

Mindfulness-Based Practice in Outdoor Behavioral Healthcare

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Abstract

Interest in the application of mindfulness-based practice (MBP) in adolescent mental health is a rapidly growing field of inquiry. While empirically validated studies with adult populations demonstrate the efficacy of structured MBP in moderating symptoms of anxiety, social anxiety, depression, stress and other conditions, research with adolescent and young adult populations is relatively new. As the prevalence of mood disorders continues to accelerate among the adolescent population, treatment modalities which specifically address emotional self-regulation and self-acceptance are increasingly important. Outdoor behavioral healthcare (OBH) seeks to provide innovative treatment to adolescents with these complex issues and could benefit from incorporating mindfulness-based practice into the treatment process. This study reviews current literature about the utilization of core mindfulness practices to support emotion regulation with adolescents in traditional therapy settings and OBH, and includes the findings from a survey assessing the prevalence and efficacy of MBP in outdoor behavioral healthcare (OBH), as well as limitations and suggestions for further research.

Keywords: outdoor behavioral healthcare, mindfulness-based practice, mindfulness, emotion regulation, adolescent mental health

According to researchers at the National Institute of Mental Health, the lifetime prevalence of a mental health disorder for 13-18 year olds is 46.3%, and just over 20% of these adolescents suffer from a severe mental disorder (Merikangas, et al 2010). Most common disorders for which this age group has sought mental health treatment are mood disorders (43.8%) and anxiety disorders (32.2%) (Merikangas, et al, et al). Despite the research showing the superior effects of cognitive behavioral therapy and interpersonal therapy for depression in adolescents, after five months the effectiveness of therapy was no longer significant (Watanabe, Hunot, Omori, Churchill, & Furukawa, 2007). Likewise, a recent study by Davis, May, and Whiting (2011) found that many treatments for anxiety in children and adolescents have not yet been demonstrated as effective. Innovative and effective treatments are needed to address the particular challenges of emotional dysregulation present in mood and anxiety disorders in adolescents.

Emotional awareness and expressivity are skills associated with and an important precursor to emotion regulation (Saarni, 1999, as cited in Chambers, Gullone & Allen, 2009). Facility in emotional and social skills is a critical aspect of self-management. It encompasses understanding how to work cooperatively with others, channel motivation, sustain attention, deal with frustration, respond appropriately to challenges, and avoid risky behaviors. Poor emotional awareness and expressivity have been linked to problematic behavior and peer relations in childhood, and poor understanding of emotions is associated with internalizing problems in adolescence (Penza-Clyve & Zeman, 2002). As recent research suggests (Chambers, Gullone & Allen, 2009) treatment strategies and interventions which increase emotional literacy, emotional identification skills, and healthy emotional expression in adolescents provide a moderating effect on problem behaviors and substance abuse.

Emotion Regulation in Adolescents

Cooper, Wood, Orcutt & Albino (2003) suggest that dysfunctional styles of regulating emotions and moderating emotion-driven behaviors may be an important indicator of future risky behavior by

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adolescents. Adolescents who lack skills for managing their emotional experiences may be more likely to engage in risky or maladaptive behaviors to avoid, suppress or override challenging emotions. The stress vulnerability model (Cooper, Russell, Skinner, Frone, & Mudar, 1992) proposes that individuals who struggle to identify and work through their emotions may turn to using substances to alleviate distressing emotional states. These skill deficits may involve difficulties in a variety of emotion-related competencies, including; regulating emotions, being aware of one's emotions, and effectively expressing of emotions. Lower self-regulation in early adolescence was associated with a greater number of sexual partners in late adolescence (Raffaelli & Crockett, 2003) and a lack of control in childhood and early adolescence predicted later adolescent internalized and externalized behaviors (Caspi, Henry, McGee, Moffitt, & Silva, 1995). Conversely, greater emotional restraint and regulation was associated with lower drug use across an 18-month period in early adolescence (Farrell & Danish, 1993).

From a developmental standpoint, adolescents are expected to be less able than adults to use words to describe their feelings, a task referred to as emotional awareness (Coffey & Hartman, 2008). Adolescents low in emotional awareness may not know what they are precisely feeling, but do know that they are experiencing emotional distress (Penza-Clyve & Zeman, 2002). Adolescents with low emotional awareness may be able to identify their affective states in simple terms (mad, sad, glad, happy, angry), but are not able to perform more sophisticated tasks or intentionally regulate their responses. Ciarrochi, Heaven, & Supavadeeprasit (2008) suggest that emotional awareness can be measured in adolescents and acts as an antecedent to increasing emotional and social well-being.

Emotional Dysregulation and Maladaptive Behaviors

Emotion regulation involves strategies to respond to the demands of a present circumstance in a manner that is socially tolerable and sufficiently flexible (Eisenberg, Spinrad, & Eggum, 2010). The ability to positively regulate emotion is viewed by Eisenberg et al. and other contemporary researchers as a foundation for well-being and positive adjustment throughout the life span (2010). Emotion regulation processes include management of distress and modulation of excitement, identification and acceptance of emotional experiences, prioritizing among competing goals, sustaining motivation, and adaptive adjustment of behavioral responses (Arnsten & Shansky, 2004). A core feature of many adolescent-onset emotional and behavioral problems, difficulties in emotion regulation, are associated with anxiety, depression, self-harm, conduct problems, eating disorders, and substance abuse. Adolescents with low distress tolerance are significantly more likely to engage in harmful risk-taking behavior (Cisler, Olatunji, Felder, & Forsyth, 2010), compared with peers who display more developed coping strategies and healthy developmental growth.

For adolescents, maladaptive behaviors often provide transient relief (positive reinforcement) or serve to permit escape from emotional pain (negative reinforcement) (Andersen & Teicher, 2008). Alternatively, teens may seek to moderate their distress through behavior which reinforces the association between automatic thought and negative affect--through rumination or obsessive worry, they may unsuccessfully seek to resolve problems and regulate feelings through reexamination or re-experiencing of a distressing situation. This practice of rumination heightens attention to distress cues and amplifies rather than attenuates distress, while reducing their capacity to engage in healthy emotion regulation (Boyce, 2005).

Eisenberg, Spinrad & Eggnum (2010) describe emotion dysregulation as 'the hallmark of psychopathology.' An individual who struggles to respond and interact with their environment and/or stressors in a resilient and adaptive manner, or who experiences symptoms of anxiety, depression, poorly controlled behavior and isolation, may indicate an individual who is at risk of developing more complex mental health disorders. Dysregulation of emotion is identified as a primary indicator in over half of the DSM-IV Axis I disorders, and all of the Axis II disorders (Cisler, Olatunji, Fedler & Forsyth, 2010).

As emotion regulation has been identified as a primary indicator of emotional health and/or of a disorder of emotional competency, the mechanism by which adolescents are able to access and understand their internal emotional landscape appears to be an essential component of self-regulation. As self-awareness has been identified as the primary ingredient in identifying and understanding our motivations, impulses and actions, there exists a need for a means of self-exploration, which provides a non-judgmental and honest appraisal of our emotional states and our reactive nature in response to

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stress or threat. This foundation of emotional awareness has been described as mindful awareness, or simply, mindfulness.

Mindfulness

Mindfulness is defined as paying attention in a certain way: on purpose, in the present moment, and non-judgmentally (Kabat-Zinn, 1994). Mindfulness consists of a number of dimensions, including non-reactivity to present experience, observing experiences, acting with awareness, describing/labeling with words, and non-judging of experience (Baer, 2003).

Several interrelated theories have been offered for why mindfulness is associated with a greater sense of well-being. In the mindful state, thoughts may be more likely to be experienced for what they are (transitory events which come and go), rather than solid and unchanging facts. For example, the thought “I am a failure,” can be observed as a passing event, rather than a statement about reality. When negative thoughts are viewed as valid reflections of what is real, the thought “I am a failure” leads to a decline in self-esteem, loss of motivation, and reflexive and impulsive reactions to the environment and interactions with others (Caspi, Henry, McGee, Moffitt & Silva, 1995).

While there are a variety of disciplines and practices that can cultivate mindfulness (e.g. yoga, tai chi, martial arts, qigong); (Siegel, 2007), most empirical research and theory has focused on the development of mindfulness through mindfulness meditation. With this approach in mind, mindfulness meditation refers to:

A family of self-regulation practices that focus on training attention and awareness in order to bring mental processes under greater voluntary control and thereby foster general mental well-being and development and/or specific capacities such as calm, clarity, and concentration (Walsh & Shapiro, 2006, p. 228).

While Tibetan and Zen Buddhist meditation styles also cultivate mindfulness, the term *mindfulness meditation* is typically used to describe a form of meditation known as Vipassana, which is derived from Theravada Buddhism (Gunaratana, 2002). Vipassana, the Pali word for “insight” or “clear awareness,” is a practice designed to develop awareness (Gunaratana, 2002). By intentionally applying one’s attention to one’s environment, emotions, bodily sensations, and thoughts, mindfulness is systematically cultivated through Vipassana (Bodhi, 2000).

Although it is reasonable to assume that any type of mediation will cultivate some aspect of awareness and be beneficial to the individual, research suggests different brain activities are activated by different styles of medication practice (Valentine & Sweet, 1999). For example, concentrative forms of meditation (e.g. focusing on a mantra) have shown to be less effective in stimulating the part of the brain associated with metacognition (Siegel, 2007) than mindfulness meditation. As brain images technology advances, researchers are able to explore how differing mindfulness practices such as loving-kindness (tonglen) meditation, single-point meditation, and moment-to-moment non-judgmental meditation correlate to physiological outcomes and brain function (Lutz, Slagter, Dunne & Davidson, 2008).

In an attempt to operationalize mindfulness as a measurable psychological construct, Bishop, et 3800 W Starr Pass Blvd, Tucson, AZ, 85745 al., (2004) proposed that mindfulness incorporates two dimensions: self-regulation of attention, and a particular orientation to experience. Self-regulation of attention involves observing, without commentary or judgement, the thoughts, feelings and sensations that arise from moment to moment (Baer, 2003). It entails the ability to sustain attention on an intended point of focus and the ability to consciously switch attention to a new intended focus. Some meditation practices are methods designed to assist the practitioner in developing these attentional capacities. Placing the attention on the breath, on a fixed visual point, or on a mantra are all examples of attentional focus. As the mind wanders, the practitioner becomes aware of this, notes the thought process (“thinking”), and returns to the intended focus.

The second dimension of mindfulness, orientation to experience, concerns the attitude held towards one’s present-moment experience, specifically one of curiosity, open-mindedness, and acceptance or non-judgment of whatever thoughts, feelings or sensations may arise (Baer, 2003).

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Mindfulness-Based Practice and Emotion Regulation

Though the informal practice of mindfulness itself can have deep therapeutic benefits to emotional regulation, mindfulness-based practice has been formalized in mental health treatment as a specific modality of treatment. The primary mindfulness-based practices include Mindfulness-Based Cognitive Therapy (MBCT; Segal, Williams, & Teasdale, 2002), Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999), Dialectic Behavior Therapy (DBT; Linehan, 1993), and Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1990). While the four therapies each have roots in Eastern philosophy and psychology, they are secular in nature. These practices have three components in common: mindfulness practice exercises, didactic instruction, and social support; however, these components have not been clearly differentiated in published studies when assigning cause to positive outcomes (Bishop, 2002). Though a full review of these practices is beyond the scope of this paper, it is important to understand how these practices positively impact emotion regulation.

Theorists have suggested that mindfulness-based practices may reduce symptoms of stress, anxiety and depression by modifying emotion regulation abilities, although it is unclear what specific mechanisms of change are enhanced by these practices (Chambers, Gullone, & Allen, 2009). It is theorized that mindfulness meditation promotes agents of change, which include a reduction in perseverative thoughts and rumination, increased metacognitive awareness, and an enhancement in attentional capacities through gains in working memory. Emotion regulation is thought to increase as a result of these cognitive gains (Corcoran, Farb, Anderson, & Segal, 2010). This may be due to the premise that emotion regulation refers to a range of strategies which may be implemented at varying points during an event or experience, including noting which emotions arise, how long they are sustained, and how they are experienced and expressed (Gross, 2007).

Gross' model of emotion regulation (1998) proposes five families of emotion regulation strategies, including situation selection, situation modification, attentional deployment, cognitive change, and response modulation. There is evidence that long-term mindfulness meditation practice may directly influence attentional deployment, specifically the ability to control negative repetitive thoughts (Ramel, Goldin, Carmona, & McQuaid, 2004), self-focused attention (Goldin, Ramel, & Gross, 2009), and the conscious placement and control of attention (Jha, Krompinger, & Baime, 2007).

Further supporting Corcoran, Farb, Anderson & Segal's (2010) hypothesis, research indicates that mindfulness meditation is negatively associated with rumination and is directly related to effective emotion regulation (Chambers, Lo & Allen, 2008). In particular, 20 nonclinical novice meditators who participated in a 10-day intensive mindfulness meditation retreat were compared to a wait-listed control group on mindfulness, rumination, affect and performance tasks for attention switching, sustained attention and working memory (Chambers, Lo & Allen, 2008). Following the meditation retreat, Chambers, Lo & Allen (2008) observed that the meditation group reported a higher level of dispositional mindfulness, less rumination, and a reduction in depressive symptoms than the control group. The meditation group displayed greater attentional control and an increased capacity for working memory during task completion than the control group.

Mindfulness training has similarly been demonstrated to decrease obsessive thought patterns, or rumination, among participants with chronic mood disorders. Participants in an 8-week MBSR training had significantly less reflective rumination compared to their initial rumination scores and to a control group matched to age, gender and symptomology. (Ramel, Goldin, Carmona, & McQuaid, 2004)

Regularly practicing mindfulness may allow elements of conscious and less conscious experience to be perceived from a non-personal, decontextualized and accepting stance. This provides the opportunity to disrupt reactivity (Broderick & Blewitt 2015), strengthen attention and bring behavior and problem solving under more conscious and reflective regulation. Mindfulness practice has been demonstrated to increase awareness on both the thinking and feeling level (Carmody & Baer, 2008), and thus contributes to a restoration of balance when strong emotions arise through metacognitive processes. Since emotions are transitory, it is useful to practice noticing emotions in the moment. Mindfulness practice offers the opportunity to develop resilience in the face of difficult feelings that may otherwise evoke a maladaptive behavioral response. By repeatedly orienting attention to a specific object or focus (the breath, bodily sensations, etc.) mindfulness practice strengthens attention while consciously letting go of distractions. Through this practice of intentionally sustained and focused attention, MBP

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strengthens the executive skill of inhibition (Ramel, Goldin, Carmona, & McQuaid, 2004). Automatic processes may come under more conscious control, fostering reflective decision making and reducing impulsive reactions. The practice of orienting to experience with curiosity, patience, and non-judgment strengthens distress tolerance and may reduce the adolescent tendency to exaggerate perceived threat (Carmody & Baer, 2008), while providing a potential protective factor against stressors. Through the practice of accepting experience in the moment while being attentive to impulsive and automatic responses, resilience and emotion regulation can be strengthened and regulatory self-efficacy can be increased (Weijer-Bergsma, Formsma, Bruin, & Bogels, 2011).

Mindfulness and Adolescents

Although several randomized meta-analyses emphasize the efficacy of mindfulness-based therapies with adults (e.g., Baer, 2003; Grossman, et al. 2010; Hofmann, Sawyer, Witt, & Oh, 2010), studies of mindfulness training in adolescents are still in its infancy (Burke, 2009). The benefits of mindfulness on the alleviation of physiological concerns in adolescents has been reported (Black, Milam, & Sussman, 2009), with further findings that emotion regulation, along with non-attachment and rumination, mediated the effects of mindfulness on emotional distress (Coffey & Hartman, 2008). Mindfulness-based practices may also assist adolescents in responding with flexibility to changing environments or interactions (Brown, Ryan, & Creswell, 2007). Mindful adolescents are less likely to get caught up in dwelling on the past (rumination) or fixating on the future (worry). Ciarrochi, Kashdan, Leeson, Heaven, & Jordan (2010) suggest that adolescents who have the capacity to demonstrate experiential acceptance are more likely to self-regulate their emotional response to both pleasurable and non-pleasurable external events. Maladaptive behaviors such as aggression and procrastination may become impulsive automated responses to emotional distress (i.e. anger or anxiety), or perceptions of unpleasantness (i.e. boredom). Mindfulness is particularly suited to address these tendencies to respond in automatic, non-conscious ways to triggers. The practice of an attentive and nonreactive attitude toward one's impulses allows for responding with intention and awareness, and increases the 'gap' between impulse and action (Boyce, 2005).

Furthermore, it has been hypothesized that the level of mindfulness moderates psychological functioning and well-being in adolescents (Marks, Sobanski, & Hine, 2010), and has also been an effective way to capitalize on behavioral and emotional strengths (Wisner & Norton, 2013). According to a recent study by Parto and Besharat (2011), 717 adolescents (mean age 17.3) completed self-reports assessing mindfulness (Philadelphia Mindfulness Scale), emotional self-regulation (the Self-Regulation Inventory) and autonomy (the Autonomy Scale). The researchers found that as self-reported levels of mindfulness increased, psychological distress was reduced, including symptoms of anxiety and depression. The study further asserts that "the act and practice of mindfulness may help individuals decrease their emotional reactivity and use their body as a support and a primary warning gesture for recognition and refining of emotional and cognitive reactions...it improves psychological well-being by promotion of cognitive processes, reducing rumination, and improving self-regulation and self-awareness," (Parto & Besharat, 2011, p. 581).

Mindfulness has also been shown to reduce anxiety and stress among adolescents who were under current or recent outpatient care for psychiatric conditions (Biegel, Brown, Shaprio & Schubert, 2009), including youth with attention deficit hyperactivity disorder (ADHD; Weijer-Bergsma, Formsma, Bruin, & Bogels, 2011). In addition, this study reported that more time spent in sitting meditation practice predicted improved emotional functioning, as rated by clinicians blind to the treatment conditions. A 2011 study, Singh Singh & Singh found that mindfulness-based practice helped to reduce aggression among adolescents with Asperger's Syndrome. The sessions in this study consisted of a 10-point meditation designed to elicit a state of somatic calmness, even while envisioning scenes that would have elicited an aggressive response in the past. Bogels, Hoogstad, van Dun, Schuttler & Restifo (2008) discovered that after combined mindfulness training for the adolescents (age 11-18) and their parents in concurrent mindfulness-based cognitive therapy groups, the parents reported direct and longer-term improvements in adolescents' externalizing behaviors and attention problems, self-control, and attunement to others, and adolescents themselves reported large improvements on their own goals and symptoms (Bogels, Hoogstad, van Dun, Schuttler & Restifo, 2008).

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Mindfulness-Based Practice in Outdoor Behavioral Healthcare

Outdoor Behavioral Healthcare (OBH) can be defined as a type of outdoor adventure therapy which includes “the prescriptive use of adventure experiences provided by mental health professionals, often conducted in natural settings that kinesthetically engage clients on a cognitive, affective and behavioral level” (Gass, Gillis & Russell, 2012, p. 1). Wilderness therapy, adventure therapy, equine-assisted therapy, challenge courses, and similar programs may all fall under the definition of an OBH program, provided they operate as licensed mental health or substance abuse programs staffed by licensed clinicians. OBH provides services to youth, young adults and families, and addresses a variety of clinical issues. Research has demonstrated OBH to be an effective intervention for improving self-concept, social skills, substance abuse, recidivism, depression, and youth and family functioning (Gass, Gillis & Russell, 2012; Harper, Russell, Cooley, & Cupples, 2007; Norton, 2010; Norton, et al, 2014).

The role of stillness and quiet has been documented in helping facilitate deeper human/nature connections (Nicholls & Gray, 2007). In order to do so intentionally in a therapeutic outdoor setting, Norris (2011) encouraged wilderness programs to use ritual mindfully to assist clients in being fully conscious in the moment in order to unpack the meaning of these experiences and how they transfer to life. However, despite the unique intersection of the present-focused and experiential nature of OBH with the awareness focus of mindfulness-based practice, only a few studies have been conducted which explore the specific efficacy of mindfulness-based practice in OBH settings. In a mixed-methods study, Wallis (2012) investigated the effectiveness of wilderness therapy in promoting mindfulness, self-esteem, psychological health, and improving emotional, behavioral and relational symptoms. Results indicated clinically significant change, as participants’ mindfulness and self-esteem scores moved from the dysfunctional to the functional range during wilderness therapy. Similarly, the OBH program under investigation in Bettmann, Russell & Parry’s (2013) study, used mindfulness practices, such as meditation and yoga, to help students develop emotional awareness and regulation skills. Though these program variables were not directly controlled for, the overall outcomes of the study showed that the OBH program was effective in helping clients utilize abstinence-focused coping skills such as contacting a sponsor or asking for help from loved ones. The authors of the study posited that this may have been a result of the youth developing greater awareness of their emotions and the ability to manage them, which then allowed them to ask for help (Bettmann et al., 2013).

The most definitive study to date on mindfulness-based practice in OBH examined the role of mindfulness and adventure on treatment outcomes in substance abuse for young adult males. Quantitative data in this mixed-methods study showed statistically significant increases in mindfulness as measured by the Five Facet Mindfulness Questionnaire (FFMQ) from pre- to post-treatment, as well as a significant correlation between mindfulness skills and positive treatment outcomes (Russell, Gillis & Heppner, 2016). Qualitative data from this study further affirmed the need for mindfulness in OBH programs, especially as it relates to addictions treatment. Despite these few promising studies, it is unknown to what extent mindfulness-based practice is being utilized in OBH. To this end, this survey research study explores the prevalence and types of mindfulness-based practices currently being utilized in OBH programs.

The study sought to address the following areas of inquiry:

- Is mindfulness-based practice currently being utilized in OBH treatment settings, and if so to what degree?
- What is the perceived effectiveness of mindfulness-based practice in addressing primary treatment goals of adolescent clients, particularly emotion regulation?
- What are the specific mindfulness-based practice skills and practices are being incorporated by OBH programs?
- What is the training and experience of staff members providing mindfulness-based practice in treatment?

Methods

The study utilized survey research methods to gather data regarding the prevalence and type of mindfulness-based practice used in OBH programs. Survey Monkey was used to develop an online survey with questions about program demographics, such as clients served, length of stay and clinical issues addressed. Questions about the types of mindfulness-based practices used were based on a

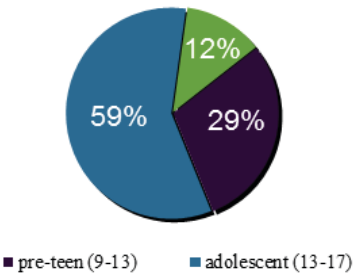
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review of the literature, and followed Streiner & Norman’s guidelines (2003) of survey development to ensure face and content validity, internal consistency and reliability. Surveys were pilot-tested with a group of OBH programs that were then not included in the actual survey. Feedback was gained from these programs to enhance the quality of the survey.

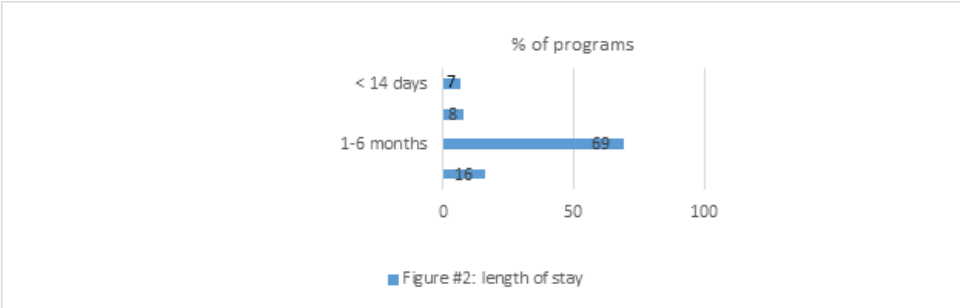
Once the survey was finalized, a non-probability, purposeful sample of 25 OBH programs were surveyed online. The survey was sent to and completed by OBH staff that provided mental health and therapeutic services to OBH clients. Of the 25 surveys sent, staff from 14 OBH programs responded to the survey, for a response rate of 56%.

Programs were assessed for their client population, primary treatment focus, length of stay, and gender mix. The surveyed facilities were evenly mixed between residential and community-based programs. In identifying their primary treatment population, Figure 1 shows that 38.5% served pre-teens (9-13 years old), 76.9% served adolescent clients (13-17 years old), 53.8% served young adults (24 or older), while 15.4% served adult clients. As a number of facilities offer multiple treatment programs that address differing age groups, there was significant overlap amongst age groups. Thirty percent augmented their course of treatment with an active family counseling component. In reporting gender populations, only six programs responded to this question, with the majority (39%) reporting a mixed gender population.

Figure #1 Client age range



Client length of stay varied from seven days to greater than six months. Figure 2 shows that the majority of programs utilized a program length of six months or less (69.2%), while



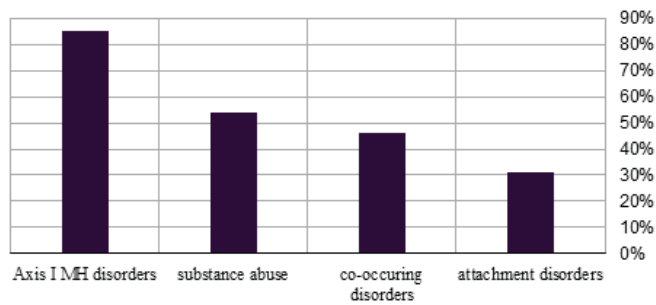
15.4% extended beyond six months. Eight percent of programs were shorter term, one month or less.

The vast majority of OBH programs surveyed (85%) reported a primary treatment focus of Axis I mental health conditions, including mood disorders, anxiety disorders, eating disorders and attentional challenges; 53% describe substance abuse as a primary focus; co-occurring

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disorders (mental health and substance abuse) comprise 47% of program focus, with 30% addressing attachment disorders as their program specialization (see Figure 3).

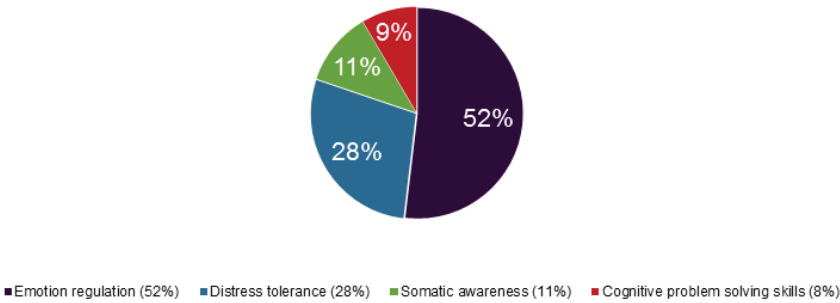
■ Fig. #3 Primary treatment focus



Results

Results from this exploratory study show that mindfulness-based practice is being utilized in both residential and community-based OBH programs. The results demonstrate that 100% of participating programs utilize mindfulness-based practice as an ‘active component of treatment.’ However, 84.6% of the programs surveyed report using it ‘randomly.’ Only 15.4% of OBH programs report that components of mindfulness-based practice are included in actual documented treatment planning. While the large majority of surveyed programs do not incorporate mindfulness-based practice as a manualized or structural component of treatment, 68% of OBH professionals surveyed report mindfulness-based practice to be an effective therapeutic tool in supporting treatment goals for their clients. Figure 4 highlights the four most common treatment goals reported by OBH staff which are

Fig. #4 OBH treatment goals enhanced by MBP



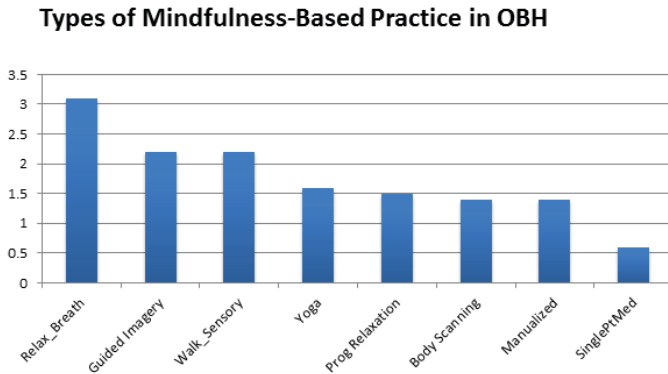
perceived to benefit from mindfulness-based practice, the most commonly cited being emotion self-regulation (52%).

Of the specific mindfulness components utilized in their programs, survey respondents identified relaxation breathing (85%), guided imagery meditation (69%), walking or sensory meditation (69%), progressive bodily relaxation (48%), single pointed meditation (38%), yoga (38%), body scanning (30%), and loving-kindness meditation (7%) as the primary practices

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used with clients. Figure 5 illustrates the types of mindfulness-based practices being utilized, in order of prevalence:

Figure #5. Types of Mindfulness-Based Practices Utilized in OBH



While programs surveyed reported using mindfulness-based practices in their programs, only 38.5% of OBH staff reported to have received specific, formal training in these practices. The remainder of OBH staff described gaining knowledge via the following sources:

- Personal experience or meditation practice
- Professional conferences
- Graduate school
- Personal research (books/articles)

Implications

Mindfulness-based practice has become an increasingly important component in the OBH treatment process. By definition, OBH programs utilize experiential, somatic, and process oriented modalities to support adolescent and young adult clients in their return to mental and emotional health. As such, mindfulness-based practices have been adopted by 100% of surveyed OBH programs, and is reported to positively assist clients with a wide range of treatment goals, including emotion regulation, cognitive problem-solving skills, somatic awareness, and distress tolerance. Sixty-eight percent of programs surveyed believe mindfulness-based practice to be an effective therapeutic tool, which by any measure could be identified as an efficacious mode of treatment with positive treatment outcomes. However, a large percentage of mindfulness treatment delivery in the surveyed programs is randomly implemented by staff who are not formally trained. This may be ineffective at best, and problematic at worst. As mindfulness-based practice continues to be adopted as part of a holistic and experiential treatment experience, further assessment of training and standardization of treatment delivery is warranted, while avoiding stripping the essence of mindfulness (experiential and intrapersonal) in the service of homogenization and manualized treatment.

Limitations and Areas for Future Research

Though this study begins to shed light on the prevalence and type of mindfulness-based practice being utilized in OBH, it is important to note that these findings are limited due

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to the small sample size and may not be reflective of all OBH programs. Likewise, these findings are based only on subjective self-reports of OBH program staff, and are not tied to improvements in actual client outcomes. Future research needs to continue to examine the impact of mindfulness-based practice on clients' emotional and behavioral functioning in OBH programs. Likewise, the current research base is limited by the lack of empirical evidence confirming the efficacy of these interventions on younger populations. Future research would benefit from continued exploration of one specific type of mindfulness-based practice, specifically attuned to the developmental needs of adolescents. As a rapidly emerging field of study, research in mindfulness practices in general would benefit from true randomized samples by condition of sufficient size to generalize findings and allow for group differences. As the neural basis for varying levels of emotional regulation and physiological response to cognition continues to be explored in adult studies, the utilization of imaging technology such as functional magnetic resonance imaging (fMRI) or other concrete interpretive data would also be a beneficial addition in the study of OBH adolescent clients participating in mindfulness-based practice.

Conclusion

Mindfulness-based practice has been demonstrated to yield real and lasting benefits during adolescence and beyond by providing tools for reducing stress and fostering wellness (Burke, 2009). Mindfulness-based practice has the documented capacity to aid the healthy development of self-awareness, self-regulation and emotional balance (Hofmann, Sawyer, Witt, & Oh, 2010), allowing adolescents to adapt to their environment and relationships with resilience. The application of mindfulness-based practice in OBH certainly has promise, yet the question of specificity in mindfulness interventions with adolescents deserves further study across interventions. It is likely that even "pure" mindfulness interventions (such as MBSR) contain cognitive, behavioral, and psycho-educational components (Bishop et al., 2004). Given the stated hypothesis of the majority of studies that mindfulness is central to psychological well-being, it will be important to discern if mindfulness can be cultivated only through mindfulness training, or if adolescents can also learn to respond in mindful ways to their emotions through other forms of therapy (Chambers, Gullone, & Allen, 2009). As the prevalence of psychological concerns continues to increase in the adolescent population, innovative and evolving strategies in OBH, including mindfulness-based practices, are required to respond to the escalating

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