

MINDFULNESS-BASED ART THERAPY IN WORKING WITH SCHOOL-AGED
CHILDREN WITH ADHD IN EMOTIONAL REGULATION

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ABSTRACT

MINDFULNESS-BASED ART THERAPY IN WORKING WITH SCHOOL-AGED CHILDREN WITH ADHD IN EMOTIONAL REGULATION

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This research paper examines and integrates existing studies to develop an intervention research that addresses the potential benefits of mindfulness-based art therapy (MBAT) with school-aged children with Attention-Deficit/Hyperactivity Disorder (ADHD) in emotional regulation. According to the ADHD Institute (2016), ADHD has a relatively high prevalence rate among children and adolescents of approximately 5.29% and 7.1% respectively. In view of this and the lack of studies specific to this research topic, the goal of this intervention program is to address specific benefits of MBAT in emotional regulation that foster focusing skills, reflective functions on emotions, and organizational skills. A theoretical perspective of “top-down” and “bottom-up” self-regulatory processing as well as the self-expressive and self-reflective functions of art therapy is integrated in this study. Components of the Expressive Therapies Continuum (ETC) are also integrated in the MBAT interventions developed for this population. The purpose of this study is to propose a 10-week group art therapy program geared towards improving emotional regulation in ways that can be practised in an interpersonal setting, giving participants an opportunity to work in a supportive group environment.

Keywords: Attention-deficit/Hyperactivity Disorder, mindfulness-based art therapy, school-aged children, emotional regulation, art therapy.

“Paying attention here and now, with kindness and curiosity, and then choosing your behaviour”
(Saltzman, 2014, p. 9).

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Chapter 1: Introduction

Mindfulness-based approaches that cultivate emotional calm and self-understanding have existed since the inception of ancient Buddhist traditions. In modern Western psychology, the concept of mindfulness has been developed through mindfulness-based programs and interventions for individuals with difficulties in regulating emotions due to various conditions such as physical and mental challenges (Kabat-Zinn, 2003). This research paper aims to examine the potential benefits of mindfulness-based art therapy (MBAT) in emotional regulation for school-aged children with Attention-Deficit/Hyperactivity Disorder (ADHD). It hypothesizes that MBAT can assist school-aged children with ADHD in improving their abilities in emotional regulation by developing self-expressive and self-reflective capacities through traditional mindfulness-based activities and self-exploration through art.

Children with ADHD are known to have problems with inattentiveness, hyperactivity, impulsiveness, and other common symptoms of emotional dysregulation (Bunford, Evans, & Wymbs, 2015). While MBAT has been frequently practised with adults with emotional challenges such as anxiety and stress to help develop self-awareness and emotional regulation, study of MBAT on its use with children with ADHD is currently absent. One of the renowned MBAT interventions developed by Peterson (2014, 2015a) over a decade of research is geared towards enhancing emotional self-awareness and expression among adults and adolescents with cancer. Currently, the absence of research that studied MBAT interventions for children with ADHD may be a factor in the lack of MBAT resources and tools available for the development of this research field. The aim of this research is to bridge this gap in the field of art therapy.

This study examines how MBAT can benefit school-aged children from age 6 to 12 with ADHD by improving their emotional regulation. Emotional regulation can be defined as one's capacity to self-soothe physiological arousal, modulate behaviours, and refocus attention when experiencing an emotion (Bunford, Evans, & Wymbs, 2015). This research aims to examine how MBAT can benefit emotional regulation for this population and lay out interventions that can assist in this. In the context of developing an MBAT intervention program, the Expressive Therapies Continuum (ETC) is a central model that clarifies the relationship between art materials and their potential influences in working with emotions. Synthesized and analyzed research has been applied to create and propose an MBAT intervention that is appropriate for school-aged children with ADHD diagnosis.

The research consists of three main components: a literature review, a discussion, and the development of the MBAT program. The literature review component of the paper examines existing research on children with ADHD, mindfulness-based approaches in art therapy, MBAT, art therapy, mindfulness, emotional regulation, and the ETC. The discussion section of the study synthesizes the literature review and serves as a guide for the development of the MBAT program. Subsequently, the program development section illustrates detailed goals and descriptions of the proposed 10-week MBAT program for school-aged children from age 6 to 12 with ADHD diagnosis in emotional regulation.

The proposed MBAT program for this population may be adapted for this age group as well as their developmental functioning by adjusting the length of interventions, using appropriated props, and modifying discussion topics (Zelazo & Lyons, 2012; Burke, 2010). The program is to take place in close group environments such as clinical, community service, and school settings.

Chapter 2: Methodology

Theoretical Intervention Research

To address the question, “How can MBAT benefit school-age children with ADHD in emotional regulation?” this research paper studied both mindfulness-based interventions in art therapy and the MBAT model. While there is an absence of research on this topic, there are comparatively profuse studies on mindfulness-based approaches used with adolescents and adults for emotional regulation (Baer, 2003; Burke, 2010; Monti, et al., 2012).

For this paper, a theoretical intervention research approach, which Fraser and Galinsky (2010) describe as a “systematic study of purposive change strategies” (p. 549), was applied. It aimed to bridge the gap that exists in this field of study with a literature review and the development of an MBAT intervention. Specifically, this study aimed to connect the links between MBAT and emotional regulation for the targeted population. The process used to develop this intervention drew on Fraser and Galinsky’s (2010) 5-step model of intervention research. These steps included a literature review and the practical application of the intervention with the targeted population. In this case, only the first two steps of the model—the development of the program and program theories along with the development of program structures and processes—were completed. The focus was on the theoretical and clinical literature review of existing studies, a discussion that synthesizes and integrates the potential benefits of MBAT for

this population, and the conceptual development of an intervention model that can be practised with the targeted population. The procedures applied in this intervention model are discussed in detail below.

Data Collection and Analysis

This theoretical intervention research process consisted of a theoretical and clinical literature review that served as the foundation for the development and designing of an MBAT intervention for the targeted population. To conduct the literature review, data was collected and analyzed, and some of the systematic steps described by Creswell (2014) were used. These steps included identifying keywords, searching for resources from journals and books under those keywords, skimming the initial group of articles and chapters, and developing a literature map from the retrieved information.

The keywords involved in this search were *ADHD, Attention-Deficit/Hyperactivity Disorder, children, school-age children, mindfulness-based art therapy, mindfulness, emotion regulation, emotional dysregulation, mindfulness-based psychotherapy, and art therapy*. To collect the data, search engines such as ERIC, Google Scholar, PsycARTICLES, PsycInfo, and Sage were used. Published books found under the keywords were also included. The time frame of the published materials was 2000 or later, with the exception of literature on the history of mindfulness theory and art therapy published before 2000 that may provide a theoretical and foundational standpoint.

Data collected for this research were not limited to MBAT with this particular population, but extend to other mindfulness-based theories, interventions, and populations. While research data on MBAT as it is used with this population was one of the primary components of the literature review, other data addressing the application of mindfulness-based interventions to regulate emotions among older populations such as adolescents and adults were included due to the lack of current research on mindfulness with ADHD.

After the data collection, a holistic coding method was employed to grasp the basic themes and issues by scanning the abstract or the entire literature to check the relevance of literature to the searching criteria (Onwuegbuzie, Frels, & Hwang, 2016). This method helped identify the main themes that are relevant or repeated in the review of research studies. Subsequently, a pattern coding method was used to find patterns or relationships between the

themes found via holistic coding. This coding method could synthesize the themes and analyze the links among them (Onwuegbuzie et al., 2016).

The discovered themes and patterns extracted from these methods were documented onto the literature map in order to organize the literature review (Creswell, 2014). The literature map served to organize the main concepts, sub-concepts, links, and absence of links between the concepts in a visual format. Figure 1 shows an example of a literature map in progress using a program called Coggle.

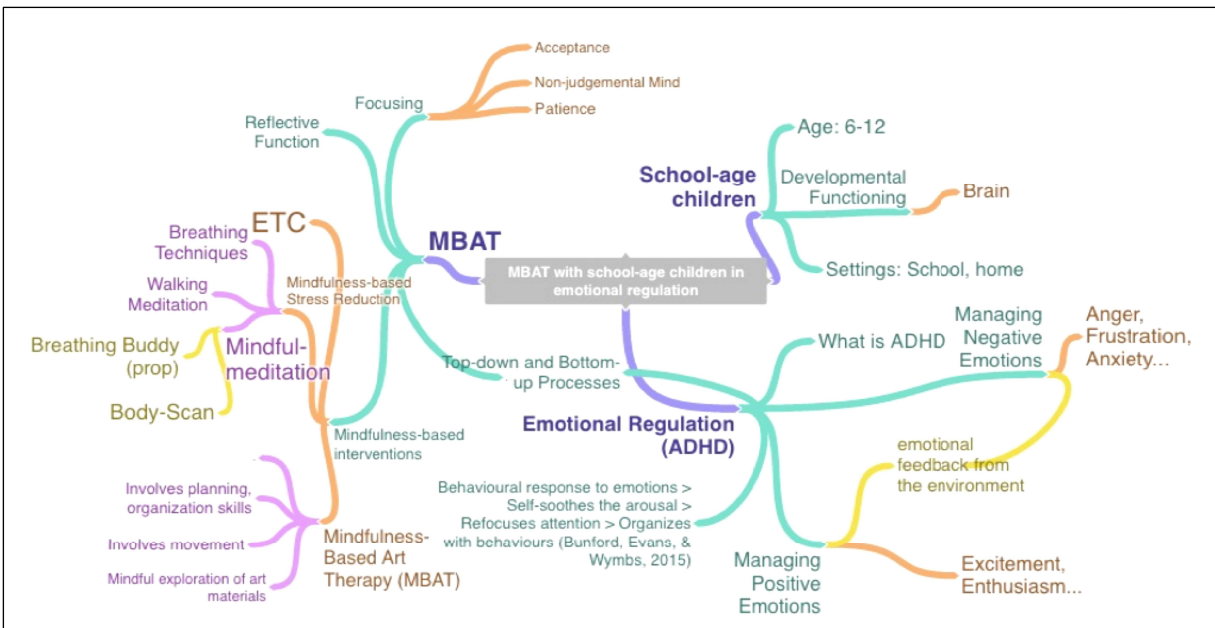


Figure 1. A literature map in progress using Coggle.

The literature map shows an organization of the main concepts and sub-concepts that have been discovered through research. It also illustrates the links discovered between concepts, theories, and interventions. For instance, it shows the links between the various types of mindfulness-based theories and common themes brought out by different mindfulness-based approaches and interventions. This can serve as a visual map to organize and note repeated concepts drawn out from the literature review.

The synthesized and analyzed data were serve to dissect and understand the potential benefits of MBAT for school-aged children with ADHD in relation to their emotional regulation. Data retrieved regarding the potential disadvantages or risks of using MBAT with this population were also a significant consideration in developing an appropriate intervention program. In addition, specific examples of mindfulness-based interventions in art therapy were an important

component in developing the MBAT intervention program. Existing interventions as well as interventions that have been adapted from existing interventions were integrated in the MBAT program.

The reliability of this methodological approach could be demonstrated by the clear evidence of repeating themes that are notable in the literature review and data analysis. Scarce themes in relation to other protruding themes found in this process were also disclosed to supplement the reliability of the main themes extracted for the purposes of developing the intervention program.

Hypothesis and Assumption

This research study is based on the hypothesis that emotional regulation in school-aged children with ADHD can be enhanced through a regular practice that combines mindfulness-based interventions with art therapy. A regular practice of mindfulness can enhance attentional capacity and self-awareness as it brings the awareness to the present moment with a nonjudgmental stance (Kabat-Zinn, 2003).

Moreover, the study is initiated with an assumption that mindfulness-based interventions in art therapy and MBAT may have more benefits for this chosen population in emotional regulation than potential disadvantages. Another assumption is that the existing studies on mindfulness-based approaches in emotional regulation for adolescents and adults can be feasibly translated for a younger population.

Chapter 3: Literature Review

ADHD and Emotional Dysregulation in School-aged Children

ADHD diagnosis. The *Diagnostic and Statistical Manual of Mental Disorders (5th ed. DSM-5; American Psychiatric Association, 2013)* defines ADHD as a continual pattern of inattention and/or hyperactivity-impulsivity that disrupts development or functioning. The symptoms are presented in two or more settings which have direct negative impacts on academic, social, or occupational functioning. Individuals diagnosed with ADHD may have either an inattentive-type, hyperactive-impulsive type or combined type, with six or more symptoms that have persisted for a minimum of six months. The ADHD Institute (2016) indicates ADHD as one of the most common childhood psychiatric disorders, with an estimated worldwide prevalence of 5.29% to 7.1% in children and adolescents respectively. The DSM-5 indicates that different cultural interpretations of behaviours may lead to differences in the

prevalence of ADHD. Along with the pattern of inattentiveness and/or hyperactivity-impulsivity, other comorbid diagnoses, such as oppositional defiant disorder (ODD), conduct disorder, obsessive compulsive disorder (OCD), anxiety disorder, depression, and personality disorders, frequently accompany ADHD diagnoses in children and adolescents (Steinhausen et al., 2006; van Stralen, 2016).

Moreover, there have been increasing demands for re-assessments of emotional dysregulation (such as emotional impulsiveness and deficiency in emotional self-regulation) as central features of the disorder rather than merely linked characteristics (Barkley, 2010; van Stralen, 2016).

Executive functioning and ADHD. The six executive function groups developed by Thomas Brown (2006), an ADHD expert researcher, are defined as activation, focus, effort, emotion, memory, and action. ADHD can have an impact on any or of all of these executive functions.

Activation refers to skills in organizing, prioritizing, and engaging in work. Focus is defined as the capacity to sustain and shift attention in tasks. Effort indicates regulating alertness, sustaining effort, and processing speed. Emotion is defined as the capacity to manage frustration and regulate emotions. Memory relates to the use of non-verbal working memory, such as the capacity to hold images in the mind, and verbal working memory, such as internal-speech. Action refers to skills in monitoring and self-regulating actions and behaviors (Brown, 2006).

Although these groupings are presented as separate, they all work together to help individuals manage many tasks (Brown, 2006). Any individual can have impairments in their executive functions, but people with ADHD have more difficulties in developing and accessing these functions than others. Most children with ADHD have comparatively greater chronic impairments in these functions than those without ADHD (Brown, 2006).

Bertin (2015) used the categorization of executive functions as impacted by ADHD developed by Brown (2006) to delineate specific types of deficits in children with ADHD, conceptualized as management functions. The six management functions are: attention management, action management, task management, information management, emotion management, and effort management (Bertin, 2015).

Attention management refers to the ability to focus, sustain focus, and shift focus on tasks (Bertin, 2015). If this function is impaired, an individual can have difficulties in maintaining

focus when demanded, being hyperfocused when engaged in a task, and/or having difficulty shifting focus between activities (Bertin, 2015). For instance, being focused on one element within a crowded environment can lead children with ADHD to feel overwhelmed, act out, or even shut down from their environment (Bertin, 2015).

Bertin (2015) describes action management as children's capacity to regulate their physical activity and behaviour. Children with low action management skills have difficulties in monitoring their own social behaviours and learning from mistakes, and may exhibit symptoms such as fidgeting, impulsivity, and hyperactivity (Bertin, 2015). Task management relates to their capacity to organize, plan, and prioritize duties in daily life (Bertin, 2015).

Information management refers to how children utilize working memory and accesses recall (Bertin, 2015). Individuals with ADHD often report that they have adequate memory for events that happened long ago, but difficulties in recalling memories such as where they placed an item or what they were about to say (Brown, 2005). Working memory can relate to children's capacity to manage information acquired in everyday life (Bertin, 2015). This can involve skills in reading, writing, and/or engaging in conversations. Impairment in these skills often affect academic learnings as they have difficulty holding one or several pieces of information or ideas while simultaneously attending to other tasks (Bertin, 2015).

Effort management is the ability to sustain effort throughout a task and complete the task (Bertin, 2015). Challenges in effort management can be misunderstood as a lack of motivation due to children's quick loss of interest in tasks, especially in long-term projects, as well as their difficulty in completing tasks on time, especially in writing (Bertin, 2015; Brown, 2005).

Bertin (2015) describes emotion management as the ability to regulate emotions without being quick to experience anger, frustration, or intolerance (Bertin, 2015). Among these executive functions of ADHD, many researchers have referred to emotional dysregulation as a core feature of ADHD, along with the other fundamental symptoms of ADHD such as inattentiveness, hyperactivity, and impulsivity (Bunford, Evans, & Wymbs, 2015; Shaw, Stringaris, Nigg, & Leibenluft, 2014; van Stralen, 2016). A study of 1500 children with ADHD indicated that emotional issues had greater impact on well-being and self-esteem than other symptoms of hyperactivity and inattention (Riley et al., 2006). In addition, a study showed that people with emotional dysregulation with ADHD had drastically higher impairment in family

and peer relationships and academic performance than those with ADHD only (Wehmeier, Schacht, & Barkley, 2010).

Specifically, in emotion management, bottom-up processing, which refers to a self-regulatory process, and top-down processing, which refers to a process of conscious reflection, are known to be difficult for children with ADHD (Shaw et al., 2014). Bottom-up processing, from the perspective of social cognitive neuroscience, is referred to as a self-regulatory process when emotions such as anxiety or exhilaration are dysregulated (Zelazo & Lyons, 2012). Alternatively, this process interacts with the top-down processing which is the process of conscious reflection (Zelazo & Lyons, 2012). Among children with ADHD, brain functioning as well as the bottom-up and top-down processing appear to be significant contributors to the capacity to regulate emotions (Shaw et al., 2014; Zelazo & Lyons, 2012). These forms of processing will be discussed later in the paper. Overall, executive functions are interconnected. An issue with one executive function can impact another executive functions' role and functioning: thus, an issue with social skills can affect academic performance (Brown, 2005; Wehmeier, Schacht, & Barkley, 2010).

Emotional dysregulation. Bunford, Evans, and Wymbs (2015) states that emotional dysregulation is the inability to adjust behavioural responses, self-soothe physiological arousal, focus attention, and behave appropriately when experiencing an emotion. Impulsive behaviours and social impairment in individuals with ADHD are linked to emotional dysregulation (Bunford, Evans, & Wymbs, 2015). Clinical studies have investigated the correlations between the behavioural and cognitive symptoms of ADHD, while the correlation between emotional dysregulation and ADHD has been less systematically examined (Bunford, Evans, & Wymbs, 2015). Historically, clinical studies on ADHD that include emotional dysregulation as an important feature of the disorder have declined since the late 1960s (Barkley & Fischer, 2010; Bunford, Evans, & Wymbs, 2015). Yet, more recently, researchers have once again begun to emphasize emotional dysregulation as a core component of ADHD (Barkley & Fischer, 2010; Bunford, Evans, & Wymbs, 2015).

While emotional dysregulation can catalyze impulsive behaviours, impulsive behaviours can also contribute to emotional dysregulation (Bunford, Evans, & Wymbs, 2015; Whiteside & Lynam, 2001). Impulsive behaviours can be described as behavioural attempts to ease negative emotions (Whiteside & Lynam, 2001). Individuals with ADHD who experience challenges in

emotional regulation tend to have difficulties in regulating negative emotions, which may lead to low frustration tolerance, sudden anger, and impatience (Barkley, 2010; Braaten & Rosen, 2000). Although they may also have difficulties in regulating positive emotions, a study by Sjöwall et al. (2013) showed that anger was the most common dysregulated emotion for 61% of boys and 65% of girls. Sadness was another commonly dysregulated emotion for 61% of boys and 50% of girls. Happiness was dysregulated for 52% of boys and 48% of girls, while fear was dysregulated for 34% of boys and 42% of girls (Sjöwall et al., 2013). As a result, it is important to consider the management of not only negative emotions such as anger and frustration, but also positive emotions that manifest as uncontrolled enthusiasm or exuberance in children with ADHD (Bunford, Evans, & Wymbs, 2015; Martel, 2009).

A three-factor trait model of ADHD by Martel and Nigg (2006) illustrates that, while inattention in ADHD can correlate with low effort control, high levels of both negative and positive emotions can relate to high levels of hyperactive-impulsive behaviours in ADHD (Martel, 2009; Martel & Nigg, 2006). The challenges in regulating these emotions can distract children from attuning to the environment and keep them from responding to their environment in a flexible, reflective, and socially appropriate manner (Bunford, Evans, & Wymbs, 2015). Therefore, emotional recognition can be a significant component in assisting children with dysregulated emotions by helping them learn how to attend to and correctly identify emotions within themselves and others (Reddy & Alperin, 2016).

Top-down and bottom-up processes. Emotional regulation can occur through the top-down process, which refers to conscious self-reflection, and the bottom-up process, which refers to the self-regulative process in moments of emotional dysregulation such as anxiety and distress (Bunford, Evans, & Wymbs, 2015; Shaw et al., 2014; Zelazo & Lyons, 2012). These processes promote psychological distancing that can encourage reflections on alternative and appropriate responses to external stimuli (Bunford, Evans, & Wymbs, 2015; Shaw et al., 2014; Zelazo & Lyons, 2012).

The cortical regions of the brain control the allocation of attentional resources of emotional arousal in the top-down process (Shaw et al., 2014). This influences skills in bringing attention to emotionally arousing stimuli and engaging in sustained processing and reprocessing of information (Shaw et al., 2014; Zelazo & Lyons, 2012). In top-down processing, conscious and purposeful reflection on emotions can be the key to emotional regulation (Shaw et al., 2014;

Zelazo & Lyons, 2012). This can take place by intentionally and purposefully allocating attention to emotional stimuli while maintaining a nonjudgmental stance (Shaw et al., 2014; Zelazo & Lyons, 2012). When children are able to bring their attention to their moment-to-moment experiences, they can develop self-reflective skills that can help them understand their bodily responses, emotions, and thoughts (Zelazo & Lyons, 2012). By controlling sustained attention and cognitive flexibility, children can achieve a state of purposeful self-reflection. An example of this is shifting thought contents, which refers to the ability to direct the attention towards or away from emotional stimuli to maintain emotional stability and focus on tasks (Shaw et al., 2014). This may include the ability to self-soothe or to refocus the attention to the present moment when experiencing heightened emotions (Barkley, 2010). This can produce a sense of calm and relaxation (Zelazo & Lyons, 2012). Simple mindfulness exercises such as body scans, mindful breathing, and yoga stretches can engage children in bringing their attention to their bodies and facilitating self-reflection on their senses and felt emotions (Zelazo & Lyons, 2012).

While the top-down process focuses on self-reflection, the bottom-up process focuses on self-regulation of emotions such as anxiety and anger in controlling behavioural reactions (Zelazo & Lyons, 2012). The bottom-up process of emotional stimuli involve the amygdala, ventral striatum, and orbitofrontal cortex (Shaw et al., 2014). In this process, the posterior attention systems detect the main emotional stimuli and recognize that control is needed (Shaw et al., 2014). The posterior attention system is a network of parietal cortex, subcortical, and thalamic structures involved in attentional orienting (Cicchetti & Cohen, 2006; Schiffer, Rao, & Fogel, 2003). Through this process, children can identify the trigger point of their heightened emotions and recognize that control of dysregulated emotions and behavioural response is needed (Shaw et al., 2014). By developing this capacity, emotional non-reactivity can be enhanced as individuals learn to choose their thoughts and emotions consciously (Chiesa, Serretti, & Jakobsen, 2013). Overall, these two processes intervene with one another in mindfulness, which aims to bring individuals' attention to their moment-to-moment experience as a form of self-reflection and psychological distancing. Attention to this moment-to-moment awareness trains individuals to maintain a nonjudgmental stance (Zelazo & Lyons, 2012).

Brain. Studies show that children, adolescents, and adults with ADHD have activation reductions in regions of the frontal areas of the brain (Friedman & Rapoport, 2015; Qiu et al., 2011). Studies have indicated developmental delay in prefrontal cortical regions in children with

ADHD when compared to children without ADHD (Shaw et al, 2007; Shaw et al, 2012). Specifically, in emotion dysregulation in individuals with ADHD, there were clear dysfunctions in the amygdala, ventral striatum, and orbitofrontal cortex (Shaw et al., 2014). These brain regions are known as responsible for allowing bottom-up processing of emotions, while the medial and ventrolateral prefrontal cortex are known to regulate top-down processing of emotions (Shaw et al., 2014).

Developmental functioning. School-aged children aged 6-12 were chosen for this research in reference to studies that state that mindfulness-based approaches is feasible for this age group if the interventions are adapted to suit their developmental levels and cognitive capacities (Burke, 2010; Zelazo & Lyons, 2011). Studies on counselling and therapy for children states that school-aged children can reason logically about situations, articulate descriptions of events, people, and emotions, engage in hypothetical thinking, acquire self-awareness, modify habitual behaviors, and use metaphors to describe abstract ideas in concrete terms (Myers, Shoffner, & Briggs, 2002; Thompson & Gauntlett-Gilbert, 2008; Verduyn, 2000). Although this age group may have difficulties in recognizing their thought patterns and in becoming fully dialectic in their thinking, these abilities can be encouraged (Myers, Shoffer, & Briggs, 2002). Mindfulness-based training with school-aged children and adolescents that were documented with teacher and parent reports have been shown to increase self-regulation (Flook et al., 2010; Semple, Lee, Rosa, & Miller, 2010). Mindfulness-based interventions can enable significant potential in enhancing self-regulation because they target bottom-up and top-down processes that can provide self-reflecting practice as well as self-regulatory processing (Zelazo & Lyons, 2011). Verduyn (2000) has suggested that mindfulness-based interventions can be effective with children in the concrete operational stage (school-aged children).

Art therapy with ADHD. Safran (2003), an art therapist who has written about and worked extensively with children with ADHD diagnoses, states that art therapy can redirect “the energy required to maintain attention so that it can be applied to listening, learning, and productively using the learned information” (p. 182). Safran (2003) states that art activities often involve children’s ability to focus on a particular task, to plan and organize, pay attention and listen to instructions or suggestions, and choose materials they will use within a provided space (Safran, 2003). Specifically, in conducting group art therapy for children with ADHD, she describes the importance of structure in each session, which she may divide into three parts: a

review of the rules and brief points about the previous session; an introduction of a new topic with art making; and a group discussion before closure (Safran, 2003). This sense of predictability, consistency, and structure can help children to focus in their therapeutic process (Safran, 2003).

Focus can be enhanced by choosing art materials that activate various levels of bodily engagement. Sensory oriented materials such as scented markers can engage children and serve as an opportunity to assess their distractibility when stimulated on a sensory level (Safran, 2003). Hinz (2009) discusses how sensory-based materials that engage touch, smell, and sound can help enhance focus. A state of focused attention can be achieved with sensory stimulation as it can develop awareness of bodily sensations (Hinz, 2009). While emotions can be stimulated when working on the sensory level, emotions and thoughts can also be eased (Hinz, 2009). Working with sensory-based materials such as clay and watercolour can allow the mind to relax and stay focused on the sensations experienced with the art materials (Hinz, 2009).

For children with ADHD, mandalas can serve as a nonverbal or less verbal approach with a meditative effect promoting an experience of relaxation and personal meaning making (Green, Drewes, & Kominski, 2013; Henderson, Rosen, & Mascaro, 2007). Mandalas, a renowned meditative tool in the Tibetan Buddhist tradition, connotes wholeness and integration (Henderson, Rosen, & Mascaro, 2007). In art therapy, a mandala generally refers to any form of art that is created within a circular shape or design (Henderson, Rosen, & Mascaro, 2007). Studies have shown the effectiveness of mandala drawings in reducing anxiety by allowing the brain to shift more easily into an alpha wave frequency, a meditative state (Beaucaire, 2012; Henderson, Rosen, & Mascaro, 2007). This can occur as the mandala is being created, coloured or observed (Beaucaire, 2012; Henderson, Rosen, & Mascaro, 2007). Drawing a mandala can help process complex emotional experiences and provide a sense of personal meaning (Henderson, Rosen, & Mascaro, 2007).

Similar to play therapy, creative processes involved in art therapy can serve as a developmentally appropriate self-expressive tool for children and adolescents because their capacity to verbally articulate their thoughts, experiences, and emotions can be limited (Green, 2008). For children with ADHD, art therapy can serve as a reflective tool in exploring their ADHD symptoms, such as impulsivity, because the created artworks can serve as a visual expression and witness of their emotional challenges (Safran, 2003). For instance, a case study of

a boy with ADHD found that he was able to articulate his difficulties in focusing in class through art (Safran, 2003). As a response drawing to the therapist's question about why school was difficult for him, he created an image of his brain flying out of the window (Safran, 2003). In return, this allowed the therapist to gain more clarity in understanding the boy's experience of ADHD, which could help direct the course of his therapy (Safran, 2003).

Group treatment and ADHD. Reddy and Alperin (2016) state that for young clients with ADHD the group treatment approach can be particularly beneficial because the social setting can serve as a place where their feelings and behaviours towards themselves and others can be identified. Group interventions provide young clients with opportunities to witness how their behaviours impact others, and in return, it allows practitioners to observe how the children interact with the group members verbally and nonverbally (Reddy & Alperin, 2016).

Children with ADHD often face challenges in forming and maintaining positive peer relationships due to poor self-control, self-awareness, communication skills, and frustration tolerance (Reddy & Alperin, 2016; Teeter & Goldstein, 2002). They often miss important social and verbal cues that could be indicative of others asking them to change their behaviours (Teeter & Goldstein, 2002). These social difficulties can lead to low self-esteem and feelings of incompetence (Teeter & Goldstein, 2002). Therefore, group treatment settings can potentially serve as a corrective emotional experience for children with ADHD (Reddy & Alperin, 2016). In a group setting, children can learn about themselves and others through group interventions, learn to talk about themselves with others, develop social skills, and potentially experience positive social interactions (Reddy & Alperin, 2016).

Mindfulness and ADHD

Mindfulness-based programs, the origins of which stem from Eastern spiritual practices and Buddhism in particular, have been applied to individuals with a wide range of diagnoses (Kabat-Zinn, 2003). Commonly known mindfulness-based programs such as Jon Kabat-Zinn's (2003) mindfulness-based stress reduction (MBSR), which focuses on stress reduction for individuals with physical illnesses, and mindfulness-based cognitive therapy (MBCT), which was designed for individuals with major depressive disorder (MDD), are known to have a balanced integration of the Buddhist and scientific traditions (Centre for Mindfulness Research and Practice, 2017; Kabat-Zinn, 2003).

Currently, research on mindfulness-based interventions for emotional and self-regulation with adults have been more prevalent than research on interventions with children (Baer, 2003; Burke, 2010; Monti, et al., 2012; Ontario Centre of Excellence for Child and Youth Mental Health, 2014). Furthermore, studies on MBAT with children are absent, while studies of other mindfulness-based programs with children appear more prominent (Burke, 2010; Zelazo & Lyons, 2012). Mindful Awareness Practice (MAP) is a mindfulness-based program that has been practiced with children with ADHD (Flook et al., 2010). Originally conducted as a randomized control study of 64 children aged 7 to 8 years who participated in an 8-week school-based program, MAP facilitates a state of enhanced and receptive attention to the moment-to-moment experience that helps develop self-awareness of the senses, thoughts, feelings, others, and the environment (Flook et al, 2010). It incorporated interactions between students and the facilitator, sitting meditations of approximately 3 minutes, body scans of approximately 5 minutes, and games that promote each week's learning objectives on developing awareness of the bodily senses and emotions (Flook et al, 2010).

Other mindfulness-based programs for emotional and self-regulation have been developed for children. The “MindUP” program is a school pilot project that incorporates mindfulness and the principles of social and emotional learning (SEL) to teach skills in managing emotions, building empathy for others, and making responsible decisions (Schonert-Reichl & Lawlor, 2010). After five months in the program, the participants showed improvements in attention, self-control, and planning and organizational skills (Schonert-Reichl & Lawlor, 2010).

The “Inner Kids Program” is a mindfulness-based program for school-aged children developed to promote awareness of self, others, and the environment (Flook et al., 2010). It involves age-appropriate games, sitting meditation, meditation while lying down, and body scans (Flook et al., 2010). It has shown significant improvements in executive functioning and behavioural regulation for children struggling with executive functions (Flook et al., 2010). Behaviour rating inventory of executive function (BRIEF), which assesses executive function behaviours for children between 5 to 18, was used as a measurement tool for the study (Flook et al., 2010). The results indicated improved executive functioning scores for children after the training program compared to children in the control group (Flook et al., 2010).

The programs described above describe mindfulness-based programs for school-aged children with and without ADHD. The application of MBAT to help school-aged children with ADHD in emotional regulation has not been studied.

MBSR. The key principles of MBSR include: making the mindfulness experience a challenge rather than a required chore; drawing importance from personal effort and motivation; practising the discipline of meditation regardless of current level of motivation; recognizing changes in lifestyle, since it requires a significant time commitment; and making each moment valuable by consciously practicing moment-to-moment awareness (Santorelli & Kabat-Zinn, 2014). The core components of MBSR curriculum are: 2.5 hours of group Pre-program Orientation Sessions followed by a 5- to 10- minute individual interview; eight 2.5-hours weekly sessions; an all-day (7.5 hour) silent retreat in the sixth week of the program; formal mindfulness meditation (MM) practices such as body scan and sitting meditation; informal MM practices in developing awareness in everyday life; daily home assignments; and group discussions about weekly home assignments (Santorelli & Kabat-Zinn, 2014).

Mindfulness and focus. The three main challenges children with ADHD often experience in focusing are: the capacity to attend to a task when asked, the tendency to become hyper-focused on a task, and the susceptibility to difficulty in shifting attention when transitioning between activities (Bertin, 2015). Mindfulness training based on meditation techniques that help them practise their focusing skills can be beneficial because inattention is one of their core challenges (Meppelink, Bruin, & Böels, 2016). In mindfulness, focusing is not merely about focusing on external factors, such as listening to directions, but also on internal dialogues, such as self-talk (Bertin, 2015). Regular practice of MM can enhance self-awareness by drawing attention on the present moment, practising non-judgemental observation, and decreasing automatic responding to stimuli (Kabat-Zinn, 2003).

Similar to mindfulness training for adults, children can engage in a variety of mindfulness-based activities such as body scanning, breathing exercises, and other forms of MMs in small groups or individually (Burke, 2010). Although an ideal length of meditation appropriate for children and adolescents is unknown, studies have shown that as little as 5 to 10 minutes of daily meditation can provide significant benefits on self-regulation (Burke, 2010; Fernando, 2013; Zylowska et al., 2008). Fernando (2003) conducted a study on the effects of mindfulness in public schools located in Oakland, which had the fourth highest crime rate in the

United States in 2010. The study measured the participants' attention, self-control, self-care, and care for others (Fernando, 2013). It involved approximately 15 minutes of mindfulness exercises such as mindful breathing, listening, eating, and empathy two to three times per week for 6 weeks (Fernando, 2013). The result showed significant improvements in attention, self-care and care for others, while the measurement of self-control remained relatively the same as the control group (Fernando, 2013). The study added that the population in the participating schools did not have self-control as a significant issue (Fernando, 2013).

Zylowska and the fellow researcher's (2008) conducted a study of MAPs for adolescents and adults with ADHD. The 8-week program involved weekly 2.5 hour sessions with a daily home-based mindfulness practice (Zylowska et al., 2008). Each weekly session followed a format that began with a short opening meditation, followed by a discussion about the home-based practice, completion of new mindfulness exercises, a group discussion about the new exercises, an introduction to the next week's home practice, and a sitting meditation to close the session (Zylowska et al., 2008). MAPs were adapted for ADHD by: including psychoeducation on clinical symptoms; shortening the length of the sitting meditation; substituting sitting meditation with walking meditation if desired; emphasizing mindful awareness in daily living; incorporating visual aids to explain mindful awareness concepts; and incorporating a loving-kindness meditation at the end of each session (Zylowska et al., 2008). The loving-kindness meditation was introduced as an exercise of wishing well for self and others to address the low self-esteem issues often associated with ADHD (Zylowska et al., 2008). The length of the guided sitting meditations was 5 minutes in weeks one and two, 10 minutes in weeks three to five, and 15 minutes in weeks six to eight (Zylowska et al., 2008). The study supported the feasibility of mindfulness meditation for adolescents and adults with ADHD (Zylowska et al., 2008).

Zylowska et al. (2008) also support the fact that mindfulness can potentially improve conflict attention and set-shifting, also known as task switching. These two types of attention are known to influence the development of inhibition and self-regulation (Rueda, Posner, & Rothbart, 2004). Conflict attention refers to the ability to monitor and change behaviour in order to meet a required goal by overriding intrusive information to attend to a chosen task (Smalley & Winston, 2010). This can be described as a key to self-regulation because self-regulation often requires attention to specific feelings, thoughts, and bodily sensations without distractions (Smalley & Winston, 2010). Task switching refers to the shifts between small sets of tasks

(Monsell, 2003). Task switching can occur frequently in everyday life and it promotes quick and efficient adaptation to different life situations (Monsell, 2003).

In mindfulness, focusing skills can be practiced by directing the attention inwards to focus on bodily sensations, emotions, and thoughts (Meppelink, Bruin, & Böels, 2016). This can enhance children's ability to maintain their focus in the "here and now" rather than wandering off inattentively (Meppelink, Bruin, & Böels, 2016). The body scan activity is a mindfulness-based intervention that has been facilitated in mindfulness-based programs such as MBSR, MBAT, and mindfulness-based interventions in schools (Baer, 2003; Monti et al., 2012; Waters, Barsky, Ridd, & Allen, 2014). The body scan is commonly known as a 45-minute exercise in which participants consciously direct their attention to areas of the body sequentially (Baer, 2003). This can be practised lying down or seated with eyes closed (Baer, 2003). The sensations in each area of the body are carefully observed in the process (Baer, 2003). For children, the incorporation of props can help engage and attain their focus (Zelazo & Lyons, 2012). For instance, a hula-hoop can be used for them to hold and move it up and down as a scanner to scan their bodies (Zelazo & Lyons, 2012). Once they have become accustomed to practising with a hula-hoop, they can be encouraged to visualize an imaginary hula-hoop while scanning their bodies (Zelazo & Lyons, 2012).

Similarly, props can be used in breathing exercises to enhance children's capacity to focus (Greenland, 2010; Zelazo & Lyons, 2011). Props such as a stuffed animal or toy or a book can be placed on their lap if they are in a seated position or on their abdomen if they are laying down to observe how the objects move up and down as they inhale and exhale (Greenland; Zelazo & Lyons, 2011). Moreover, Nikander (2015) suggests that young participants can use creative visualizations to help them remain focused on breathing exercises. Instead of using each breath as a focus point of the activity, children can visualize a blue sky with clouds as a representation of their drifting thoughts, feelings, and sensations (Nikander, 2015). When their thoughts drift their attention away from the breathing, they can visualize their drifting thoughts as a puppy running away and visualize bringing the puppy back home as a way to help them take control of their thoughts (Thompson & Gauntlett-Gilbert, 2008).

In mindfulness, focus can be enhanced by developing awareness of senses such as touch and sound (Bertin, 2015; Hanh, 2011; Zelazo & Lyons, 2012). An intervention for children, such as holding an object behind their back and moving it around in their hands, can engage the

children in experiencing touch and the textural elements of the object (Zelazo & Lyons, 2012). Furthermore, mindfulness games can incorporate instruments, for example a bell, to practise focusing skills (Hanh, 2001; Zelazo & Lyons, 2012). Children can be asked to listen to the bell as it fades and raise their hands when they no longer hear it (Zelazo & Lyons, 2012).

Alternatively, they use their fingers to count their breaths during the sound of the bell and share with the group how many breaths they took (Hanh, 2001). These interventions can help develop their awareness of physical sensations and attentional skills (Bertin, 2015; Meppelink, Bruin, & Böels, 2016). By consciously bringing attention to experiences in the present moment, such as their physical sensations and bodily reactions, children can learn to respond to external stimuli rather than to react automatically (Meppelink, Bruin, & Böels, 2016).

Movement-oriented interventions can be beneficial in developing focus and awareness in bodily sensations as well as in everyday activities (Baer, 2003; Zelazo & Lyons, 2012). Walking meditation invites participants to walk around the room very slowly for several minutes with a set attention which can be put on breathing or sensations in their body when moving (Sears, Luberto, & Sell-Smith, 2016). The activity can be altered by asking the participants to coordinate their breathing with their footsteps when walking or coordinating their breathing and their walking while listening to music (Baer, 2003).

Bertin (2015) describes that children with ADHD often have difficulties in monitoring their physical activity. This can be seen in symptoms of restlessness, fidgeting, and hyperactivity. Practising mindfulness can allow children to gain better control of their capacity to focus by bringing their attention to the present moment with their focus on bodily sensations and movement (Meppelink, Bruin, & Böels, 2016). This can potentially benefit other psychological symptoms (Meppelink, Bruin, & Böels, 2016). An empirical literature review of mindfulness on psychological health by Keng, Smoski, and Robins (2011) showed that mindfulness increased the participants' well-being and behaviour regulation and decreased emotional reactivity. Focusing on the present moment can help connect to the "direct experience of the sensory world and the body," (Kabat-Zinn, 2003, p. 148).

Impact of mindfulness and reflective functions on emotions. Mindfulness approaches can guide individuals to accept their full range of thoughts and emotions rather than having to redirect their attention to more positive or pleasant thoughts and emotions (Kabat-Zinn, 2003; Ontario Centre of Excellence for Child and Youth Mental Health, 2014). This non-judgemental

acceptance of thoughts and emotions is essential in mindfulness teaching and can help develop skills in focusing and reflecting on arising thoughts and emotions (Kabat-Zinn, 2003). Kabat-Zinn (2003) describes “waking up to the full spectrum of our experiences in the present moment... [which] we rapidly discover is severely edited and often distorted through the routinized, habitual, and unexamined activity of our thoughts and emotions” (p. 148). He states that people are often alienated from the direct experience of the senses and the body when living in distorted and habitual patterns-of-life without examining their thoughts and emotions (Kabat-Zinn, 2003).

Monti and his fellow researchers’ (2012) study aimed to observe changes in cerebral blood flow (CBF) and anxiety for women with breast cancer in an MBAT program (Monti et al., 2012). The program integrated the core components of MBSR with expressive art activities to provide a nonverbal mode of self-expression (Monti et al., 2012). The interventions included meditation exercises and art exercises that aimed to foster the participants’ non-judgemental awareness of the “here and now” by attending to their emotions and bodily sensations (Monti et al., 2012). The result of the 8-week practice showed a significant increase in CBF as stress and anxiety was reduced when meditating and a decrease in anxiety scores (Monti et al., 2012).

Similarly, children can learn to shift their attention toward their thoughts, feelings, and bodily sensations while practising a non-judgemental and observant stance (Bishop et al., 2004; Bunford, Evans, & Wymbs, 2015). Mindful observation of impulsive behaviours can be developed by noticing the emotional trigger points that activate behaviours, which may allow children with ADHD to respond to their triggers rather than to react automatically (Meppelink, Bruin, & Böels, 2016; Shaw et al., 2014). Zylowska and her fellow researchers’ (2008) study of MM training for adolescents and adults with ADHD showed improvements in anxiety and depressive symptoms. The study involved weekly sessions and a daily home meditation practice, group discussions about experiences with mindfulness, and psychoeducation on clinical symptoms of ADHD (Zylowska et al., 2008). The MMs involves two core elements: fostering attention regulation with emotional equanimity and bringing attention to the present experience (Britton et al., 2014). This can be achieved by choosing a focus of attention such as the sensations of breathing or sounds in the environment that participants can return to as the anchor point whenever their mind wanders (Britton et al., 2014). A study of classroom-based MMs with

sixth-grade children showed a reduction in negative emotionality, the risk of developing suicidal ideation, and thoughts of self-harm (Britton et al., 2014).

Mindfulness and organization Skills. In reference to the executive functions in children with ADHD, task management can be a significant impairment that effects their everyday life (Bertin, 2015). Task management can be defined as the ability to organize tasks and materials, prioritize and get started on tasks, and estimate time. Difficulties in organizing and planning tasks can correlate with children's inattentive behaviours, which disrupt their sustained attention and persistence (Meppelink, Bruin, & Böels, 2016). This can often lead to interrupting other students' conversations or tasks, calling out answers before the question has been fully presented, and making decisions impulsively (Meppelink, Bruin, & Böels, 2016). As children become older, task management, more than attention, can become the core issue because impaired task management skills can be difficult to treat with medication (Bertin, 2015). Therefore, children with ADHD often "require predictability, consistency, and structure" (Safran, 2003, p. 185).

Safran (2003), an art therapist who has worked extensively with children with ADHD, advises that art therapy sessions should be facilitated in an organized manner with consistent structures. This consistent and structured approach can foster focus and feelings of safety that allow children to predict what will be happening in the sessions (Safran, 2003). This can help improve their focusing skills by reducing distractibility and potential arousal of anxiety (Safran, 2003). For instance, each session can be organized into three main components: a review of important points discovered in the previous session, an introduction of new concepts or activities, and participation in sharing and discussing the art and the therapy process (Safran, 2003). As well, children with ADHD can learn organizational skills participating in organized and sequenced activities (Safran, 2003; U.S. Department of Education, 2006). Sears, Luberto, and Sell-Smith (2016) also suggest that mindfulness-based activities facilitated with consistent structures, an agenda, and rules can allow children with ADHD to maintain focus when transitioning between activities. This can potentially lessen experiences of social anxiety (Sears, Luberto, & Sell-Smith, 2016).

When children pay mindful attention to their thoughts, emotions, and sensations from a nonjudgmental stance, they can reduce internal struggle by actively choosing thoughts and actions that are appropriate to their life situation (Sears, Luberto, & Sell-Smith, 2016). This sense

of internal organization and self-awareness can allow children to recognize their choice points (Sears, Luberto, & Sell-Smith, 2016). Choice points, which exist only in the present moment, can allow them to choose how to respond to situations that they may feel they lack control over (Sears, Luberto, & Sell-Smith, 2016). Mindfulness activities that invite children to pay attention to their sense of touch and other bodily sensations can help them recognize these choice points (Sears, Luberto, & Sell-Smith, 2016). For instance, they may be asked to explore and describe an object through touch while having their eyes blindfolded or they may engage in a regular practice of body scanning (Sears, Luberto, & Sell-Smith, 2016). These mindfulness-based activities can help them learn to recognize how to pause and reflect upon better options for decision making (Sears, Luberto, & Sell-Smith, 2016).

Overall, mindfulness-based interventions allow children with ADHD to process and recognize their senses and bodily responses by practising focusing, reflective and organizational skills (Barkley, 2010; Safran, 2003; Zelazo & Lyons, 2012). These skills can be practised by orienting nonjudgmental awareness to the emotions and thoughts in the present moment (Kabat-Zinn, 2003; Zelazo & Lyons, 2012).

Mindfulness-based Art Therapy (MBAT) and Emotional Regulation

MBAT and mindfulness-based interventions in art therapy have been facilitated for individuals in need of emotional regulation (Peterson, 2014; Kabat-Zinn, 2003; Kramer, 1971). MBAT emerged as a form of art therapy exercise integrated with mindfulness training and education from the MBSR program that was developed by Jon Kabat-Zinn (Peterson, 2014). Peterson (2014), an artist trained in meditation practices, developed MBAT in the context of her clinical research in oncology by integrating MBSR with art therapy intended for supportive group therapy (Peterson, 2014). MBAT was one of the first models that originated from MBSR, with MBCT and Mindfulness-Based Eating Awareness Therapy (MB-EAT) also stemming from it (Peterson, 2014). There are five factors that can be described as important aspects of mindfulness: the observation of one's own experience; the ability to describe that experience; action-taking with self-awareness; and the experience of a nonjudgmental stance and non-reactivity of the inner experience (Zelazo & Lyons, 2012). Mindfulness-based approaches are not focused on illness; rather, they are attuned to each individual's inherent capacity for mental health and well-being (Peterson, 2014).

The MBAT program, “Walkabout: Looking in, looking out” is an 8-week program developed for cancer patients that is intended to reduce patients’ over-identification with their illness, decrease psychological stress, and improve health-related quality of life (Peterson, 2015). It is predominantly art-based with a selection of mindfulness-based interventions from MBSR (Peterson, 2015). The group program involved taking a mindful walk outdoors, taking digital photographs of the walk, constructing collage art, and engaging in other mindfulness-based and art-based activities (Peterson, 2015). The participants in this program have reported experiences of calm, deep personal reflection, and self-regulation (Peterson, 2015).

In MBAT, MM methods such as the body scan meditation, breathing with awareness, meditation, walking meditation, mindful eating with awareness, yoga, integrated with mindful use of art materials are commonly used as a way to focus and self-regulate (Peterson, 2014). The integration of the art therapy component with mindfulness-based interventions in support groups provides individuals with opportunities for both verbal and non-verbal expression, fosters social support, and expands coping methods (Monti et al., 2006).

Safran (2003), an art therapist who has written about and worked with children with ADHD, states that art can provide an outlet for expression of emotions that may be difficult to be articulated with words alone. Art can serve as an entry point in focusing and revisiting feelings or ideas, which can be beneficial for children with ADHD with dysregulated emotions (Safran, 2013). For instance, when a boy was asked to draw what school was like for him, he drew himself as a small boy behind bars (Safran, 2013). When the art therapist attended a meeting with the staff at school, not realizing the boy’s potential ADHD symptoms, they described the boy as being deliberately disruptive in school (Safran, 2013). The drawing helped the boy to express his feelings about school, and the staff, witnessing his difficulties, was able to gain a different perspective on his emotions and behaviours in school (Safran, 2013).

MBAT and dysregulated emotions. MBAT can help decrease dysregulated emotions such as distress and anxiety (Monti et al., 2006; Monti et al., 2012; Peterson, 2015). Monti et al. (2006) conducted a randomized and controlled trial of the effects of MBAT for women with cancer and discovered a significant decrease in symptoms of distress, as measured by anxiety and depression subscales (Monti et al., 2006). The 8-week program combined art therapy with meditation techniques, aiming to provide specific skills to foster self-regulation in a supportive group format (Monti et al., 2006). The participants in the intervention group engaged in 2.5

hours of weekly session that provided them, within a MBSR program curriculum, with training in the practice of various types of MMs, group art therapy activities that were mainly non-verbal, and home assignments on mindfulness-based exercises (Monti et al., 2006).

The MBAT program included MMs (such as body scan meditation, sitting meditation, walking meditation, and gentle yoga) and art-based interventions. The art-based interventions included the mindful exploration of art materials; reflecting on pre- and post- assessments of the mind/body relationship before and after gentle yoga; illustrations of images that represent self-care; explorations of meditation experience; illustrating pictures representing stressful and pleasant events; an open studio for free art-making; and the creation of an image of a healing place (Monti et al., 2006). Home assignments involved practising any form of MMs 6 days a week for 30 minutes (Monti et al., 2006). Each participant was provided with an audiotape of guided body scan and sitting meditation to use at home (Monti et al., 2006).

Monti et al. (2012) also conducted a study in examining changes in CBF and anxiety associated with the MBAT program for women with cancer based on the same 8-week MBAT program curriculum used in Monti and the researcher's previous study (2006). Results showed correlations between changes in the participants' stress and anxiety levels (Monti et al., 2012) and a significant increase in CBF, which correlated with a decrease in anxiety scores (Monti et al., 2012).

MBAT interventions. Caroline Peterson (2014), who developed the MBAT model as a part of her research in oncology, developed the following MBAT exercises for the MBAT pilot study with women with cancer. The interventions were facilitated as art-based intervention components for the MBAT program curriculum for women with cancer (Monti et al., 2006; Monti et al., 2012). The result of the studies demonstrated a decrease in the participant's anxiety and distress levels (Monti et al., 2006; Monti et al., 2012).

Mindful exploration of art materials (MEAM). MEAM is an art-based intervention intended to encourage exploratory interaction with art materials (Peterson, 2014). Developed by Peterson (2013), this intervention makes use of a variety of art materials that are paired together in order to pay mindful attention to bodily sensations while creating scribbles. This is followed by a group discussion about the sensations, thoughts and feelings that arose in the process (Peterson, 2014). Art materials, from the most structured materials, such as pencils, to the least structured materials, such as paint and watercolours, are introduced (Peterson, 2014). Paying

mindful attention while exploring these materials is intended to develop self-awareness of pleasant and unpleasant thoughts that occur throughout the process (Peterson, 2014).

Bringing attention to pain and care. In MBAT, expressive art activities before or after meditation are important components for self-reflection (Peterson, 2014). Peterson (2014) starts by offering a guided body scan meditation. Subsequently, each participant creates a body outline and is directed towards exploring any physical, emotional, or mental pain within the body boundary using lines, shapes, and colours (Peterson, 2014). The participants are then invited to move these symbolic expressions of pain outside of the body outline, onto a new page without a body outline (Peterson, 2014). In the final step, they are asked to step back to look at the art contents (Peterson, 2014). Subsequently, they are invited to explore ways to symbolically offer care to the expressed contents on another paper, using any of the art materials available (Peterson, 2014). At the end, they are asked to write a self-care prescription for themselves in response to the final image (Peterson, 2014).

Pleasant and unpleasant event pictures. Mindfulness training brings attention to both pleasant and unpleasant feeling tones, which refer to wants, likes, and dislikes (Kabat-Zinn, 2003). It also emphasizes awareness of shifts toward or away from internal and external experiences (Kabat-Zinn, 2003). By the mid-phase of the MBSR program, participants' awareness of their senses and feeling tone can be more attuned (Kabat-Zinn, 2003). This awareness can be further developed through art (Peterson, 2014). In this intervention, the participants are invited to use the art materials made available to them to create an artistic response to their observational homework: noticing and reflecting on pleasant and unpleasant events (Peterson, 2014). Two images, one about a pleasant event and another about an unpleasant event, are intended to convey the feelings associated with these events (Peterson, 2014). The images can be created in the materials of their choice (Peterson, 2014). Peterson (2014) noticed that unpleasant pictures often described the feeling tone associated with fight-flight arousal, such as themes and colours associated with storminess, isolation, repeated marks, lack of colour, red or black, explosions, disconnection, and minimal or maximal use of space. In images of pleasant events, there were visual elements and themes such as sun, green, water, nature, flow, connection, and balanced use of space on the paper (Peterson, 2014).

Feeling vocabulary of the body. This MBAT intervention aims to broaden participants' range of human emotions and develop awareness of how the body reacts in feeling those

emotions (Peterson, 2014). From a standard feeling word list as seen in Figure 2, participants identify two types of feeling states (Peterson, 2014). The first four to six feeling words may be “discomforting, discouraging” or somewhat related to those experiences (Peterson, 2014, p. 51). For the second four to six feeling words, they are asked to identify feelings that they “would like to cultivate, emotional states [they] would like more contact with” (Peterson, 2014, p. 51). To implement this intervention for children, a feeling vocabulary list with school-age level vocabularies may be appropriate.

Warm	Gutsy	Spunky	Defeated	Del
Calm	Suspect	Important	Masculine	Dis
Useful	Needed	Unneeded	Free	No
Cared For	Protected	Secure	Hopeless	Lig
Lost	Inadequate	Feminine	Disgusted	Use
Rewarded	Appreciated	Unrewarded	Heard	Jut
Stopped	Cornered	Risky	Anxious	Put
Inferior	Childish	Indifferent	Seen	Gu
Ignored	Unseen	Buoyant	Icy	Co
Safe	Helpless	Useless	Giddy	We
Childlike	Sunny	Timid	Loved	Bot
Unnoticed	Overloaded	Humiliated	Withdrawn	Ser
Grieved	Poor Me	Avoided	Relieved	Ok
Refreshed	Strong	Happy	Enduring	So
Lonely	Desperate	Powerful	Tough	Co
Pitiful	Bright	Let Down	Babied	Spi
Healthy	Despondent	Close	Stepped On	We
Alone	Calm	Quiet	Left Out	Em
Foolish	Ashamed	Cold	Jittery	Ha
Rejected	Trapped	Dejected	Funny	De
Shy	Gloomy	Vulnerable	Open	Sal
Tender	Joyous	Peaceful	Captivated	Fro
Wounded	Hurt	Martyred	Impish	
Positive	Complete	Fulfilled	Clumsy	
Longing	Heavy	Nervous	Content	
Crushed	Alarmed	Frightened	Unhappy	
Brave	Grounded	Carefree	Whole	
Needy	Frustrated	Afraid	Unwanted	

Figure 2. An example of Peterson’s feeling vocabulary list used in the MBAT program. Adapted from *Mindfulness-based art therapy* (p. 51), by C. Peterson, 2014, London, UK: Jessica Kingsley Publisher.

Each participant is asked to fold a large paper vertically and horizontally to create two rows of four to six blocks, and are then asked to write the chosen feelings at the top of each block (Peterson, 2014). Subsequently, they are invited to use line, shape, and colour to explore and create a mark or series of marks that describe the feelings (Peterson, 2014). Next, they are provided with a large piece of paper where they draw a body boundary on which they can locate these feeling marks (Peterson, 2014). They are instructed to begin by marking out the uncomfortable feelings, and then mark out the feelings they would like to cultivate and develop better contact with (Peterson, 2014).

Healing place. This intervention begins with a guided imagery activity about a safe place (Peterson, 2014). Guided imagery scripts can be used to help the participants visualize their safe

space imagery. In visualizing their safe place, participants are directed to use their mindfulness skills to notice any smell, sound, or image of the safe and healing place they experience in the meditation (Peterson, 2014). In visualizing this place, they are encouraged to pay attention to details of their imagery which can be explored by vividly imagining the time of day, weather, landscape, and any other symbolically meaningful elements (Peterson, 2014). Subsequently, they are asked to explore and develop the image or sensations using their chosen art materials (Peterson, 2014).

Chapter 4: Discussion

The literature review above can be organized into three main theoretical and clinical constituents: emotional regulation through the lens of top-down and bottom-up processes; the function of mindfulness in emotional regulation for children with ADHD; and the role of MBAT, which combines components of art therapy and MBSR, in emotional regulation. All of these three theoretical and clinical bases of mindfulness seems to encourage the notion of focusing, practising self-reflection, and acquiring a sense of internal organization. This section of the paper will discuss the ways in which MBAT, when used specifically with children with ADHD, can benefit these aspects of emotional regulation. Studies on MBAT as used with children with ADHD are currently absent in the field of art therapy. However, the existing studies on mindfulness-based approaches in working with children with ADHD, MBAT in enhancing emotional regulation for adults, and the clinical perspective of top-down and bottom-up emotional regulation processes can potentially back up the benefits of MBAT for children with ADHD in emotional regulation.

MBAT for School-aged Children with ADHD

MBAT and focusing. Mindfulness-based approaches, including MBAT and the theoretical perspectives of top-down and bottom-up processes in emotional regulation, show the benefits of practising focusing skills. Specifically, focusing can be practised by drawing the attention to the senses, such as the bodily sensations, sound, touch, and images. This process, in return, can potentially benefit emotional regulation as it can increase self-awareness and emotional calm (Weijer-Bergsma, Formsma, Bruin, & Bögels, 2011; Peterson, 2014; van de Weijer-Bergsma; Zelazo & Lyons, 2012).

In MBSR and other forms of mindfulness-based programs conducted in schools, MMs are facilitated regularly (Fernando, 2013; Kabat-Zinn, 2003; Zelazo & Lyons, 2011; Zylowska et

al., 2008). The various form of MMs can assist development of focusing skills and self-awareness (Burke, 2010; Fernando, 2013; Thompson & Gauntlett-Gilbert, 2008). MMs such as the body scan meditation, guided imagery, breathing meditation, walking meditation, and gentle yoga, can bring focus on the bodily senses (Focus Family Resiliency Training Manual, 2009; Peterson, 2014). Specific attentional skills such as conflict attention and task switching can be practised and enhanced through mindfulness-based interventions because they bring attention to the senses, shifting thoughts, and bodily reactions (Rueda, Posner, & Rothbart, 2004; Smalley & Winston, 2010). This, in return, can potentially enhance self-regulation (Rueda, Posner, & Rothbart, 2004). Details on these MMs are discussed in the literature review section of the paper.

Similarly, MBAT interventions bring attention to the bodily sensations by incorporating a self-expressive process through art in response to the MM experience (Peterson, 2014; Monti et al., 2006; Monti et al., 2012). Interventions such as MEAM, which encourages the sensorial exploration of art materials, can promote awareness and discussions about the sensations, thoughts, and feelings that were aroused and that the individual became aware of during the process (Peterson, 2014). “Bringing attention to pain and care” is another MBAT intervention that brings focus on pain or felt sensations in the body and promotes the symbolic expression of felt sensations through art (Peterson, 2014).

According to Hinz (2009), art materials can play a significant role in enhancing focus. Sensory-oriented materials such as clay, watercolour, and acrylic paint can help focus and sustain focus because they can orient the attention exclusively to the present sensation (Hinz, 2009). Sensory-based interaction with art materials can help develop awareness of internal sensations (Hinz, 2009; Safran, 2003; Zelazo & Lyons, 2012).

These sensory-based interventions appear to correlate with the top-down and bottom-up processes of emotional regulation. The top-down process, which is referred to as a conscious and purposeful reflection on emotions, can bring the attention to the moment-to-moment experience of bodily sensations, thought processes, and emotional reactions (Shaw et al., 2014; Zelazo & Lyons, 2012). This process can take place in MMs and MBAT interventions that bring focus to sensory experiences, rising thoughts, and bodily and emotional responses (Monti et al., 2006; Peterson, 2014; Shaw et al., 2014; Zelazo & Lyons, 2012). MMs such as the body scan meditation and breathing meditation can allow the attention to shift from unexamined and habitual thoughts and emotions to the internal experience of the bodily senses, which can help

develop self-awareness in the present moment (Kabat- Zinn, 2003; Zelazo & Lyons, 2012). Moreover, MBAT interventions, such as MEAM, can promote mindful attention to the experience of using the fluidity and textures of art materials (Peterson, 2014). This mindful experimentation with materials can bring about attention to bodily sensations and thoughts that arise in the process. Furthermore, MMs and MBAT interventions can help individuals to slow down, become aware of their dysregulated emotions, and identify the triggers of their heightened emotions, which is the basis of bottom-up processing (Peterson, 2014; Shaw et al., 2014; Zelazo & Lyons, 2012). Moving deliberately and slowly during walking meditation helps bring the attention to the visceral bodily sensations (Flook et al., 2010). Thoughts or emotions that distract their focus may arise during the walking meditation. Participants are encouraged to recognize and let these distractions to pass, and reorient their focus to the “attentional anchor” (Zylowska et al., 2007, p. 2), such as the breathing or sensations in a particular area in the body.

It is important to note that, for these focusing and sensory-oriented interventions to be applicable and manageable for school-aged children with ADHD, the interventions are to be feasible for their attention span levels and general interests (Burke, 2010; Thompson & Gauntlett-Gilbert, 2008; Zelazo & Lyons, 2012). Children’s levels of focus can be enhanced and maintained when MM exercises are reduced from 45 minutes of the original length in MBSR and MBAT, to 5 to 15 accompanied minutes (Fernando, 2013; Kabat-Zinn, 2003; Monti et al., 2006; Zelazo & Lyons, 2011). Moreover, the incorporation of props can help children to stay interested and focused on the MM process (Fernando, 2013; Kabat-Zinn, 2003; Monti et al., 2006; Zelazo & Lyons, 2011; Zylowska et al., 2008). In guided imagery meditation, choosing imagery exercises that may elicit interest for the age group, such as scripts that include imagery of a walk along a beach, playing with sand, or outdoor exploration, can help engage and maintain their focus (Focus Family Resiliency Training Manual, 2009; Nikander, 2015).

Overall, these interventions and theories appear to adhere to the foundations of MBSR and MBAT that include maintaining a nonjudgmental and self-accepting stance while exploring the sensations, thoughts, and emotions that arise in the process of mindfulness (Peterson, 2014; Kabat-Zinn, 2003). Focusing the attention on the present moment or a particular exercise, such as breathing, noticing arising thoughts and emotions, allowing them to wander, and practising refocusing the attention after the mind has wandered are important components of the nonjudgmental attitude of mindfulness (Zelazo & Lyons, 2011).

The reflective function of MBAT on emotions. Mindfulness-based interventions as well as the top-down and bottom-up processes of emotion regulation draw significantly on self-reflection on emotions and recognition of emotional triggers. Again, in mindfulness, the nonjudgmental and accepting attitude towards felt emotions, senses, and thoughts can help promote reflective functions on emotions (Kabat-Zinn, 2003; Peterson, 2014). This allows thoughts and feelings to be observed as passing events, without reacting to them automatically, which can help break the habitual pattern of emotional reactivity (Bishop et al., 2004). This state of self-observation and self-reflection provides a sense of space between the experience of and response to emotional triggers (Bishop et al., 2004).

Research on mindfulness-based models such as MBAT for adults, MBSR for adolescents and adults, and school-based mindfulness programs for children commonly state that self-awareness and self-reflection can contribute to emotional regulation (Flook et al., 2010; Monti et al., 2006; Zylowska et al., 2007). MMs in mindfulness-based studies have demonstrated decreases in emotional dysregulation among children and adolescents with ADHD in their symptoms of anxiety and depression (Bunford, Evans, & Wymbs, 2015; Monti, 2012; Zylowska et al., 2007). MMs such as breathing meditation, body scan meditation, walking meditation, gentle yoga, and guided imagery have demonstrated benefits in emotional regulation in adults with cancer as well as adolescents and children (Bunford, Evans, & Wymbs, 2015; Monti et al., 2006; Tacon et al., 2003). MBAT programs for adults with cancer have shown a significant decrease in levels of anxiety and distress after the program (Monti et al., 2006; Monti et al., 2012). Peterson's (2014) MBAT interventions such as "Feeling vocabulary of the body," (p. 51) can be facilitated to help participants broaden their range of emotions and develop awareness of how their body reacts as they experience those emotions.

Hinz (2009) discusses how kinesthetic engagement with art materials can facilitate exploration and reflection on emotions. Kinesthetic engagement in art making can serve as an outlet to release energy or tension, develop kinesthetic awareness, and find inner rhythm (Hinz, 2009). Robust or forceful movements can increase arousal of emotions, while slow movements can evoke soothing emotions (Hinz, 2009). These experiences in art making can develop participants' ability to slow down and use their cognitive information processing capacity to sustain their length of focus and learn to recognize their emotions and control their behaviours

(Hinz, 2009). This can be facilitated through interventions such as painting in response to music or pounding, rolling, and pushing clay (Hinz, 2009).

Fundamentally, these mindfulness-based interventions promote an intentional shift to participants' awareness of their thoughts, emotions, and the sensations in their body (Bunford, Evans, & Wymbs, 2015). By shifting the attention to the bodily senses, arising thoughts and felt emotions, participants can practice in choosing their thoughts and emotions consciously rather than habitually reacting to them (Chiesa, Serretti, & Jakobsen, 2013). This process can help increase self-awareness of emotional reactions and increase emotional calm (Peterson, 2014; Weijer-Bergsma, Formsma, Bruin, & Bögels, 2011; Zelazo & Lyons, 2012). For children with ADHD, the focusing attitude and awareness of emotional reactions can help develop their capacity to recognize trigger points of emotional reaction (Sears, Luberto, & Sell-Smith, 2016; Shaw et al., 2014).

It is important for mindfulness-based interventions to be facilitated with consideration of the child's level of development and capacity to focus (Zelazo & Lyons, 2012). For instance, mindful breathing meditation can be facilitated by asking children to notice their thoughts, feelings, and bodily sensations when breathing. Whenever their minds wander, they may be asked to visualize their thoughts as a puppy running away (Thompson & Gauntlett-Gilbert, 2008). This technique assists children and adolescents with ADHD in taking self-directives by helping them take control of their thoughts (Thompson & Gauntlett-Gilbert, 2008). Furthermore, as mentioned earlier, props such as stuffed animals and toys for breathing activities and hula-hoops for body scan meditation can help children stay engaged in the process of mindful self-reflection (Greenland, 2010; Zelazo & Lyons, 2011; Zelazo & Lyons, 2012).

The process of mindful reflection on arising emotions and triggers of heightened emotions is also discussed in top-down and bottom-up processes in emotional regulation. In top-down process, by bringing attention to the moment-to-moment experience of children's thoughts and bodily and emotional reactions, they can enhance self-reflective skills in witnessing their emotional shifts (Zelazo & Lyons, 2012). This state of purposeful self-reflection can help children practice cognitive flexibility, which can take place by intentionally directing their attention towards or away from their emotional stimuli, giving them more agency (Shaw et al., 2014; Zelazo & Lyons, 2012). Bottom-up process refers to the recognition of trigger points of heightened emotions and reduction of emotional reactivity (Chiesa, Serretti, & Jakobsen, 2013).

This nonreactive stance can be learned as participants practice noticing and accepting their internal experiences (Chiesa, Serretti, & Jakobsen, 2013).

Overall, MBSR and MBAT interventions appear to draw on a self-accepting attitude in the context of thoughts and emotions in the “here and now” to help provide space to observe and recognize thoughts and emotional triggers. This reflective stance can help regulate impulsive behaviours (Chiesa, Serretti, & Jakobsen, 2013; Hinz, 2009).

MBAT and organizational skills. Mindfulness-based programs such as MBAT for adults, MBSR for adults and adolescents and mindfulness-based programs in school-settings for children, such as MAP and the MindUP program, consist of organized structures and a sense of consistency. These mindfulness-based programs and models often comprise integrated mindfulness-based interventions, group discussions, and home assignments in an organized and consistent manner (Kabat-Zinn, 2003; Monti et al., 2006; Peterson, 2014). In MBAT, art therapy interventions are facilitated in response to participants’ experience of MMs (Peterson, 2014). Usually, the MBAT program for patients with cancer are weekly sessions of 2.5 hours in duration and it emphasizes the importance of regular practice of mindfulness through daily mindfulness homework (Monti et al., 2006; Peterson, 2014). This daily homework on mindfulness appears to contribute to the sense of structure, consistency, and continuation of the mindfulness attitude outside the therapy setting. A similar structure of 2.5 to 3.5 hour session and a regular practice of mindfulness through daily mindfulness homework exists in the MBSR program (Santorelli & Kabat-Zinn, 2014).

The sense of organization and structure in mindfulness-based programs appears to correlate with the notion that children with ADHD often require a sense of “predictability, consistency, and structure” (Safran, 2003, p. 185). These qualities help them focus and refocus in their group art making process (Safran, 2003). A sense of organization and structure can be offered by informing the children about the structure, agenda, and rules of each session (Sears, Luberto, & Sell-Smith 2016). For instance, mindfulness-based therapy sessions can be organized into sections: beginning with a breathing exercise, a review of the previous week’s session and home practise, the introduction of new mindfulness exercises, a facilitated group discussion on the experiences, ending with a mindful breathing exercise, and a review of the home practice for the following week (Sears, Luberto, & Sell-Smith, 2016; Zylowska et al., 2008). Daily homework can serve as a continuation of their mindfulness practice and enable them to

experience mindfulness as a part of their daily routine (Santorelli & Kabat-Zinn, 2014; Kabat-Zinn, 2003; Zlylowska et al., 2008). Safran (2003) states that organized and consistent structures in sessions can help children feel safe by allowing them to predict what to expect. This can help increase their level of focus and decrease anxiety by reducing unexpected stimulation and distractibility (Safran, 2003).

A sense of organization and structure can also be created by facilitating art-based interventions with purposefully chosen art materials (Safran, 2003). Materials such as coloured pencils, oil pastels, and markers can provide more structure for children with ADHD than less structured materials such as clay and paints (Safran, 2003). Resistive materials such as collage papers, oil pastels, and pencils can provide a better sense of control over their creative process and provide visual organization and structure (Hinz, 2009). Moreover, topic-directed interventions can promote sustained focusing and cognitive planning skills for children (Hinz, 2009). Mindfulness-based art interventions such as self-centering mandala drawings can allow children and adolescents with ADHD to focus on their emotions and cognitive skills experienced in the task (Green, Drewes, & Kominski, 2013; Henderson, Rosen, & Mascaro, 2007). As a safe and contained space, “the circular shape of a mandala connotes wholeness and integration” facilitates a less verbal approach that can have a meditative effect (Green, Drewes, & Kominski, 2013, p. 161). It can potentially increase attentional capacity and reduce impulsive behaviours by providing a calming effect in therapy (Green, Drewes, & Kominski, 2013; Henderson, Rosen, & Mascaro, 2007).

In mindfulness, a sense of organization can also occur internally. By learning to pay mindful attention to their thoughts, emotions, and bodily sensations nonjudgmentally, children can learn to reduce their internal struggle by actively choosing their thoughts and actions that are appropriate to their life situations (Sears, Luberto, & Sell-Smith, 2016). Similar to the bottom-up process of emotional regulation, self-awareness can allow children to detect their choice points, allowing them to choose how to respond to their emotional stimuli (Sears, Luberto, & Sell-Smith, 2016). The organization and structure of each session can provide a sense of internal structure that can help the children to focus on their mindful self-reflective process (Safran, 2003).

Potential disadvantages. Alongside the potential benefits of MBAT interventions and mindfulness-based interventions in art therapy for school-aged children with ADHD, there may

also exist potential disadvantages. The central attentional issue experienced by children with ADHD may contribute to challenges in engaging each child in the mindfulness-based therapy process in a group therapy setting as there may be distractions. Children with ADHD can often exhibit signs of inattention and disruptiveness by calling out answers, provoking other group members, and being unable to maintain focus on a task (Reddy & Alperin, 2016). Mindfulness-based interventions that aim to engage the children to attend to their internal process of attuning to the bodily sensations may be a struggle for those with limited attention spans. Children with ADHD, the hyperactive-impulsive type, may be more prone to become bored and restless than the other types, leading them to interrupt others in group settings and to be unable to remain still (Reddy & Alperin, 2016).

It is important to recognize that the bottom-up and top-down emotion regulatory functions of mindfulness may be a challenge for children with ADHD due to their common susceptibility to impulsive behaviours and difficulties in regulating their emotions. Although kinesthetic and sensory levels of engagement with art materials can reduce tension and enhance emotional calm, these levels of working may also stimulate emotions that they have yet to develop the capacity to regulate (Hinz, 2009). Especially in using fluid art materials such as watercolour, acrylic, and clay, their bodily sensations may be activated, leading to emotional stimulation and regressive behaviours (Hinz, 2009). This may lower children's ability to have reflective distance when working on the sensory level (Hinz, 2009).

The comorbidity rate for children with ADHD is approximately 66% as they tend to have at least one other psychiatric diagnosis (Elia, Ambrosini, & Berrettini, 2008). The symptoms of ADHD can overlap with other childhood disorders such as disruptive behaviour disorders, language-based disorders, OCD, and anxiety disorder (Elia, Ambrosini, & Berrettini, 2008). This can cause group interventions to be quite difficult for this population due to the possibility of having young participants with a wide range of comorbid diagnoses (Reddy & Alperin, 2016). These comorbidities may lead to other considerations that will make it necessary to adapt mindfulness-based interventions to make them feasible and practicable for a group.

Moreover, the variety of symptoms of ADHD and comorbid symptoms may vary depending on gender, age, and disorder (Reddy & Hale, 2007). For instance, children with ADHD, specifically the inattentive type, can more frequently and easily withdraw from the group socially than the other types (Reddy & Alperin, 2016). In contrast, these children may

participate in the group in a calm, quiet, and creative manner which can make them good role models for the group (Reddy & Alperin, 2016). Children with the hyperactive-Impulsive type of ADHD may exhibit symptoms of restlessness, interrupt others, and become impatient and bored (Reddy & Alperin, 2016). It is also known that children with the Hyperactive/Impulsive or the Combined Type are most known to struggle with social interactions with peers and adults due to their distractedness and high motor activity levels (Reddy & Alperin, 2016). In contrast, these children may help bring energy and creativity to the group (Reddy & Alperin, 2016). This variety of factors within this population may make it difficult to attend to the variety of needs of the participants. Given the importance of quiet attention in mindfulness, in mindfulness-based interventions in a group therapy context, varying levels of children's engagement and focus may be disruptive to other participants' processes.

Cultural ethics. In facilitating the MBAT program for children with ADHD, cultural and social ethics are to be considered. Singh (2008) talks about "cultural knowledge" (p. 354) of what is a normal behaviour. Children with the diagnosis of ADHD with difficulties in emotional regulation have ADHD symptoms with varying levels of severity and have their own cultural understanding of the extent to which emotions need to be regulated and expressed (Sing, 2008). Within international contexts of the culture of schooling, most American primary schools require young children to sit in their chairs to focus on work, with few breaks for them to release physical energy and participate in creative activities (Singh, 2008). Similarly, different schooling systems differ from one culture to another in their "cultural knowledge" (Singh, 2008, p. 354) of what is a normal behaviour. This notion of cultural diversity will need to be considered in implementing the program for this population.

There may be other clinical, contextual, and interpersonal factors on top of the children's symptoms of ADHD and emotional dysregulation that may influence their capacity to engage in mindfulness-based interventions, such as family relationship difficulties, trauma, or comorbid diagnoses. It is important to take note of these potential factors when adjusting and facilitating an MBAT program for this population.

Chapter 5: Intervention Program

Meta-Framework

The meta-framework for the proposed MBAT program for school-aged children with ADHD integrates three main clinical and theoretical constituents. The first constituent is the top-

down and bottom-up processes of emotional regulation in mindfulness. It includes processes that can facilitate self-reflection and self-regulation of emotions. The second constituent pertains to the therapeutic model of MBAT that integrates components of art therapy with MBSR. Existing mindfulness-based interventions and modifications to the existing mindfulness-based interventions will be included. The third constituent references the ETC in selecting art materials and art-based interventions. This component considers the ways in which art materials may engage in the various levels of functioning in the ETC as well as the materials' relationship to emotional regulation.

Within this framework for an MBAT program for this population, mindfulness-based approaches that are feasible for school-aged children's developmental levels and interest will be significant (Burke, 2010; Zelano & Lyons, 2012). Adjusting interventions to make them feasible for this population can promote participants' ability to engage and maintain focus in mindfulness activities (Burke, 2010; Zelano & Lyons, 2012).

The proposed MBAT program for children with ADHD aims to help facilitate emotional regulation by engaging their focusing skills in the present moment, self-reflective skills on emotions, and organizational skills for self-regulation.

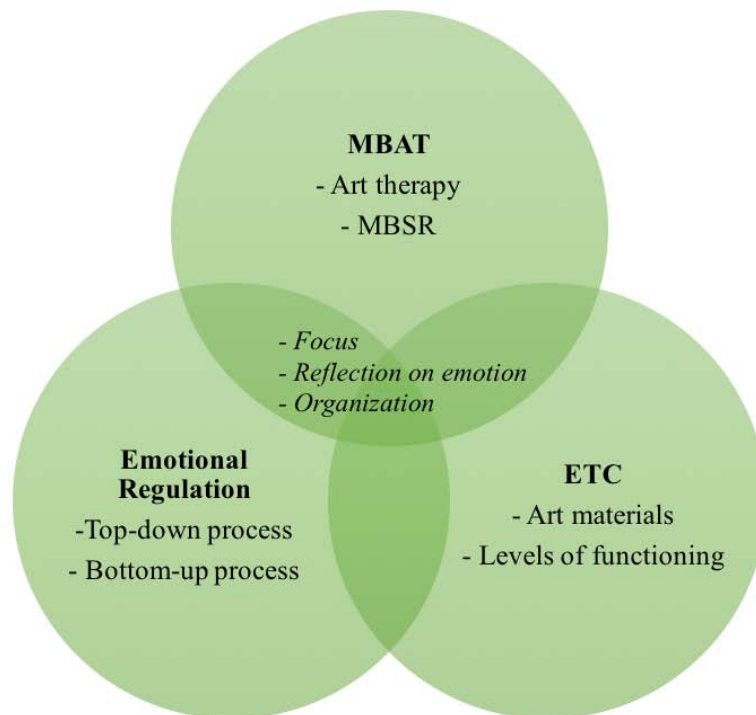


Figure 3. Venn diagram of the meta-framework of the MBAT intervention program.

Importantly, the stance of the therapist or the facilitator of the proposed MBAT program pertains to the nonjudgmental, curious, and accepting attitude, which are the fundamental attitudes in mindfulness (Kabat-Zinn, 2003). Moreover, the therapist will play a role as the holder and container of the safe therapeutic space, meaning she or he will facilitate physical, emotional, and social safety for the participants. The therapeutic relationship between the therapist and the participants within the secure therapeutic space will also be significant components in facilitating a supportive and safe space for the young participants (Nissimov-Nahum, 2008). It can play a significant role in alliance building. For this population, clear rules and a limited setting when working as a group in the therapeutic space will be important to provide a sense of structure.

Overview of Intervention Program

Treatment goals. The primary goal for the MBAT program for school-aged children with ADHD is to help develop skills in emotional regulation in a social context. To help facilitate this, the sub-goals are to: develop focusing skills to attend to bodily sensations, emotions, and thoughts through the engagement of the senses; practice self-reflective skills on present or arising emotions; and develop organizational capacities through consistent and structured sessions. Emotions explored in the course of therapy may be anger, sadness, happiness, and fear, which are known as the top main emotions that are often dysregulated for children with ADHD (Sjöwall et al., 2013; van Stralen, 2016).

The group therapy format will be a significant component for the course of this MBAT program because children with ADHD often lack positive social experiences (Bertin, 2015; Safran, 2003). This can lead to further social isolation (Bertin, 2015; Safran, 2003). Reddy and Alperin (2016) describe how group therapy settings can serve as a replica for children's daily settings (such as school, home, and playground) where they work and play. Moreover, group settings can allow participants to influence one another positively by problem solving together, supporting one another, and sharing experiences as a group (Reddy & Alperin, 2016). It also provides opportunities to solve behavioural conflicts as a group through discussions. As a result, a group therapy setting can also enhance social skills and the capacity to regulate emotions in a social setting.

Context and space. The intervention program is feasible in closed-group setting such as psychiatric hospitals, schools, and community service settings. Generous space for tables, chairs,

and for the participants and therapists to move around in, and closed doors for confidentiality are recommended. In consideration of the proneness to over-stimulation among many children with ADHD, the therapeutic space should be organized and kept consistent over the course of the MBAT program. The potential for stimulation from loud noises in the environment or over-crowdedness should be kept to a minimum. It is important to ensure the safety of the therapy space and inspect art materials to ensure that they meet the safety requirements for participants' age group.

Participants. The participants for this intervention program are school-aged children from age 6-12 with ADHD diagnosis from all demographics. The interventions can be modified based-on the group's levels of developmental and behavioural functioning. All three types of ADHD: hyperactive-impulsive, inattentive and combined types can be considered. The number of participants in the closed-group can be between four to seven to ensure that each participant has enough personal space both physically and emotionally, and opportunities to engage and discuss with one another and the therapists on an interpersonal level in the social setting.

The art therapist who facilitates the group is encouraged to engage in personal self-care, including engaging in her or his own mindfulness practice. Kabat-Zinn (2003) states that mindfulness cannot be taught to others authentically without the instructor's regular practice of mindfulness in her or his own life. This may ensure the therapist's capacity to facilitate and contain the therapeutic process of the group members over the course of the 10 sessions. The therapist is advised to work with a co-therapist or an assistant throughout the program.

Duration and structure. The MBAT intervention program functions as a 10-week closed group and is facilitated for 75 minutes once a week. (Although regular MBAT and MRSR programs are usually 2.5 hours, in consideration of the population's attentional span, shorter sessions are recommended.) For a group of older children, mindfulness-based interventions and art-based interventions can be lengthened to 90-minute sessions. Each session is divided into three components: a check-in, followed by a brief discussion about mindfulness homework; an introduction to a mindfulness-based intervention followed by an art-based intervention; a group discussion about the experience and the mindfulness homework for the upcoming week. The beginning of each session will be presented with a brief outline of what is planned for the session. The art therapy interventions are closely related to the mindfulness-based activities that are geared towards promoting one or more of the three sub-goals for the program: focus,

reflection on emotion, and organization. The group discussions aim to promote social interaction and discussions about their mindfulness experience.

Art materials. A variety of art materials will be used throughout the sessions in the proposed MBAT program. Each session will be presented with art materials, in an organized manner, chosen by the facilitator specifically for the planned art intervention. The choice of art materials will be fundamentally based on the ETC, considering the potential functions of emotional engagement, levels of functioning, and potential regression that the materials can elicit. The art cabinets will be kept closed and will only be accessible to the facilitators to ensure the participants' safety and prevent over-stimulation. The details of which art materials will be present for each session will be outlined below. The art materials listed for each session may be adjusted based on the facilitator's observation of the participants' engagement with them.

Descriptions of the Intervention Program

Session 1: "What is mindfulness?" The goal of the first session is to invite participants to become familiar with the therapy space, the group members, and the organized structure of each session that they will be a part of over the course of the 10-week program. The second goal is to introduce and engage the children in the concept of mindfulness through icebreaker activities. Structure and predictability may be an important component for the group in terms of providing a sense of safety that can potentially reduce anxiety (Safran, 2003).

Initially, the participants are introduced to a clear description of what the MBAT program is about and its structure, as discussed above. Subsequently, as an ice breaker, the children will engage in a name game using an imaginary ball. Each participant will say her or his name when receiving the imaginary ball and pass it to the next person in the circle. The facilitator then transforms the imaginary ball into various kinds of objects, such as a hot potato, a soft feather, or a heavy rock. Repeating this game, in the next round, they pass or throw the ball after saying their names to another person of their choice. This can help the children learn each other's names and engage their imagined senses.

As a group, the participants will come up with the basic rules they would like to have in the group. The main rules that the therapist can convey are: the therapist's role in ensuring the participants' safety; the participants' respect for each other—including the therapist—and each other's space; art materials are to be used for art making only; and the therapeutic frame. The therapeutic frame stipulates that the artworks created in the sessions will be kept in a locked

cabinet in the therapy room until the end of the program and that the confidentiality of the participants is to be respected. The young participants will be invited to look around the room and become familiar with the art materials they may use over the course of the program. They are invited to take five minutes to walk around the therapy space and notice the things they see in the room such as the materials that are available on the table and the props.

Prior to starting the first activity, the art therapist will facilitate a discussion about what mindfulness can mean, including the idea that it is like studying their mind, thoughts, and feelings. Also, it can be about slowing down or focusing on our thoughts, feelings, or movements. As an experiential exercise related to the discussion about the concept of slowing down and focusing, the children will be invited to participate in a walking meditation activity where they walk around the room very slowly for approximately 5 minutes. This will be followed by a group discussion about the activity. The purpose of this MM is to introduce the children to the notion of slowing down and noticing how this may feel different than their regular pace of walking.

In response to the first MM, the participants will then be invited to create an image of “calm.” They do not necessarily need to be in a state of calm to participate in this art activity. The focus is on reflecting on their personal image of “calm.” They will be presented with markers, oil pastels, and colour pencils and asked to choose one colour that represents “calm” to create an image of what it looks like to them. For children who may require more concrete directives or have difficulties with abstract thinking, the activity can be simplified by directing the children to create a scene or a place that can help them feel relaxed or calm (Wagner, Rathus, & Miller, 2006).

The therapist will facilitate a group discussion to share their experience on the walking meditation and/or the art. For this population, breaking down the discussion into specific discussion questions may provide them with a sense of structure as a guide to what they can share about their artworks and art processes (Anxiety BC Youth, n.d.). Questions related to the walking meditation may include: What was it like to walk slowly? How did it feel when you were walking slowly? Did any thoughts come by? Did you notice anything that you did not notice before? Questions related to the art experience may include: What colour did you choose for your image of calm? Can you tell us about your image of calm? What was it like when you were creating the drawing? How do you feel when you look at it?

Subsequently, each participant is provided with a box where they will keep their artworks over the course of the program, which they will take home at the end of the program. They can either choose to glue their image of “calm” on the box or place their art in their box.

To close the session, the participants will be asked to experiment with the slow walking meditation as their mindfulness homework over the week, practising it each day for 5 to 10 minutes for 6 days. The recommended duration of MM practice in MBSR for adults is 45 minutes, 6 days a week. This will be shortened to 5-10 minutes to adapt to the children’s attention span, however it may be increased over the 10 weeks (Kabat-Zinn & Santorelli, 2014; Zelazo & Lyons, 2012; Zylowska et al., 2008)

Session 2: “My senses and focusing.” An objective of this session is to engage the participants in sensory-based activities to help develop bodily awareness of their sense of touch. Props and art materials are selected specifically to explore touch.

The participants will be introduced to the session outline as a reminder of consistent and organized structure that exists in the program. Subsequently, they will engage in a check-in activity called “Three Senses” (Anxiety BC Youth, n.d.). This activity allows children to take a moment to notice and share with the group the three things they can hear, see, and feel in the present moment. Subsequently, they will engage in a brief discussion regarding their experience of the mindfulness-based homework from last week.

As an initial MM, breathing buddy meditation will be introduced (Greenland, 2010). Each participant can pick an object from a basket of a variety of items that have different shapes, textures, weight, and characteristics. The items are to be placed on their belly for them to observe when breathing. Items such as a ball of yarn, book, small pillow, stuffed animal, a ball, or empty recycled container can be used. The object is used to help the children to maintain their attention to their mindful breathing by observing their object move as their belly inflates and deflates (Greenland, 2010; Zelazo & Lyons, 2012). In consideration of their attention span, approximately 3 to 5 minutes of the exercise may be appropriate in the early phase of the program (Rueda, Posner, & Rothbart, 2004; Zylowska et al., 2008). To reflect and become aware of their bodily sensations, they will be invited to engage in a short discussion about how their body feels after the breathing exercise.

Subsequently, the children will engage in a mindful exploration of provided art materials (Peterson, 2014). Peterson’s (2014) original MEAM intervention will be slightly modified to be

feasible for this population. They will be directed to pay attention to sensations in their body, such as how the tips of their fingers may feel when using the materials (Peterson, 2014). They will be provided with four 5" x 5" blocks of paper with four different art materials from structured to fluid materials: markers, oil pastels, water-colours with a small brush and a container with a small amount of water, and modeling clay. These four materials are chosen to provide different levels in the fluidity of the art materials (Hinz, 2009). They will slowly explore each material on each paper block by paying attention to the sensory experience of the material. The size of the papers can be slightly altered but it is important that the papers are not too small or too large in order to contain the experience while providing enough room for the art exploration. The art materials are to be presented in an organized manner in order to reduce overstimulation or disorganization. This can be done by putting the materials into separate containers. It may be helpful to have protective covers on the table to both speed up the cleaning process and convey to the children that art making takes place on the table. It will be important to remind them of the rules if their engagement with the materials becomes chaotic and disrupts the group process.

Subsequently, the participants will be invited to arrange or cut the explored blocks and to have them glued on a 12" x 16" paper in the way they desire. For instance, they could keep the blocks separate on the large paper or manipulate their drawings by cutting and gluing them on the large paper, creating a new integrated image. This process can be symbolic of organizing or integrating the various experiences in sensations explored when engaging with the art materials.

After, the group will discuss how the materials felt in their hands, on the paper, and their bodily sensations. These discussions can help the children develop awareness of their sensorial experience through self-reflection. The group may also discuss whether any of the materials gave them a certain mood or feeling such as calm, excitement, or frustration. The completed artworks will be put into the art boxes that they received in the first session. If the artworks need to be dried before being put away, they may leave the work by their boxes. They should be informed that the work can be put in the boxes by the therapist or kept in the locked cabinet until they are fully dried and they can place their work in their boxes the following week.

Before closing the session, the participants will be asked to practice their mindful-breathing buddy activity at home as their mindfulness homework over the week. They are advised to practice the breathing-buddy meditation for 3 to 5 minutes each day for 6 days over

the next week. They can also practice this meditation anytime they want to feel calm or relaxed (Fernando, 2013).

Session 3: “Listen and notice.” The goal of this session is to engage the participants in paying attention to their external stimuli, in this case sound, and in using kinesthetic movement to respond to and reflect on the sounds with their bodies. Subsequently, they are invited to reflect on how different sounds and physical sensations can link to their emotions.

Initially, the participants will be introduced to the general outline of the session to provide them with a structure. They will engage in the regular check-in activity, a “Three Senses” activity, to bring their attention to the present moment (Anxiety BC Youth, n.d.). Before beginning their first activity, the group will briefly discuss their mindfulness-homework experience, the mindful-breathing buddy activity.

The children will participate in a short game consisting of listening to different sounds, reflecting on how the sounds feel in their bodies, and guessing what the sound might be (Hanh, 2011). For example, sounds of bells, pebbles, drum, a singing bowl, and recorded voices can be used for this listening activity. These sounds can also be played at various speeds and volumes to invite them to reflect on how the sounds feel different in their ears and other parts of their bodies. The purpose of this activity is to ease the participants into an MBAT activity of listening and visually responding to different songs.

As an MBAT activity, each child will be provided with three white sheets of 12” x 18” paper with a set of assorted oil pastels and watercolour pencils. These materials are selected in consideration of their capacity to engage affect with less possibility of overstimulation of affect that can occur when using more fluid materials such as watercolours and paint (Hinz, 2009). The participants will listen to three different songs that have different paces, rhythms, and impressions and will then create a response to each song through art. If their capacity to comprehend abstract thinking is limited, the activity can be broken down into two options (Wagner, Rathus, & Miller, 2006). For instance, they can listen to the music and automatically follow their hand movements to the rhythm or sound elements in the songs, or listen to the music for a minute and come up with colours, shapes, textures, lines, or pictures that come to mind as they listen. Bertin (2015) describes how focusing and discussing felt senses experienced in the present moment can develop awareness of emotions and stress, since noticing them sooner can develop a conscious awareness of physical experiences. This activity exemplifies a top-down

processing of emotions that promotes sustained attention by bringing awareness to bodily sensations and potentially to emotional stimuli with a nonjudgmental stance (Shaw, Stringaris, Nigg, & Leibenluft, 2014; Zelazo & Lyons, 2012). In addition, practicing a top-down reflection can help foster calmness and well-being (Zelazo & Lyons, 2012).

At the end of the MBAT activity, the group will discuss their experience of their bodily sensations when listening and responding to the music using movements with art materials. For each image, they will list at least one feeling word that came to them in the process of art making or when looking at the completed art work. They can write the feeling words on the back of their artworks if desired. If their vocabulary is limited, they will be provided with a list of feeling words that they could reference. This portion of the activity practises linking sensory and kinesthetic experience to affect.

Before closing the session, the children will be given their mindfulness homework for the week. They will be asked to continue their mindful breathing buddy or slow walking meditation exercises each day for 5 to 10 minutes for 6 days. They are asked to pay attention to their body when doing this activity and notice the sensations they feel.

Session 4: “In my mind’s eye.” The goal of this session is to introduce the participants to the practice of a non-judgmental mind by engaging them in a guided imagery exercise that can help them become aware of the thoughts, feelings, and images that come into their mind.

In the beginning, the children will be informed of the order of the activities planned for the session. This will be followed by the check-in ritual of the “Three Senses” (Anxiety BC Youth, n.d.). The group will briefly share their experiences with their mindfulness homework.

The children will be introduced to the idea of allowing their thoughts to happen without judging them. To help understand this concept, a warm-up activity will take place. Each child will draw a word from a basket of word cards and write the picked word on a provided 8 1/2 " x 11" paper. From that chosen word, each child creates their own word map by writing down the words that come into their thoughts, one after another. If writing is difficult for some children, they can draw simple pictures that resemble their ideas. They are encouraged to write the words as they come without thinking too hard. For the second round, the participants can try this as a group, going around in a circle and saying the words out loud, one after another. In the activity, it is important to let the words or ideas flow out without long pauses. Afterwards, they will discuss their experience with this activity. They may discuss whether it was easy or difficult to do.

Subsequently, the participants will be introduced to a guided imagery meditation that they can engage in with their eyes closed, or by finding a space in the therapy room to sit in and focus their eyes on. In order to sustain the attentional level of the children, the guided imagery will be a short 5- to 10-minute session that will have them visualize a safe and pleasant scene (Burke, 2010; Fernando, 2013; Zylowska et al., 2008). The therapist can facilitate the guided imagery by encouraging them to visualize descriptive details of the scene in a receptive manner (Haen & Aronson, 2015).

Following the guided imagery meditation, the children will be invited to create the visualized safe and pleasant place using the provided art materials on a 12" x 18" paper, as an adaptation from Peterson's (2014) "Healing place" intervention. They will use multi-media materials for this activity: Semi-fluid materials (such as watercolour pencils, oil pastels, and soft pastels), resistive materials (such as colour pencils, cut-out papers with scissors and glue), and sensory-oriented materials (such as feathers and pompoms) will be provided. These materials are selected to allow each participant to engage in the art making process on various levels, such as the sensory, affective, perceptual, and symbolic-levels (Hinz, 2009). In cases where the participants may not be familiar with the art materials, a short demonstration of the different ways the art materials may be helpful. It is important to inform them that there are many ways to use the materials and that the demonstration covers only a few methods.

The children will share their artworks and art processes with the group. The discussion will mainly focus on their experience of visualizing the details of their internal imagery. They may discuss whether it was easy or difficult to focus on the meditation process. If it was difficult, they could share what was happening to their mind or what thoughts they had that made it difficult. The discussion will also be about when they might want to go to this imagined safe and pleasant place. It will also allow them to share examples of events that made them feel unpleasant or stressed.

Before the end of the session, the participants are informed of their mindful-homework for the week. They are asked to practise the mindful-breathing buddy exercise each day for 5 to 10 minutes for 6 days and visualize the safe and pleasant place at least twice over the week.

Session 5: "Story of my ups and downs." In this session, the main goal is to practise the bottom-up self-regulatory process by engaging in a mindful story telling intervention.

Initially, the participants are provided with a general outline of the activities that they will engage in. This is followed by the regular check-in activity, “Three Senses” (Anxiety BC Youth, n.d.). They will discuss their mindfulness-homework as a group. The discussion can revolve around situations that led them to visualize the safe and pleasant place.

The children will engage in a mindfulness body scan activity to bring their attention to their bodily sensations. In order to attain their focus and adapt the traditional body scan activity for adults for this age group, hula-hoops or imaginary hula-hoops will be used as a tool to scan their bodies from their toes to the tip of their heads (Monti et al., 2006; Zelazo & Lyons, 2012). Subsequently, on a 12” x 18” paper with a body outline, each child can colour, make shapes, or mark textures on areas of their body where they felt something. It can be a sensation or tension that they experienced. In a group discussion, they can share examples of sensations they felt and reflect whether they made them feel a certain way emotionally.

For the main art therapy activity, the children are invited to choose one feeling they like and one feeling they do not like out of a collection of feeling words on cards. There will be a brief discussion about how all the feelings we feel are important because they are telling us about what we need in that moment. MBAT brings attention to both pleasant or unpleasant feelings and participants can learn to become more in tune with their bodies and needs through practice (Peterson, 2014). The group can discuss what they feel they need when they are feeling certain emotions. For instance, they can discuss what they want or need in moment when they feel upset, sad, or excited. Each child will sculpt two characters that represent their feeling buddies. One is a character that can help or accompany them when they are experiencing an emotion they do not like. The other one is a character that can help or accompany them when they are experiencing an emotion they do like. The sculpted characters will have: a name, a home, a special power, and special sayings that can help the children when feeling their emotions. These characters will be created using model magic, a sensory-oriented material that can provide a self-soothing experience as well as release of energy (Hinz, 2009). After the MBAT intervention, the participants will share their characters and explain how the sculpted characters can help them when they feel their emotions. The characters will be placed in their art boxes, which they can take home at the end of the program.

Before the end of the session, they will be informed of their mindfulness-homework, which will be a walking meditation exercise. They are asked to engage in this practice for 5 to 10

minutes daily. The participants will also be informed that the session was their fifth session, and that another five sessions remain.

Session 6: “Mindful decision making.” The goal of this session is to further practice bottom-up emotional processing by learning about the connections between thoughts, feelings, and behaviours.

The children will be introduced to the schedule of activities that they will take part in this session. This is followed by the regular check-in activity, the “Three Senses” (Anxiety BC Youth, n.d.). Subsequently, they will discuss their experience of the mindful homework that was assigned in the last session. The art therapist will explain that the session of the week will also involve mindful movement that is like the mindful-walking meditation.

The first warm-up activity will start after a brief discussion about how thoughts, feelings, and behaviours can be connected with one another (Lowenstein, 2014). This concept will be explored through a mindfulness-based game inspired and adapted from Lowenstein’s (2014) cognitive-behavioural activity. The children will engage in a game called “What I think, feel, and do.” On the floor of the therapy room will be three large cards. The words “thought,” “feeling,” and “action” will be written on them. The cards are spread out across the room in a triangular formation at a distance for children to walk around it. Walking to the three cards slowly, each participant will connect the three cards with yarn. Next, the facilitator reads short stories that illustrate different characters’ thought processes and feelings that lead to certain behaviours. When the facilitator reads the part of the story that involve a character’s thoughts, the participants will slowly walk to the “thought” card, practising their mindful walking. When the facilitator reads a part in which the character is experiencing an emotion, they will mindfully walk to the ‘feeling’ card and so on. The purpose of this activity is to engage the children in slowing down the process of reacting to their feelings or thoughts by reducing automatic behaviours. In mindfulness, paying attention to both external factors and internal dialogues is valued (Bertin, 2015). MMs and mindfulness practices enhance awareness and focus by drawing attention to the present moment, encouraging the experience of non-judgemental observation, and decreasing automatic response to stimuli (Kabat-Zinn, 2003). In this particular activity, the children can also discuss alternative ways of thinking, feeling, and reacting to the situations outlined in the short stories.

For the next MBAT intervention, the participants are asked to choose a specific event that involved thoughts, feelings, and actions that led to a consequence they were not happy about. Each child will create a comic strip of at least five scenes that illustrate how the event began, and what changes in thoughts and feelings could be involved in the process of leading to a preferred outcome of behaviours. In this intervention, the kinesthetic involvement of the movement activity combined with the cognitive art making process can serve as an outlet that helps the children develop kinesthetic awareness, find inner rhythm, and develop their capacity to slow down and use cognitive processing to control their behaviours (Hinz, 2009).

After sharing their comic strips as a group, they are informed that their mindfulness homework is to practise their mindful breathing buddy exercise each day for 5 to 10 minutes.

Session 7: “What my feelings look like.” The goal of this session is to practise top-down emotion processing by helping the participants to develop feeling vocabularies and by exploring the feelings through art making (Hinz, 2009).

The participants will initially be presented with the outline of the session. This will be followed by the weekly check-in activity, “Three Senses” (Anxiety BC Youth, n.d.). Afterwards, they will discuss their experience with their mindfulness homework.

The first activity will involve mindfulness-based yoga-movements. This will help them focus on their kinesthetic movement and felt sensations experienced during the exercise (Safran, 2003; Zelazo & Lyons, 2012). Given that many art therapists may not be trained yoga instructors, the yoga-movements will be simple and safe poses geared towards practising on focusing and breathing skills. The group will discuss any sensations or feelings that they experienced in the process. They may also discuss how their bodies feel different before and after the mindfulness yoga. Words that describe sensations and emotions are encouraged for this exploration.

Subsequently, the participants will engage in an art intervention adapted from Peterson’s (2014) “Feeling vocabulary of the body” intervention. They will be provided with a list of feeling words and sensory words. The words will need to be comprehensible for the children of the age group. They will each choose six feeling words which they will translate into a visual form on 5” x 5” papers. They are invited to use visual elements such as colours, lines, shapes, textures, and symbols to represent each feeling word (Peterson, 2014). On the back of each feeling card, they will list at least one sensory word that goes with their feeling card.

The group will share their individual art making processes. They will also describe their feeling words and the sensory words and how they relate to one another. Again, group discussions are an important part of the MBAT group as they allow participants to influence one another positively by supporting and sharing their experiences as a group with different perspectives (Reddy & Alperin, 2016).

Before the end of the activity, the participants are informed of the mindfulness-homework for the week, which is about noticing the sensations in their body when feeling certain emotions. They are asked to practice this exercise for 5 to 10 minutes each day. This is explained in reference to the MBAT activity they participated in. The participants will be reminded that there are three sessions left until the end of the program.

Session 8: “Inside my mind-home (part one).” This section of the program will take place over the course of two sessions. The goal is to engage on a sensory and kinesthetic level in exploring and processing various emotions that can often co-exist.

Initially, the participants are introduced to the outline of the session and informed that the activity will be continued in the next session. After the “Three Senses” check-in activity (Anxiety BC Youth, n.d.), the participants will engage in a group discussion about their mindfulness-homework.

As a warm-up activity, three short stories are read to the participants, which they will respond to by selecting emotion cards. A group discussion will focus on how they might respond with different emotions to the situations illustrated in the stories, how more than one feelings can be felt at the same time, and how feelings can shift from one to another.

The next MBAT activity engages the children in practising their focusing, organizational, and planning skills, and reflecting on the emotions they experience. They are invited to create their own mind-home in the form of a house or apartment, with different rooms representing different feelings they experience. The form of the mind-home can be simplified into a floor plan, instead of a structure of a house or apartment, depending on the age group of the children. For example, a participant may have a house with rooms for a sad feeling, an angry feeling, a fearful feeling, and a shy feeling. As an initial step, they will sketch how their house would look in terms of the sizes of the rooms for the chosen emotions. They will be provided with dry materials to semi-fluid materials (colour pencils, pencils, markers, oil pastels, and soft pastels) to draw, colour, and design the rooms in their mind-homes. Subsequently, they will be introduced

to clay as a material they will use to build their homes. If necessary, a brief introduction to the different ways in which clay can be used may be helpful. It is important to inform the children that these are just a few examples of how to use clay and that they might discover their own ways to explore the material. They will explore the material before beginning to build their mind-homes. For this session, building the basic structure of their home is recommended. The group will discuss how they used the different materials and chose the different emotions.

Before ending the session, they will be told that their mindfulness homework for the week will be the mindfulness breathing buddy and mindfulness walking exercises. They are asked to practice the exercises for at least 5 to 10 minutes daily. The participants will be reminded of the fact that two sessions are remaining until the end of the program in order to prepare them for termination.

Session 9: “Inside my mind-home (part two).” This section of the program takes place over the course of two sessions: This is the second session. The goal of this session is to engage the children on sensory, kinesthetic, and symbolic levels in exploring and processing emotions that can often co-exist. The process of working on a BMAT over the course of two sessions can also enhance their focusing capacities.

Initially, the group is introduced to the general outline of activities planned for the session, followed by the regular “Three Senses” check-in activity (Anxiety BC Youth, n.d.). Subsequently, they will engage in a brief discussion about their mindfulness homework.

The participants will begin with a body-scan meditation for approximately 5 to 10 minutes. They will briefly discuss what they felt in their bodies and if any feelings came up as they were engaging in this process.

The participants are asked to revisit the mind homes that they made out of clay and that are now dried and review what they had planned in the last sessions. Using a variety of materials such as acrylic paints, cut-out papers, cut-out foam papers, pencils, colour pencils, feathers, and pompoms, they are encouraged to engage in their art making process on sensory, perceptual, cognitive, and symbolic levels (Hinz, 2009). These various levels of functioning are known to bring balance to means of self-expression through art. This is also described as creativity (Hinz, 2009). Each room they create relates to feelings they have personally experienced or are currently experiencing. Viewing the rooms from a holistic point of view can provide them with a larger picture of their mind and emotions. This can be an important part of the top-down

processing of emotions that attune to particular stimuli from a nonjudgmental stance, which can potentially produce a sense of calm (Shaw et al., 2014; Zelazo & Lyons, 2012).

At the end, the group will share their process of the art making and witness how others have visually expressed their feelings in their homes. They will be asked to choose and practise one mindfulness activity they learned from the program as their mindfulness homework. They are asked to spend 5 to 10 minutes daily in the mindfulness activity. The group is reminded that next week is the last session before the end of the program.

Session 10: “I am.” The goal of this last session is to provide the participants with a review of the MBAT program. As a termination session, the focus will be on discoveries they have made about themselves and the group members.

Initially, the group will be provided with an outline of the session followed by the “Three Senses” check-in activity (Anxiety BC Youth, n.d.). The group will share which mindfulness homework they decided to do and will discuss their experiences.

For the last activity, each participant is provided with a small box with a lid. They will fill the box with learnings, feelings, thoughts, and experiences they had in the group program. They will use various materials such as beads, pompoms, and clay pieces to represent these elements. At the end, the children will share their box and decide if there is anything they could take out from the box and leave behind. They may choose to add elements to the box that they appreciate from what the group members shared. This activity will be a self-reflective process that can be used to review the self-discoveries they have made from studying their mind, thoughts, and feelings over the weeks.

This part of the session will be about kindness and compassion, which can be an important concept in mindfulness (Peterson, 2014). For the last activity, the “Web of Life” (Hanh, 2011), the participants will stand in a circle. The person who starts will hold a ball of yarn and share one thing she or he is thankful for or appreciates about the group and will throw the ball of yarn to another person. This continues until everyone has had their turn. At the end, each participant will hold their part of the string. The facilitator can conclude the activity with comments such as, “Even though we are all going back home, we remain connected just like this string connects us now. We will bring our time together back to our homes and our schools.” (Hanh, 2011, p. 165-166)

At the end, the children will receive their art boxes, which will contain all the artworks that they have created, to take home with them.

Chapter 5: Conclusion

This research paper began with the question of how MBAT can benefit school-aged children with ADHD in their emotional regulation. The clinical and theoretical literature review, discussions of the discovered studies, and the development of the intervention address the various ways MBAT can benefit this population's ability to regulate their emotions. In emotional regulation for this population, developing their capacity to focus, reflect on their emotions, and practise organizational skills, externally and internally, appear to be critical. The proposed MBAT program addresses these three main components and benefits of MBAT that are feasible for this population. The potential challenges and disadvantages of MBAT for this population are also discussed in the paper. Interventions in the MBAT program can be modified to be applicable for younger and older children.

Again, studies on MBAT for school-aged children with ADHD are currently absent in the field of art therapy. Yet, current studies on adult MBSR programs for emotional regulation, mindfulness-based exercises with school-aged children for self-regulation, and art therapy for children with ADHD for managing focusing skills and impulsive behaviours have provided a strong foundation for the development of this MBAT intervention program for this population.

It is important to define and clarify the therapeutic stance of the facilitator when implementing the intervention program. The main responsibilities for the art therapist or the facilitator is to provide a safe and interactive space with structure and consistency, articulate the planned interventions so that they are comprehensible for this particular population, facilitate group discussions from a nonjudgmental stance, and provide resources for participants who may desire further treatment.

In summary, the clinical and theoretical intervention research provided a review of literature that can be organized in three essential theoretical and clinical components: emotional regulation through top-down and bottom-up processes, the function of mindfulness in emotional regulation for this population, and the role of MBAT in emotional regulation. These components appear to take into account skills in focusing, self-reflection, and organization. The discussion section aimed to bridge the gap between mindfulness, MBAT, emotional regulation processes, and art therapy with children with ADHD to develop a MBAT program. The proposed MBAT

program addresses the current lack of research on this topic and potentially serves to bridge a similar gap that exists in the field of art therapy. This research paper is intended as a stepping stone in further studying and developing MBAT interventions and programs for young individuals with ADHD with challenges in emotional regulation. The development of assessment tools for the evaluation of changes in participants' capacity for emotional regulation before and after the intervention program will be a valuable addition for this study.

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