or attention in sport or in daily life. Participants were then encouraged to discuss their environmental cues or typical moments where they can ground themselves.

To conclude the third session, participants were assigned the daily home assignment of yoga and breath-focused sitting meditation. Participants were directed to a series of 10-15 minute mindful yoga links on YouTube and were instructed to continue revisiting the previously shared meditation sources.

Session 4: Accepting and adapting to what is

Session four began with a centring diaphragmatic breathing exercise followed by a group conversation about the home mindfulness practice from the past week. In this conversation, participants revisit the concept of expectations and discuss attachments as its foundation. According to Kaufman et al. (2018), attachments refer "to underlying beliefs about what is 'good,' 'bad,' 'right,' or 'wrong,' which can generate rigid expectations regarding what 'should' be (p. 181)". Instructors directed participants to bring awareness to their attachments to 'good' or

‘bad’ performances, thoughts, and emotions in sport to consider how mindfulness can aid their openness to different circumstances.

This session's first formal mindfulness practice reviews the fifteen-minute mindful yoga routine from the previous session. While the MSPE suggests a ten-minute walking meditation to engage with sensations mindfully, the instructor assigned this exercise for home practice to consider participant safety around the practice facility's area. Instead, a five-minute breath meditation followed the mindful yoga practice.

At the end of the session, participants were instructed to practice yoga, body scan, and walking meditation during the week and are prompted to apply informal mindfulness whenever possible. The session concluded with examining the essence of accepting the present moment and explicitly distinguishing it from resignation.

Session 5: Becoming a mindful athlete

Session 5 began with a centring diaphragmatic breathing exercise followed by a group conversation about the home mindfulness practice from the past week. In this conversation, participants were instructed to discuss the concept of present-moment acceptance. For example, when participants meditated to achieve a certain outcome, like reducing stress, they may maintain an attachment to this outcome rather than accepting the emotions present in a stressful circumstance.

This session's first formal mindfulness practice expanded the sitting meditation to ten minutes and added environmental stimuli (e.g. sounds) as focal objects of attention. Subsequently, participants received an introduction to a sports meditation to integrate mindfulness into athletic performance fully. In the sports meditation, participants were directed to anchor their attention towards body's sensations while performing sport-specific movements

during their warm-up. For example, one set of anchors for a torso twist lunge included a balanced base and fluid rotation of the trunk. This exercise emphasized the distinction between mindfully observing one's intuitive movements rather than analyzing and correcting actions with an attachment to performing them "correctly".

At the end of the session, participants were instructed to practice the sports meditation warm-up, the further expanded sitting meditation, and were encouraged to partake in informal mindfulness in their everyday tasks. The session concluded with a conversation on how one engages in self-care by engaging in mindful awareness, acceptance, and non-striving.

Session 6: The end of MSPE and beginning of a lifelong mindfulness practice

Session six began with a centring diaphragmatic breathing exercise followed by a group conversation about the home mindfulness practice from the past week and during the entire program duration. Instructors summarized the concepts learned, and participants shared their opinions about the training experience. The session included a conversation on how the MSPE program was a beginning step to establishing a lifelong practice. Therefore, participants were encouraged to create a personalized practice that aligned with their schedules, activity preferences, and environment. This session did not introduce any new formal exercises. Instead, participants reviewed the ten-minute body scan and ten-minute yoga meditation to observe the difference in experience compared to the first introductory sessions of the exercises.

Appendix H. Exploratory Notes and Experiential Statements

Supplemental Table 1

Exploratory Notes and Experiential Statements

Experiential statement	Original transcript	Exploratory notes
Mental game is primary barrier to showing full skill	BA: That has been, like, my biggest struggle, like, confidence, like, believing in myself. That I have all, like, the skills and all that stuff. It's just my mental game is what I need to work on the most. And, like, everyone that knows me, like, it's probably knows that that's my biggest weakness.	BA speaks about how the mental game holds him back the most, it's not necessarily the physical skills, but his mind that restricts him from being able to play his game. <i>Repeating "biggest" adds emphasis; "everyone that knows me" hints to BA's social self-consciousness. Sense of being publicly known for this "weakness."</i>
Early interest in mindfulness	And, actually, recently, my mom, me and my mom, have talked about, like, mindfulness and, like, meditating, all that stuff. And breathing exercises and all that.	Highlights a tension between ability and mental blocks. Before the program started, BA has already shown interest in training the mind and had talks with his mom about trying meditation.
Fear of others' opinions distracts from present moment	I: What do you think are, like, why do you think you struggle with that right now? BA: Maybe because what others think of me, I guess, or I don't think in the present. I think about, like, the after facts. Like, what if I mess up? And then how are these people gonna react to that, or how are they gonna see me and all that stuff?	BA talks about the things that undermine his confidence: other people opinions, the future outcomes, etc. <i>"Maybe," "I guess," "like" can be seen as hedging or softening;</i> Conceptual: Social anxiety and future-focused worry undermine confidence.

Yeah. Like like, the Like, is my coach gonna sub me out or and all that kind of stuff that goes on in my head Okay. That I shouldn't think about.

I: Yeah. So, like, when you get those thoughts in the game, like, what do you do?

BA: I mean, it's kinda hard to think now. I don't really remember, but, yeah, it's just not, like, the greatest thing.

Appendix I. Table of Personal Experiential Themes (T1 Analysis)

Supplemental Table 2

Table of Personal Experiential Themes

Table of personal experiential themes for Jake's T1 Analysis

	Interview/Page	Quotes
Timepoint 1. Bogged Down by Mistakes		
Mental state impacts basketball performance	1/13	I mean, um... I mean, a big part of like my play is like when I'm playing down and stuff It'll like affect my game.
Potential for mindfulness to assist his game	1/14	Because if you're performing bad, then all of that just like just goes to nothing if you're just like playing down And you're like thinking bad about your game. So I thought like someone like me who like goes through that Like where I'm playing bad and then just like continue to think about it It's something I can work on, so.
Mistakes can disrupt focus	1/14	So maybe like if I get like a turnover or like a I got turnover or I like missing shot or something like that. It's just... I guess into my head a little bit sometimes.
Early self-talk strategies	1/15	I try and like talk to myself and say, like... um just like get on with the next one.
Worrying about small mistakes affecting the bigger picture	1/47	Just like if I make a turnover here, if I make a mistake It's just like, how will that affect the team like later on?
Learning to accept and work with nervousness and negative thoughts	1/48	And just see like, yeah, I did do something wrong, but like not let it get to me and just like focus on like, I did something wrong. Let's not

do that the next one and just focus on that mostly, I guess.

Theme 2. Mental Game as Untrained but Stable Base

Sees his mental game as passable, but not entirely strong 1/21

My own mental, my own mental game... Decent. It's decent. I'd say it's decent.

Recognizing areas for growth in self-compassion 1/31

I'd say that... Excuse me. There's still like... those areas where I still need that. And to not be like down on myself. So I feel like I can work on that.

Seeing mindfulness as a way to tackle the negative mental side 1/33

The negative mental self is stuff I need to work on so I felt like it could actually help me.

Theme 3. Desire to Manage Emotions

Managing nerves and building self-confidence in big moments 1/23

Distraction. I'd say... Also, just, like... That's it. It's gotten better, but like the nervousness sometimes Like sometimes, like... There'll be like big moments.

Recognizing a need to strengthen self-confidence 1/27

I: I'm curious to know like what's one part of your mental that you think you'd want to improve on?

Jake: Um... Just the confidence.

Learning to accept and work with nervousness and negative thoughts 1/48

Now that you mentioned like the part about like Just like embracing and just like Just like accepting like the nervousness and stuff like that I feel like I could do better on.

Theme 4. No Prior Exposure to Mindfulness

Seeing meditation as peaceful but undefined 1/26

When I think I'm meditating... I'd say it's just like... I don't know. Just like... like, peace.

Mindfulness rooted in school prayer but not yet applied athletically 1/40

I'd say just like... like just like a general like mindful. Actually, yeah, we have like these... mindfulness like kind of things on the announcements because like at [Saints] we do like prayers on the announcements every morning.

Table of personal experiential themes for BA's analysis

	Interview/Page	Quotes
Timepoint 1. Underdeveloped Mental Game		
Mental game is primary barrier to showing full skill	1/6	That has been, like, my biggest struggle, like, confidence, like, believing in myself. That I have all, like, the skills and all that stuff. It's just my mental game is what I need to work on the most. And, like, everyone that knows me, like, it's probably knows that that's my biggest weakness
Fear of others' opinions distracts from present moment	1/7	Maybe because what others think of me, I guess, or I don't think in the present. I think about, like, the after facts. Like, what if I mess up? And then how are these people gonna react to that, or how are they gonna see me and all that stuff?

Mental game has been a long-term struggle but key growth area 1/30

The mental game is like. I mean, it's definitely been a struggle for me, like, for years, I guess, now. And I just been trying to be the best version of myself. Obviously, that one of that factor is, like, my mental game.

Racing mind prevents presence on and off court 1/31

I think, I think ahead of time. Not just with, like, with basketball but with life. I just feel like my mind is, like, too rushed, I guess.

Responds to frustration by withdrawing or losing opportunity 1/34

In a game, I think I would, like, maybe fade into the back background or maybe the coach pulls me out.

Theme 2. Mindfulness Experience

Early interest in mindfulness 1/7

And, actually, recently, my mom, me and my mom, have talked about, like, mindfulness and, like, meditating, all that stuff. And breathing exercises and all that.

Self-driven efforts outside of meditation 1/8

I did some I listen to those podcasts sometimes. Mhmm. I'm trying to listen to it more, but there was one where it's just it's just about meditation Yeah. For fifteen minutes.

Defines mindfulness as connection between mind-body 1/24

I would say how connected your mind is to your body

Knows mindfulness conceptually but struggles with application 1/27

I have an understanding of it. So my Just how how do I apply that?

Table of personal experiential themes for Mateo's analysis

	Interview/Page	Quotes
Timepoint 1.		
Theme 1. No Prior Mental Training Experience		
No formal mental training yet	1/10	I: Have you thought about training the mind at all?
		Mateo: No, no, not really. I don't think so.
No prior knowledge of mindfulness	1/26	I: Have you heard about mindfulness before?
		Mateo: No, I haven't heard of it.
Self interest and parental encouragement	1/26	I: So what motivated you to join this study about mindfulness?
		Mateo: Kind of thinking it, you know, overall help me improve my game and My parents told me it would be good for me so Yeah, I thought I'd try it out.
Theme 2. Distractions		
Distraction: Other team's scoring run	1/15	You know, when other team just starts coming back or they score on a run, it kind of gets you gets you down, I guess.
Anger during momentum swings	1/17	A little bit of anger, you know, you start getting mad at yourself. It's like things you're doing wrong And then, yeah, I don't know, just a little bit of anger, I guess

Missing an easy layup caused a downward spiral	1/30	It's like the end of our [Iowa Western] game. I missed like an easy layup and I got... a little mad at myself, I guess. Then I just stopped playing well. I got subbed out right at the end.
Self-judgment spirals into thoughts of self-blame	1/31	I don't know. It's like, I really should have made that shot, bro. Like, I... Like, this game could be on my like this game could be on me. Like, it could be my fault we lost just because of this.
Shift from self-criticism to constructive self-talk to stay focused	1/39	I: What difference in the mindset would you say you'd like to have? Mateo: I don't know. Well, probably like having, you know, constructive criticism on myself instead of putting myself down.
Less downward spirals	1/42	Getting myself better and better. Instead of just worrying about doing bad.

Table of personal experiential themes for C's analysis

	Interview/Page	Quotes
Timepoint 1.		
Theme 1. High Degree of Physical Training, Some Idea of Mental Training		
Focus on physical and technical improvement	1/4	I'm like I'm usually in the gym like the gym Almost every day, if not... everyday.
Focus on physical and technical improvement	1/4	Yeah, just getting shots up, [lift], maybe like four or five times a week.

No mental training yet	1/4	I: And now you're working on your mental game too?
		C: I haven't been really... Not really.
Current sense of confidence	1/5	I think I'm a pretty good mental state right now. I'm like confident about my game.
Prayer as a source of strength before the game	1/12	I just thank the Lord. For allowing me to be there that day. Allowing me to play the game. And I just ask him to give him to give me his strength, his courage and the peace of mind when I go into the game. I feel like it gives me a sense of... calmness and confidence because when I know like the Lord is by my side when i'm in that game I feel like I could accomplish anything.
A tendency to disengage after setbacks	1/30	I: Would you consider it right now as one of your weaknesses or one of your strengths? C: One of my weaknesses for sure. Because... I feel like sometimes it's very easy for me to like start fading away And just let other people do their thing because of something that happened during the game something that's, yeah.

Theme 2. Mistakes as Distractions or A Cause for Confidence Decrease

Dwelling on mistakes disrupts in-game focus	1/6	Sometimes, like... If I did something bad, like a bad play like turned over missed
---	-----	--

		shot or something affect me sometimes. Like in my brain, like I think about it during the game And then, yeah.
Overthinking mistakes leads to passive play	1/6	Sometimes it's just like... causes me to play more like passive And like... not be as aggressive as I was at the beginning of the game.
Staying focused on the present play instead of dwelling on mistakes	1/21	I: How do you think that would help you out? C: Just just like not thinking about like missed shots Or something that happened like in the past. In the past games, practices, just focusing on like what's happening during like... the game is like important.
Goal: Staying unshakably focused during games	1/33	I: What would you want to be different about your mindset? C: Stay focused on that one thing, which is winning. And don't let anything else affect it.
Theme 3. Early Idea of Mindfulness		
Associates meditation with calmness	1/24	I've heard that like it helps you like be more calm.

Appendix J. IPA Idiographic Journal

Timepoint 1

BA- BA's descriptions of his mental game emphasized how he had struggled with confidence and a high degree of concern about others' evaluations of his game when playing. He framed his psychological skills as a barrier to his performance and also mentioned trying mindfulness independently to strengthen what he described as a "weakness". I bracketed the expectation that other participants would describe similar psychological barriers as some participants may not struggle with these despite receiving no prior mental skills training like BA.

Jake – Jake's interview highlighted how nervousness and mistakes were often distracting and sought to develop greater confidence in his own abilities. He mentioned how mindfulness was introduced in school, but he had a vague idea on what it entailed. I bracketed the expectation that participants wanted to develop greater confidence and that responses to mistakes were often detrimental to performance.

Mateo – Mateo's interview emphasized how his emotional reactions to mistakes disrupted performance and resulted in more errors and negatively impacted his performance for the remainder of the game. I bracketed the tendency to interpret other participants' experiences primarily through frustrated responses to mistakes before analyzing the next transcript.

C- Analyzed last, no subsequent case to bracket

Timepoint 2

BA- BA's interview emphasized a deeper and more thorough conceptual understanding of mindfulness that focused on being in the moment. BA also highlighted the meditations learned as

a significant part of what he learned in the MBI. I bracketed the expectation that other participants would describe similar conceptual shifts in their understanding of mindfulness as present-moment attention.

Jake – Jake’s interview highlighted the use of mindfulness anchors (3Rs) to reset attention and maintain confidence during games. He describes being more attentive during games and recognizes where his attention is directed. I bracketed the expectation that other participants would describe similar uses of anchors in competition to maintain engagement in the game.

Mateo- Mateo’s interview emphasized reducing the habitual tendency for self-judgment and learning to move on from mistakes and contrasts it with his frustration and self-criticism prior to the MBI. I bracketed the tendency to interpret other participants’ experiences primarily through reduced self-criticism or more self-compassion before analyzing the next transcript.

C – Analyzed last, no subsequent case to bracket

Timepoint 3

BA – BA’s interview emphasized the application of mindfulness beyond basketball. He mentioned how knowing that mindfulness meant being present allowed him to strengthen his everyday focus. He also mentioned how his “weakness” was improving as he learns how to steady his attention. I bracketed the expectation that other participants would describe greater shifts in their psychological skills and a similar transfer of mindfulness into daily life.

Jake –Jake’s interview highlighted a more mindful approach to emotions as he developed the capacity to be more aware, accepting, and curious of the emotions he felt. Jake mentioned the intention to extend mindfulness for his relationships beyond the MBI to continue his

development. I bracketed the expectation that other participants would develop their abilities to respond to emotions and be willing to continue mindfulness beyond the MBI.

Mateo- Mateo's interview emphasized mindfulness as a stabilizing mental resource for regulating emotions and maintaining performance consistency despite fluctuating performance outcomes. Mateo mentioned that his motivation to practice mindfulness increased as he saw its benefits. I bracketed the tendency to interpret other participants' experiences primarily through maintaining a consistent mental state through mindfulness.

C – Analyzed last, no subsequent case to bracket

Appendix K. Table of Group Experiential Themes (Timepoint 1)

Supplemental Table 3

Table of Group Experiential Themes

Timepoint 1

	Page
Group Experiential Theme 1. The Untrained Mental Game	
BA: That has been...like, my biggest struggle, like, confidence, like, believing in myself... I have all, like, the skills and all that stuff. It's just my mental game is what I need to work on the most...And, like, everyone that knows me, like, knows that's my biggest weakness.	6
And I just been trying to be the best version of myself. . Obviously, that one of that factor is, like, my mental game, what I lack in.	30
Jake: It's just like the nervousness. Obviously, I gotta like shake it off a little and like... I'll start playing better. But... I just had to have more confidence in myself, I'd say	23
Mateo: I don't think I know anything about it [mental training], really.	11
C: [The mental game is] one of my weaknesses for sure	30
Group Experiential Theme 2. Early Understandings of Mindfulness	
2a. Not Knowing What Mindfulness Entails	
Mateo: I don't think I know anything about it, really [...] [I was] thinking it would, you know, overall help improve my game and my parents told me it would be good for me, so...I thought I'd try it out	26
Jake: I'd say it's just like...I don't know. Just like... like, peace. I don't know, thoughtless [...] I'm chilling. I don't know	26
C: I've heard that like it helps you like be more calm.	24
2b. Understanding what Mindfulness Means	
BA: I would say how connected your mind is to your body	24
I have an understanding of it. But how do I apply that?	27

Group Experiential Theme 3. Preoccupation with Mistakes and Evaluations

C: I feel like sometimes, it's very easy for me to like start 30
fading away and just let other people do their thing because of
something that happened during the game.

Mateo: I missed like an easy layup, and I got...a little mad at 29
myself, I guess. Then I just stopped playing well [...] I got
subbed out right at the end.

BA: I think about, like, the after facts. Like, what if I mess 7
up? And then how are these people gonna react to that, or how
are they gonna see me and all that stuff?

Jake: I thought like someone like me who like goes through 14
that Like where I'm playing bad and then just like continue to
think about it It's something I can work on... If I get like a
turnover or like a I got turnover or I like missing shot or
something like that. It's just... I guess into my head a little bit
sometimes.

Appendix L. Researcher Reflexive Journal

Phase 1: Pre-Study Reflexive Positioning

In the following paragraphs, I sought to outline my assumptions about mindfulness and its possible utility for adolescent athletes (within and outside sport contexts).

My personal reflexivity on my beliefs about mindfulness:

I believe that mindfulness is an impactful practice with the capacity to positively influence individuals. My own experience over the past years of meditation practice has reinforced my belief that mindfulness can foster meaningful personal growth. I believe that mindfulness can cultivate a heightened sense of self-awareness, emotional regulation, equanimity, and presence over a period of committed practice. I also believe that it can lead to greater empathy, kindness, and compassion in one's relationships, as I have seen for myself. Lastly, in my own sport performance, I have seen how mindfulness has allowed me to be more attentive to task-relevant cues, let go of distractions in the moment, to let go of the outcome and the need to play well, to recognize the needs of others on the team, to cultivate greater self-kindness after mistakes, to deal with nervousness and other difficult emotions. Overall, I see mindfulness as a valuable holistic approach to well-being and performance-enhancing mindset.

Personal reflexivity on my awareness of sensitization to mindfulness topics:

Importantly, I also recognize that my beliefs and experiences sensitize me to particular aspects of participants' accounts such as descriptions of concentration/attentional stability by focusing on the present play, not getting too high or too low after each play, not needing to pay attention to thoughts as much during the game, acceptance of emotions and working with them, moving on from mistakes, understanding that 'good' and 'bad' games can be reframed and are

not static. Because of this position, I will pay reflexive attention to ensure that moments of challenge or limited applicability of mindfulness are represented and not overshadowed by my own orientation toward the practice during the data collection and analysis phase. Paying attention to myself in this way will align with the article I read about reflexivity by Olmos-Vega et al. (2023).

Personal and methodological reflexivity of why this phenomenon and methodology

I was drawn to mindfulness qualitative research because of my engagement with mindfulness and interest in how younger can athletes understand and use it over time. Seeing that most research was done with adults also meant that youth participants are an underrepresented population in mindfulness research. I also do not really know how to quantify mindfulness and if such measures will accurately measure the intended variable. As I read more about mindfulness research and reflected on my experiences as a youth coach, I had a few questions: “If taught by a certified instructor, will adolescent participants understand mindfulness? Will they apply it? Why would they apply it? Why wouldn’t they? Are they too young to understand it?” These questions developed as I moved away from my initially outcome-focused questions to “prove” that mindfulness works through scientific research when first starting my graduate education.

Personal reflexivity on what I anticipate participant accounts

Because mindfulness will be taught in a sport context, I believe that participants’ understanding of mindfulness will be primarily sport oriented. In this way, I expect participants to describe mindfulness in terms of being present with the game, mindful ways of relating to themselves/others in a game, like being nonjudgmental of their own/others’ actions, recognizing

the team's needs, and becoming more accepting of all different outcomes. At the same time, I am remaining open to participant accounts that challenge these expectations.

Personal reflexivity on surprising data

I would be surprised if participants described mindfulness as something that changed their entire game drastically after a few weeks of practice. I would also find it unexpected if mindfulness had no relevance at all throughout the entire intervention. Outlining these potential surprises now will allow me to notice when participants' experiences diverge from my expectations, and to be sure to report them despite not lining up with how I see mindfulness.

Interpersonal reflexivity on my relationships to participants:

I believe that my position as someone relatively close in age, who plays basketball, and a male (if I recruit males), will support rapport. At the same time, my role as a mindfulness leader/intervention facilitator positions me as an authority figure, where they may hesitate to share negative perceptions of mindfulness or simply say what they learned in the mindfulness program. Because of this, examples and stories will provide richer data that will allow me to ground what is reported with their experiences.

Because of my background with mindfulness, I may ask questions or probe more deeply about experiences that resonate with my own athletic history with mindfulness. It is important that I remain open-ended and responsive to participants' meanings instead of steering the interview toward familiar narratives.

How do I imagine my responsibility towards participants at this stage?

At this stage, I view my responsibility as creating a respectful and non-judgmental space for participants to share their experiences. This includes listening without endorsement of particular outcomes or correction of their understandings of mindfulness (both in the MBI and during interviews). My role is to represent participants' experiences with integrity when I report my findings, rather than to advocate that mindfulness is effective.

Methodological Reflexivity

I have decided to use IPA as the methodological approach for this study. This is because compared to approaches such as thematic analysis that focus more on shared patterns across participants, IPA places a greater emphasis on the detailed exploration of individual experiences before examining convergence across cases, and this approach seems well suited to the research question as mindfulness can be understood and applied in different ways by athletes. IPA allows me to explore how each participant interprets and applies mindfulness within their own sporting and personal contexts and see where participants converge and diverge.

IPA also provides a way to examine how participants' understandings of mindfulness develop throughout the program. This aligns with my interest in exploring how their interpretations and applications of the practice evolve through their experiences participating in the MBI and practicing it independently.

Choosing IPA also shapes the type of knowledge that this study can produce. The analysis will involve interpreting participants' accounts and that the findings will be a co-constructed understanding between participants' experiences and my interpretations as the researcher. Because of this, reflexive awareness of my own perspectives on mindfulness will be

important throughout the research process and a continued engagement with this reflexive journal is needed.

November 2024- After meeting with Janet, I refined my interview guide and research objectives so that the focus of the study will be on participants' experiences with mindfulness rather than evaluating the effectiveness of the MBI itself. Initially, I found myself thinking about the study in terms of whether the intervention "worked." But within an IPA approach, the emphasis is on understanding how participants make sense of the phenomenon being explored and not on measuring the effectiveness of a MBI.

The interview guide was adjusted to better reflect this orientation. The questions were refined to explore how participants understood mindfulness, how they attempted to apply it in sport and daily life, and what meanings they attached to these experiences. This moved away from focusing primarily on whether participants liked or disliked aspects of the MBI, which allowed the interviews to remain aligned with the phenomenological focus of IPA.

Choosing IPA also made me more aware of how methodological choices shape the research process. My selection of this means that the study I will conduct prioritizes depth of individual experience, not generalizable claims about intervention outcomes or MBI acceptability.

Contextual Reflexivity

This study was conducted within a competitive youth basketball context where performance and improvement are important for athletes. This environment may influence how participants interpret and apply mindfulness by emphasizing improvements in their sporting

experiences. For example, participants may view mindfulness primarily as a strategy to improve how they play rather than as a general approach or way of being.

Phase Two: Data Collection

April 2025- I just conducted my first interview with BA. I think in the attempt to make the participant feel more comfortable; I did not probe for as many questions that might have been too sensitive to talk about. I also felt like I had talked about myself too much in the interview to relate to the participant more. Because of my role as the mindfulness facilitator, I feel like I really want to help BA with his mental game, especially if he wants to get better at it. With my role as a researcher, this might also be affected because I want to see him get better, and I will look for data that confirms that he is getting better. But I will root my analysis on what he will say so it is grounded in his experiences.

April 2025- I just finished my interview with Mateo. I learned from my previous mistakes. I was more comfortable with silence, probed more when I could have, and I feel more comfortable in the position of the interviewer. I also feel like my age and background in basketball has been advantageous. I feel like participants are open to share stories about themselves and my background in basketball and me being close to their age can be a factor that helps that.

April 2025- I just finished my interview with Jake, and it went smoothly. I feel like knowing players through attending a practice allowed for more depth as he was comfortable speaking about the things he wants to work on in his game. I was able to ask him questions more naturally and the increased rapport allowed for a smooth conversation.

April 2025- I just finished my interview with C. For this interview, it seemed like the interview went straight into the important parts of the interview. There was minimal informal talking and getting to know the participant, but it seems like the data is still rich and there are a lot of important things mentioned.

April 2025- I just finished my interview with BA. It seems like the rapport developed through the first interview and throughout the sessions allows for a smoother conversation and BA is willing to share how he has applied mindfulness. BA seems a lot more positive when speaking about the mental game, compared to his first interview where he seemed to be hesitant or feeling down when talking about the mental game.

April 2025- I just finished my interview with Mateo. One thing I found that I can do better is allowing the participants to feel okay with sitting with a question for a bit. I can let them know that it's okay to take a second to think about it and we can move through it at a reasonable pace.

April 2025- After conducting the first two mid-intervention interviews, it seems like the participants are learning a lot about mindfulness and have been applying it in many different ways. With my dual role as the facilitator and researcher, there are two parts of me that are viewing the data in different ways. The facilitator side is happy that the participants are learning about mindfulness. The researcher side is asking 'Are they just saying this because they think I want to hear this? Are they just saying what they think the right answer is or are they actually learning things?'

Another thing I noticed is that I used affirming language when participants talked about using mindfulness for performance like "I'm glad that's been working for you". This might have

influenced their responses. I will monitor my body language and tone in future interviews to remain as neutral as possible.

April 2025- I just finished my interview with Jake. I find that I summarized his points a bit better without using affirming language that would suggest that the use of mindfulness is 'good'.

April 2025- I just finished my interview with C. I am surprised how C uses mindfulness. C has shown up more often to the make-up sessions and not the in-person sessions, can be quiet during the session, so I was not sure if he was going to apply mindfulness on his own. To my surprise, he has and he mentions the benefits he has been experiencing.

May 2025: I just finished my interview with BA. It seems like he has improved his mental game and has learned a lot. BA participated a lot in the sessions, asked for the PPTs, and texted me about his questions during the program so his effort to learn seems like it has been paying off. It also seems like BA is getting comfortable with telling details about his life so this is a good sign that he feels like he can trust me as an interviewer and voice out the things that he feels. But this might also make him hold back on the things he wants to say about mindfulness that may not really be working for him so its important that i ask him about it and he feels comfortable to share the challenges too.

May 2025: I just finished my interview with Mateo. I noticed I rushed through follow-up questions when they seemed uncomfortable, next time I'll hold the silence longer.

June 2025: I just finished my interview with Jake. I notice that Jake provides very rich answers with little need for follow-up. It surprised me how Jake mentions the team aspect of basketball a lot and how mindfulness has helped him help his team. This was surprising to me as

the mindfulness program did not teach them this. He talked about how his own management of his mental game allows him to help others who might be struggling.

June 2025: I just finished my interview with C. I find that something that has been recurring with all the participants is their recovery from mistakes. All participants have mentioned how mistakes impacted their game and how mindfulness has helped them with recovery, both emotionally and with their confidence.

June 2025: After conducting all the interviews with participants, they have voiced out generally positive changes since the beginning of the mindfulness program. My initial question remains of whether their statements are true or if it is influenced by social desirability bias

Phase 3: Data Analysis

June 2025-I recognize that my longstanding engagement with mindfulness shapes my expectations about its benefits. I believe that athletes can benefit holistically, but I must remember that participants' experiences may differ greatly. I need to be careful not to interpret their words only through my own lens. To do this, I will conduct the analysis and receive feedback from my advisor about the interpretation of themes.

June 2025 – I am aware that my role as the facilitator of the MBI could shape how I interpret participants' accounts when beginning the analysis. I may feel invested in participants benefiting from the program and attend to examples that reflect positive changes because I delivered the sessions. Because of this, I will make sure to remain attentive to participants' descriptions of both helpful and challenging aspects of the practices, and also ensure that my analysis reflects the range of their experiences across the MBI, rather than emphasizing the instances that aligned with the intended outcomes of the MBI.

July 2025- I noticed that I was inclined to view participants' definitions as "incomplete" or in need of correction while analyzing the theme related to their early understandings of mindfulness. This tendency likely reflected my own background engaging with mindfulness practice and reading the academic literature of what constitutes mindfulness that have shaped a more developed understanding of the construct. But I became aware that evaluating their understandings of mindfulness against how mindfulness is defined in the literature could lead me to overlook the meaning these early understandings held for the participants themselves. Therefore, I instead approached these definitions as part of participants' developmental engagement with mindfulness. I recognized that these early interpretations represented meaningful starting points for participants that were shaped by their own experiences and assumptions.

July 2025 –I noticed that I easily understood the participants' reactions and experiences because of my own background in basketball as I worked through the theme of "Preoccupation with Mistakes and Evaluations". While this insider understanding helped me interpret the meaning of their accounts and recognize the pattern quickly, I remained aware that I may fill in meanings too quickly based on my assumptions (e.g., thinking of getting benched, thinking of teammates' evaluations, etc.) so I checked the transcripts to ensure my interpretation matched their words and included the context of their experiences.

August 2025- During analysis of the mid-intervention interviews, I noticed that I felt encouraged when participants began describing mindfulness in terms of presence and awareness rather than just as a way to achieve relaxation or "peace." This validation likely reflects my value of mindfulness as more than a relaxation strategy, and as evidence that my instructions during the MBI were being received. Upon recognizing this reaction, I remained mindful that this sense of

validation could influence how I represented participants' conceptual changes (framing mindfulness from something not understood to a straightforward progression to "correct" understanding). Therefore, I remained attentive to the nuances within their accounts and ensured that my analysis reflected how participants described mindfulness in terms of present-moment attention and awareness of their experiences, rather than portraying their conceptual change as a simple or complete shift toward a "correct" understanding of mindfulness.

September 2025 – Because the study is longitudinal, I found it easy to want to focus on growth and movement. I noticed that I was often looking for signs of progression over time from T1 to T3 across the full analysis. Therefore, I remained open to unevenness and plateaus. For example, participants' conceptual understandings of mindfulness were relatively the same from T2 and T3. This was important to do to stay grounded in the data rather than in my expectation that change should occur.

Appendix M. MBI Facilitator Reflexive Journal

July 2024:

I find myself really wanting to make a difference in the games and lives of the participants I will recruit. I am currently seeking advice from other sport psychology and mental performance coaches to enhance the training as much as I can. This dual role of researcher and mindfulness teacher can be difficult to balance sometimes. If I were to do this in the future, I would have two separate people doing the interviews and doing the program, but I recognize that I am building the skills of a researcher in this master's degree, so this is very important to learn.

August 2024:

As I am reading the Mindful Sport Performance Enhancement (MSPE) book, I recognize that there are a lot of things from the program that I can directly teach how it was designed. The program also says that each leader can direct the session based on their style and the needs of the group they are working with, because of this, I think I will make changes based on the lessons I am learning in the Canadian Mindfulness Institute training. For example, they said teens need to see more relevance to learning about mindfulness and might need more time with some mindfulness concepts. Therefore, I will break apart some things, like in session two where all the five performance facilitators are talked about. I think that is too much for them to learn in one session and I will spread them apart, so participants are not overloaded with information.

I feel like my personal style shaped the tone of the session a lot. I tend to ask questions a lot, use analogies, and ask them to do some reflecting. I think this allows for more of the focus on them and their application and the analogies try to simplify some of the concepts to make it more understandable.

I think a different facilitator would have done it differently if they were to and that's okay, I think that's the nature of facilitating one--- being able to add your own style while staying true to the content.

February 2025:

I have finally received my ethics approval. I'm both excited and nervous for what's ahead. I'm not sure if I can get enough participants, how this will all work but I will message the club I am interested in and see if they want to work together.

After contacting the coach on Instagram, it seems like they are open to the idea and recruiting five participants out of the twelve players seems very doable if I can pitch it in a way that can resonate with them and make them interested in it.

May 2025

Mindfulness session four had to be moved online because of scheduling conflicts with the gym. I wonder if this will affect how the participants view the mindfulness program and affect their understanding.

Appendix N: Demographic and Competition Level Form

Thank you for expressing interest to participate in our study! Our study seeks to explore the experiences of adolescent athletes participating in a mindfulness-based program across a diverse set of participants.

To achieve this, we would require the following information:

Participant Name: _____

Participant Age: _____

Participant Gender: _____

Participant Ethnicity: _____

Participant's Highest Level of Basketball Competition (i.e., Community, Club, High-School, Provincial, National): _____