



A Conceptual Model and Clinical Framework for Integrating Mindfulness into Family Therapy with Adolescents

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Individual and group-based psychotherapeutic interventions increasingly incorporate mindfulness-based principles and practices. These practices include a versatile set of skills such as labeling and attending to present-moment experiences, acting with awareness, and avoiding automatic reactivity. A primary motivation for integrating mindfulness into these therapies is compelling evidence that it enhances emotion regulation. Research also demonstrates that family relationships have a profound influence on emotion regulation capacities, which are central to family functioning and prosocial behavior more broadly. Despite this evidence, no framework exists to describe how mindfulness might integrate into family therapy. This paper describes the benefits of mindfulness-based interventions, highlighting how and why informal mindfulness practices might enhance emotion regulation when integrated with family therapy. We provide a clinical framework for integrating mindfulness into family therapy, particularly as it applies to families with adolescents. A brief case example details sample methods showing how incorporating mindfulness practices into family therapy may enhance treatment outcomes. A range of assessment modalities from biological to behavioral demonstrates the breadth with which the benefits of a family-based mindfulness intervention might be evaluated.

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INTRODUCTION

Individual and group-based psychotherapeutic interventions for adults, adolescents, children, and parents increasingly incorporate mindfulness-based principles and practices. A primary motivation for integrating mindfulness into these therapies is the compelling evidence for its capacity to improve emotion regulation (Germer, Siegel, & Fulton, 2013). Both the practice of mindfulness and the skills associated with emotion regulation are typically perceived as intrapersonal activities. However, with recent studies emphasizing the relational nature of emotion regulation (Butler, 2015; Butler & Randall, 2013; Mancini, Luebbe, & Bell, 2016), family therapy might similarly incorporate interpersonal mindfulness-based practices to improve outcomes, particularly where negative communication patterns, high conflict, and poor family cohesion are inherent in the presenting problems. This paper offers a conceptual model and clinical framework for integrating mindfulness into family therapy, particularly as it applies to families with adolescents.

THE FAMILY CONTEXT OF EMOTION REGULATION

Family and emotion researchers are recognizing that the expression and regulation of emotions occur in interpersonal contexts (Butler, 2015). Family and parent socialization of emotion regulation or dysregulation patterns begin in infancy (Morris, Silk, Steinberg, Myers, & Robinson, 2007). Responsive parenting enhances a child's ability to regulate positive and negative emotions, while inconsistent and intolerant parenting tends to impede development of strategies to regulate negative emotions (Contreras, Kerns, Weimer, Gentzler, & Tomich, 2000; Crowell et al., 2006; Morris et al., 2007). Beyond these socialization efforts, it is increasingly evident that family members engage in emotional coregulation or codysregulation through mutual and bidirectional patterns of interaction. These interactions can either provide morphostatic emotional stability or conflict escalation that results in maladaptive negative affect reciprocity (Butler, 2015; Butler & Randall, 2013; Mancini et al., 2016). Moreover, family members develop physiological synchrony or linkage with one another such that emotion activation and its resultant physiological responses in one family member results in similar activation in another (Butler & Randall, 2013; Timmons, Margolin, & Saxbe, 2015).

Parents and children shape each other's behaviors, emotions, and physiological responses through dyadic interaction patterns that repeat over time (Crowell et al., 2014; Morris et al., 2007). Preliminary evidence suggests that failure to adequately coregulate leads to poor behavioral outcomes for youth (Butler, 2015; Dishion & Patterson, 2006; Mancini et al., 2016). Timmons et al. (2015) assert that the emotional and physiological attunement occurring between family members raises an ideal target for interventions that aid family members to deescalate conflict and recommend the use of biofeedback to do so. Mindfulness practices are an excellent approach for accomplishing this by impeding the transmission of negative affect, and building emotional flexibility in family members.

HOW MINDFULNESS ENHANCES EMOTION REGULATION CAPACITIES

Conflictual relationships are a common focus of treatment within family systems interventions. These relationships involve patterns of interaction characterized by verbal or physical aggression, blame, criticism, and an escalation of negative emotional states. Recognizing emotional turmoil as a central target of change within families, pioneers in family therapy, such as Bowen, emphasized the need to attend to the family emotional system and patterns of emotional escalation (Kerr & Bowen, 1988). Family interventions that rely on cognitive and behavioral strategies typically seek to reduce conflict and increase family

cohesion through relational reframing in conjunction with cognitive emotion regulation strategies and communication skills training (Alexander, Waldron, Robbins, & Neeb, 2013). However, physiological arousal (“emotional flooding”) may hinder the higher order cognitive processing required for family members to use these skills in the precise situations they are most needed (Eddie, Kim, Lehrer, Deneke, & Bates, 2014). Mindfulness could address this gap through physiological and cognitive methods that reduce emotional arousal. Mindfulness targets *awareness of the process of behaving* rather than *altering specific problem behaviors*, a key distinction between mindfulness interventions and traditional therapies. Thus, the approach emphasizes the development of self-regulatory skills that may be applied to any situation or problem of concern.

Mindfulness-based interventions, the “third wave” of cognitive and behavioral therapies (Fletcher & Hayes, 2005), feature a versatile set of skills that include: labeling and attending to present-moment experiences, acting with awareness, avoiding automatic reactivity, and responding with a nonjudgmental, compassionate, and curious attitude (Sauer & Baer, 2010). The effortful focusing of attention plays a key role in regulating emotion, allowing for more adaptive patterns of thinking, reducing negative mindset, and disengaging from automatic cognitive, emotional, and behavioral responding (Carmody, 2015; Siegel, 2007). This pattern fosters psychological flexibility and behavioral regulation, which improves the potential for adaptive appraisals and coping responses (Biglan, 2015).

Teaching families to apply mindfulness practices will enable individual members to manage stressful interpersonal situations with greater ease. Promoting skills in a non-judgmental awareness of thoughts and emotions will reduce the negativity and impulsivity that often leads to dysfunctional interactions within families, resulting in more adaptive responses to conflict. When focused on relational awareness, mindfulness offers families a means to disrupt repeated patterns of dysfunctional behavior, bringing greater freedom of choice, shifting engrained patterns, and reducing automatic responding. Mindfulness increases awareness and connection with others, which promotes empathy, compassion, and other prosocial behaviors. Thus, teaching mindfulness in a family context provides the opportunity to focus directly on strengthening weak relational bonds (Porges & Furman, 2011) and facilitating adaptive emotional coregulation.

Mindfulness practices influence emotion regulation through both cognitive and physiological processes. Theoretically, the process of receptively observing and accepting stressors as they arise buffers the brain’s automatic threat/stress appraisal process. This increases an individual’s access to additional internal coping resources, which promotes “in the moment” psychological flexibility and decreases stress reactivity (Gratz & Tull, 2010). The beneficial effect of mindfulness manifests in the capacity of mindful-awareness to reduce threat appraisals and responses along two stress-processing pathways in the brain: “top down” cognitive management and “bottom up” physiological reactivity.

Mindfulness supports stimulation of the prefrontal cortex (PFC), augmenting its connections with the emotion processing centers of the midbrain (e.g., the amygdala). MRI studies demonstrate that the “top-down” pathway activates during mindful awareness emotion regulation tasks such as affect labeling and reappraisal (Creswell, Way, Eisenberger, & Lieberman, 2007). Strengthening the neuronal connections between the PFC and emotional processing areas improves behavioral and emotional inhibition, providing time for cognitive processes to activate, subsequently enhancing the potential for skilled, thoughtful responses to emotionally arousing situations (Carmody, 2015).

Mindfulness skills also modulate stress reactivity through two complementary autonomic nervous system processes, the sympathetic and parasympathetic. The sympathetic system (SNS) activates fight, flight, or freeze arousal mechanisms in response to perceived threats, causing an accelerated heart rate, fast shallow breathing, dilated pupils,

and secretion of adrenal hormones. Although evolutionarily adaptive for survival through highly efficient processing of dangers by the amygdala and the hippocampus, these sympathetic processes do not distinguish between high stress situations and actual survival threats. Consequently, individuals may react physiologically to a family argument in the same way they would to an actual threat to their survival (Parker, Nelson, Epel, & Siegel, 2015). In contrast, initiation of the parasympathetic system (PNS) reduces heart and breathing rates, producing a calming effect and a sense of safety. A settling response from the PNS tempers activation of the SNS. This sequential process allows the autonomic nervous system to return to a baseline level of equilibrium. However, individuals with poor emotion regulation capacities may repeatedly trigger the SNS, making it more difficult to bring the overall system into balance and return to a baseline relaxation state. Mindfulness helps buffer the fight or flight response, either through reducing SNS arousal or by improving PNS settling (Creswell & Lindsay, 2014; Creswell et al., 2007). Furthermore, given the physiological linkage between family members (Saxbe & Repetti, 2010; Timmons et al., 2015), improving the physiological stress response in one family member is likely to improve the family systems' capacity for adaptive emotional coregulation.

MINDFULNESS IN CLINICAL PRACTICE

Behavioral and mindfulness strategies are found in a number of evidence-based interventions. For example, mindfulness is one of four core modules taught in the group component of Dialectical Behavior Therapy (Linehan, 1993), which also includes family sessions as part of this multifaceted intervention. Other examples include Acceptance and Commitment Therapy (Hayes, Strosahl, & Wilson, 1999), Mindfulness-Based Cognitive Therapy (MBCT; Segal, Teasdale, Williams, & Gemar, 2002) and its adaptation for children, which utilizes concrete, informal, present-moment awareness practices, and may include parents in skill building (MBCT-C; Semple, Lee, Rosa, & Miller, 2010). Mindful parenting skills have been successfully incorporated into established parenting programs (Duncan, Coatsworth, & Greenberg, 2009a,b), building upon an enormous prevention literature of effective parenting practices (Biglan, 2015). Moreover, mindful parenting approaches are widely read within the popular press (Siegel & Bryson, 2011).

Group-based programs such as MBCT follow a detailed outline that includes formal sitting meditations, the body scan, as well as informal mindfulness skills. Less structured insight-oriented therapies may introduce an eclectic mix of meditation and mindfulness skills (Germer et al., 2013). Informal practices are short exercises that create present-moment awareness and often involve sensory orienting (e.g., listening to a sound, such as a chime, until the tone can no longer be heard). Other informal methods include the "STOP" practice (Stop – Take a breath – Observe your internal states – Proceed with awareness), and the "3-minute breathing space." The latter begins with brief attention to the breath, expands to include observations of thoughts, feelings, and bodily sensations, and then returns back to the breath (Segal, Williams, & Teasdale, 2002). These informal methods, when practiced repeatedly, help move individuals out of automatic and habitual responding. Increased awareness of internal states, which often drive emotional reactivity, creates opportunities for more skillful and productive responses (Black, 2015).

ADAPTING MINDFULNESS INTO FAMILY THERAPY

We propose that a mindfulness-based family therapy program would support intrapersonal emotion regulation and interpersonal coregulation using awareness and acceptance

strategies of body and mind states, while integrating techniques that promote mindfulness in interpersonal relationships (Gambrel & Keeling, 2010; Surrey & Kramer, 2013). Key methods include:

- Emphasis on awareness, attention, labeling, acceptance, integration, and nonjudgment of inner states, including thoughts, emotions, and bodily sensations.
- Psychoeducation related to brain functioning, focusing on the connection between the limbic system, autonomic system reactivity, and the role of the prefrontal cortex in self-regulation.
- Parent–adolescent relationship enhancement through attunement to each other’s internal states, empathy practices, and positive interactions.
- Emotional arousal monitoring and cultivating awareness-based self-regulation techniques in the context of family communication.
- Active cultivation of positive emotional states through gratitude and compassion practices.
- Individual and relationship-based daily home practice of mindfulness and relationship skills.

Together, these processes would promote neural integration of the cortico-limbic system, augment self-regulation and distress tolerance through attention to the present moment and acceptance of thoughts, feelings, and emotions. Behaviorally, we expect to observe reduced impulsivity and enhanced executive functioning, especially in emotionally challenging situations. Interpersonally, the mindfulness skills promote family coregulation and parental influence, through attunement, empathy, and compassion practices, which in turn would improve the family systems’ capacity for emotional flexibility and conjoint decision-making, all of which are known to reduce youth problem behaviors.

CLINICAL IMPLEMENTATION

The rationale, presented with an example of how a therapist might introduce mindfulness practices to families, clarifies important distinctions between the inner and outer world: “We all tend to focus our attention primarily on outer world experiences, thinking about the past, planning for the future, or daydreaming. We tend not to focus regular attention on our own inner world of thoughts, feelings, and bodily sensations, or consider the inner world of others and consequently, we are less aware of vital information that drives our behavior due to a lack of inner world awareness. Focusing regular attention on the inner world and developing curiosity about the inner world of other family members enables us to recognize reactivity and escalation patterns, and the links between our own inner experiences and outer behavior. Noticing the connections naturally increases our curiosity about the inner world of our family members, promoting attunement with one another. Learning mindfulness techniques will help us better understand ourselves and each other, improve the depth and quality of our communication, and feel more connected as a family.” Once families understand the intention, the therapist can begin to introduce the mindfulness concepts, which include:

Present-Moment Awareness

The capacity to respond skillfully to emotional escalations arises from the ability to maintain awareness of the present moment. Negative thoughts and emotions often result from angry rumination on the past or anxiety for the future. Sustaining a present-moment focus requires cultivating practices that enhance awareness. Families are introduced to a number of brief practices to help experience the present moment. Sensory focusing, such

as a ritual of ringing a chime to begin and end the session, with an emphasis on listening deeply until the sound can no longer be heard, is an easy method to help even young family members experience the present moment. Focusing in on a single sensory modality provides an easily accessible experience of calm for family members. Breathing practices are another method for establishing present-moment awareness in families. The general instruction is to focus attention on the inflow and outflow of breath, either at the tip of the nose or the rising and falling of the chest. Initially this may be difficult for some youth and adults and some report boredom. To reduce resistance, breathing practices are initially kept short with time gradually added as tolerance and capacity grows. The experience of boredom is something to notice with acceptance, as recognition and tolerance of negative emotional states is a skill to be developed. In the “keep a straight face,” contest, which is an example of an interpersonal present-moment mindfulness practice, two family members look directly at each other and the first to laugh loses. Several rounds can be played quickly with different family members taking turns playing the winner of each round. This exercise is an excellent home practice assignment as it creates easy opportunities for positive connection throughout the week. Family members experience this type of relationship-focused present-moment practice as fun, engaging, and promoting positive emotional connections.

Exploring Connections Between Thoughts, Emotions, and the Body

CBT-based emotion regulation techniques typically focus on the connection between thoughts, emotions, and behavior, with an emphasis on using cognitive strategies to challenge and replace irrational thinking. Mindfulness approaches, by contrast, highlight connections between thoughts, emotions, and physical sensations. An “emotional posing” exercise is one method for helping families experience connections between the body, the mind, and feelings, and develop a language to describe their internal experience. Using pictures of animals and/or people with expressions for different emotions, family members are first asked to identify the feelings expressed through the drawings, then take turns “posing” with each of the emotional expressions and describe their internal observations. A key insight is to notice connections between shifts in the body and the resulting thought and affective states, enhancing awareness in how the body influences the mind.

Understanding the Physiology of Emotion

The “hard wired” evolutionary nature of emotional reactivity is not widely recognized. Families often misinterpret extreme emotional responses as largely volitional and indicative of character or carrying a relational meaning within the family. It is very helpful to provide families with a brief explanation of the nature of brain development and the key roles that the autonomic nervous system and prefrontal cortex play in triggering and buffering innate fight, flight, and freeze responses. This helps reframe the meaning of emotional reactivity and enhances acceptance of mindfulness-based emotion regulation approaches.

Practicing Awareness and Tolerance of Distressing Emotional States

A core premise of mindfulness is impermanence, as manifested through the continual flux of arising and passing experiential states. Grasping, avoidance, and suppression exacerbate negative emotional states and reactive behaviors. Mindful awareness encourages active tolerance of these states with the recognition that they dissipate naturally through dispassionate observation. Skills for accepting distress combine observation of bodily states, such as stomach churning, with breath practices that support present-moment

attention. Affect labeling activates the prefrontal cortex, which is responsible for rational executive functioning activities.

To help develop awareness of biological reactivity during distressing emotional states, families can be provided with a heart rate monitor. After establishing the resting heart rate baseline for each family member, the family is asked to bring to mind a recent or current conflict. While remaining silent, each family member focuses on the internal sensations that occur while bringing the incident to mind, noticing the thoughts, feelings, and sensations in the body. Family members also observe their heart rate from the monitor and notice their heart beat internally. The therapist explains that the first step to effectively managing a challenging situation is to observe internal reactions, label feelings, notice thoughts and bodily sensations, including escalations in heart rate. The goal is to sit with the experience, enhancing awareness of reactivity. The therapist can guide family members in managing intensity through purposeful shifts in attention back and forth to neutral internal or external stimuli, such as the soles of the feet or a point on the wall. By observing with acceptance, physiological reactivity will gradually decrease.

Using Breath to Stimulate Parasympathetic Activity

Family members may regulate fight or flight responses by enhancing vagal nerve tone, which activates the settling/relaxation response of the parasympathetic nervous system. Using abdominal breathing, where the exhalation is longer than the inhalation, automatically initiates the relaxation response. Teaching families to practice this form of breathing together is a natural way to reduce emotional reactivity as a prelude to communication or problem solving around affect-laden issues.

Emphasizing Family Attunement to Emotional States

Once family members understand connections between their own body and mind states, they can explore understanding of one another's emotional states. A rich area of exploration is the frequency and accuracy with which family members observe and evaluate one another's emotional states through facial expressions and other bodily cues. Common areas of misreading (e.g., mad for tired) or purposeful emotional masking (e.g., happy for angry) are key avenues for enhancing emotional attunement within the family. These conversations enhance recognition for the importance of understanding the internal states of family members.

Valuing Attuned Communication

Attuned communication represents a synthesis of the mindfulness-based skills that allow for the recognition and sharing of distressing internal states within families. High conflict families often escalate through reactive responding to external behaviors without considering their intrapersonal origins. Common CBT methods for addressing communication challenges include using a variety of assertive verbal and nonverbal communication skills and active listening. However, attuned communication goes beyond these techniques to emphasize the central role of inner world experiences in resolving conflicts and challenges that arise in families. Highlighting the exploration and sharing of inner world states, particularly negative thoughts and feelings, enables families to better identify core problems and create effective solutions.

The repeated inability to resolve a particular issue may signal that the problem is not fully understood, either within an individual who has not yet fully accessed all the information available internally, or, when the issue is relational, by family members not fully attuned to each other. By accessing all the internal and external information available,

and working together, families are in the best position to make appropriate choices. This essentially uses the attunement process for problem solving and for coregulation. The failure to accomplish a goal is often associated with avoiding a negative emotional state or anticipating a negative emotional state, coupled with related thoughts and tension or unpleasant physical sensations in the body. The key to finding new paths is recognizing and allowing the awareness of these experiences to emerge and be tolerated, so they can be approached rather than avoided.

For example, one source of conflict in families is an adolescent's repeated failure to wake up in time for school. Parents' focus on outer world behaviors, such as late bedtimes, the failure to set an alarm, and the overuse of electronic devices typically result in ineffective solutions, even though these behaviors often contribute to the problem. Less often explored are the contributions of the adolescents' anxiety and distress at school, problematic social relationships, fear of failure, or distrust of teachers. Youths' active avoidance of negative emotional states and lack of a language and process for describing and sharing inner world experiences lead to their limited expression or denial. However, through mindfulness-based practices that emphasize awareness, recognition, tolerance, and skillful sharing of inner world states, families access a much richer field of information from which to address the problem. Youths, moreover, develop skills for managing negative emotional states and experience full understanding from their families. Complicated situations may take some time to explore. For example, not going to school may involve thoughts about teachers, lack of self-confidence, reactive body posture that makes focus difficult, feelings of anxiety and stress. Parent reactivity may result from fears of failure, judgments of laziness, and other attributions. The process of attunement-based problem solving is designed to minimize reactivity, explore true internal states and allow opportunities for more productive and creative solutions to emerge as greater compassion and empathy is expressed.

Expressing Gratitude

Promoting the expression of daily gratitude within families underscores interdependence and offers a concrete method for increasing positive emotional connections. A daily gratitude practice affirms what is going "right" today, enhancing positive attention to family relationships. While benefiting the entire family, we have found this to be an especially powerful practice for youth, who parents often accuse of "not caring," and who often lack skills for positively acknowledging parents and other family members.

Nurturing Self-Compassion and Compassion for Others

Feelings of guilt, self-loathing, and self-criticism are common sources of negative affect in families. Parents fear their children's misbehavior is a direct indication of their own failure as parents. Youth struggle with disappointing parents through poor behavioral choices and negotiating the challenging social and academic minefields of adolescence. Together, the day-to-day experiences of life often leave people feeling unsuccessful and full of negative self-judgment. Mindful awareness of these moments of suffering allows individuals to counter negative thoughts and feelings through an intentional expression of acceptance of human frailties and loving-kindness toward themselves. Moreover, the practice of offering kindness toward the self opens a pathway to greater compassion for others, as well as providing a framework for the concepts of listening with kindness and nonjudgment. Families may implement this first through the selection and daily repetition of meaningful loving-kindness and self-compassion phrases directed toward themselves and others, and then through active listening with acceptance and kindness during communication exercises.

CHALLENGES IMPLEMENTING MINDFULNESS WITHIN FAMILY THERAPY

Challenges with engagement and resistance may arise when therapists present mindfulness practices in family therapy (Higham, Friedlander, Escudero, & Diamond, 2012). When a family member appears uninterested or noncompliant, clarifying the importance of mindfulness and its role in family process is an important first step. Therapists employing mindfulness practices in family therapy may also find it useful to anticipate and discuss in advance some typical issues that can lead to reluctance to participate in mindfulness practices. For example, some family members may struggle with concentration and focus skills that require practice to develop. Attending to negative internal states can be uncomfortable, and active avoidance is a common occurrence, so family members can be expected to differ (at least initially) in their willingness to explore them. It is important for therapists to select mindfulness exercises that match the attentional skill and level of distress tolerance within the family.

Many families will find the active and experiential nature of mindfulness practices appealing. Nonetheless, introducing mindfulness practices incrementally, by first engaging in brief, pleasant, and relatively easy activities, and gradually introducing longer and more complicated practices, such as sustained monitoring of negative internal states, can be an effective strategy for overcoming a family member's reluctance. It may be useful to offer a reluctant family member the opportunity to simply watch as other family members engage in mindfulness exercises. Because of the effects of coregulation, engaging family members who are willing to participate can still be beneficial, and reluctant family members can be urged to participate as they feel comfortable and more willing to attend to their own internal experiences.

Occasionally a family member, generally a parent, will resist the premise of mindfulness and the importance of attending to internal states, instead directing the focus of attention toward external problem behaviors (typically of the youth). As parents raise these behavior problems, youth often disengage, decline to talk, and express their annoyance through nonverbal body language. Therapists can use these moments to demonstrate how mindfulness may reduce communication barriers by asking the youth to describe their present-moment internal experiences as they listen to their parent's complaints. Adolescents in mindfulness family therapy will use these opportunities to describe internal feelings such as anger, embarrassment, guilt, physical discomfort, tension, and a desire to escape from the room. This can be followed by asking parents to describe their internal reactions to their child's response. These in-the-moment interventions highlight the value of mindfulness, as describing internal experiences reduces behavioral reactivity, enhances understanding of problem behaviors, and re-engages the family to consider how their internal experiences affect family relationship dynamics.

Family members may also experience different levels of skill with various mindfulness techniques. Some adolescents may be aware of bodily sensations, but lack the vocabulary to describe the emotions and thoughts that accompany these feeling states. Parents, by contrast, often project worries about their children far into the future, struggle to attend to the actual situation facing them in the present moment, and lack awareness of how their own emotional reactivity contributes to family conflict. In these circumstances, parents can check in with youths about their thoughts and emotional states when they begin to observe reactivity at home, and adolescents can gently remind parents to stay present-focused when expressing concerns.

Minimizing resistance is built on providing a solid rationale for how the practices will benefit the family's daily experience and instill realistic hope that mindfulness can provide some relief. However, mindfulness practices may not be a good fit for all families and in

some cases, especially when multiple family members are resistant or struggle with the skills, an alternative treatment approach may be necessary.

CASE-STUDY EXAMPLE

An older couple, Sarah and Sam, adopted their 14-year-old nephew, John, 7 years ago following the death of both parents. The couple never had children of their own. Sarah generally offers criticism in the hopes of encouraging John to improve his bad habits, which include waking up late for school, throwing trash all over his room, and not completing homework. She is a stickler for a clean home and has a lot of rules John “should” be following but is not. John frequently asks permission to spend time with his friends at sleepovers or at the mall. Sarah and Sam struggle with how best to respond to these requests, which often occur at the last moment. When his requests are denied, John regularly escalates into aggressive behavior, destroying property in the home and occasionally threatening self-harm. Not knowing how to handle these situations, Sam calls the police in their small community for help. Sarah often expresses concern to John that he will not be successful in life, and may end up like his father who spent a lot of time in prison and died of a drug overdose.

This scenario incorporates many of the dynamics that are common in families with struggling adolescents, including:

- Problems with family relationships
- Emotional escalations and family conflict
- Poor communication
- Unaddressed youth problem behavior
- Parental focus on future and presuming worst case outcomes
- Youth impulsivity, reward/sensation seeking, and lack of appreciation for possible consequences of actions

The therapist incorporated mindfulness approaches into the family treatment in several ways. To address the frequent negative interactions, the therapist first introduced the gratitude practice, asking family members to identify something they were grateful for in one another. John communicated his gratitude for the meals that Sarah prepares each day, and the rides that Sam gives him to places he wants to go. Sarah acknowledged that John is good about going to church with them each week and that Sam takes care of all the yard work. Sam spoke about all the ways that Sarah manages the home and that John helps him out in the yard when asked. The therapist asked the family to continue the gratitude practice each day, making an effort to positively acknowledge each family member in some way.

The increase in positive interactions resulted in a few good days over the next week, but the family experienced one of their typical escalations when John wanted to go to the mall but Sarah refused because his room was a mess. The therapist used a white board to explain the physiology of emotion to the family to help them understand emotional escalations. She then explored each family member’s experiences with extreme emotions, seeing how well they were able to identify the accompanying thoughts, feelings, and bodily sensations. All three identified the unpleasant physical sensations. Sarah lacked awareness of her feelings, and notably focused on excessive fears for John’s future. John was more in tune with his feelings, often experiencing hopelessness and frustration when his parents denied him the opportunity to spend time with his friends. Sam, who had previously been the victim of a violent crime, was extremely uncomfortable with negative emotions, and often played peacemaker between Sarah and John. However, Sam also identified specific

triggers, such as John's preference for music with violent lyrics, that "set him off," creating conflict between them.

Over the course of several sessions, the therapist integrated a number of mindfulness techniques into traditional CBT approaches to support the family in enhancing their emotion regulation capacity. The therapist helped the family develop the ability to attend to the present moment through sound and breath practices, which they all found relaxing. Emotional posing practices, which help individuals better connect to their feelings, were particularly beneficial for Sarah. John and Sam enjoyed playing the keep a straight face contest together, and Sarah finally joined in after a week of watching them play. Moving toward attuned communication, the therapist first explored typical communication styles and then taught standard assertive communication strategies. This was particularly helpful for John, who began to communicate more directly with Sarah and Sam about his needs, which increased positive outcomes for him and reduced the extreme escalations. However, poor school attendance and performance continued to be a concern for the family. Sam often caught John up late at night playing video games, and the morning routine of Sam repeatedly nagging John to get out of bed continued to be a source of stress for both.

The therapist built upon the family's growing mindfulness skills to enhance distress tolerance. She first engaged the family in a discussion of the morning routine using the STOP practice to help clarify each family member's experiences. As the family members discussed their morning routine, the therapist called a "STOP" each time they began to escalate. The therapist instructed family members to stop talking and observe their own inner responses to the dialog and then share something about what they noticed in their inner world. This emphasized the importance of attunement to their own as well as other family members' inner worlds, especially during stressful conversations. John acknowledged his annoyance at Sam's repeated nagging, and expressed that he wanted to be given the space to wake up on his own. Sarah spoke of the stress she feels when worrying that John may fail, and acknowledged that she often expressed her fear as criticism. John observed his anger at her comments, recognizing that it increases his resistance to getting ready. Sam talked about the stress he experiences from their interactions and shared that he often collapses at home in exhaustion after finally getting John to school. Helping family members move beyond their reactivity by first acknowledging and then sharing their internal distress highlighted the emotional toll their interactions had on each other. This increased their motivation to explore ways of working together to reduce the morning stress. For example, John agreed to set his own alarm, while Sarah decided to focus on her own daily exercise needs during that time, practicing mindful observance and letting go of worries and fears as they arose. In later sessions, the therapist used similar methods to explore John's resistance to school in greater detail, asking him to describe his internal experience as he enters his math class. He expressed feelings of humiliation and a sense of failure after doing poorly on several exams. His stomach is often "tied in knots" and he feels uncomfortable asking for help from the teacher because he thinks it makes him seem stupid. He does not have confidence in his ability to complete the work. These negative thoughts and feelings often lead him to ditch the class. Hearing this information, Sarah, who regularly accused John of not caring about school, for the first time expressed compassion and support, saying "I wish I had known how he felt. I never knew this." Sam, who experiences daily anxiety when calling into the school's automated attendance line to check up on John, acknowledged that his own fears over John's school failure had led him to avoid the topic in conversation. With a greater understanding of the connection between John's internal distress and his school avoidance, Sam and Sarah were able to shift from worry, blame, and assumptions about motivation to supportive problem solving with John. Feeling greater connection with his parents over the issue, John willingly participated in

discussing possible options for getting back on track at school. With increased attunement, communication, support, and motivation developed through mindfulness practices, family conflicts decreased substantially.

THERAPIST TRAINING IN MINDFULNESS

Mindfulness skills are simple to learn but not easy to sustain. Experts in mindfulness-based interventions contend that clinicians who wish to teach mindfulness must develop their own practice as a foundation for their work (Germer et al., 2013; Pollak, Pedulla, & Siegel, 2014; Wolf & Serpa, 2015). Researchers have not yet quantified the amount of experience necessary for interventionists to teach these skills effectively. However, those who have personal experience will be better prepared to bring skillful techniques into therapy through implicit modeling and active teaching. In addition, introducing mindfulness practices to vulnerable populations, such as those with PTSD, requires caution and careful training as mindfulness may trigger clients with repressed experiences. At this point, though, the boundaries or limitations of a family therapy application of mindfulness techniques are unknown.

ASSESSING THE EFFECTIVENESS OF MINDFULNESS IN FAMILY THERAPY

While a range of potential methods exist for assessing the effectiveness of family-based mindfulness, some are more practical for a clinical context. Researchers have developed several self-report questionnaires for assessing mindfulness in recent years (Sauer & Baer, 2010) and have adapted them for use with youth and parents including the *MAAS Adolescent* version (MAAS-A; Brown, West, Loverich, & Biegel, 2011), the *Child and Adolescent Mindfulness Measure* (CAMM; Greco, Baer, & Smith, 2011), the *Parental Acceptance and Action Questionnaire* (PAAQ; Cheron, Ehrenreich, & Pincus, 2009), and the *Interpersonal Mindfulness in Parenting Scale* (IM-P; Duncan, 2007). The *Family Environment Scale* (FES; Moos & Moos, 1994) can assess reductions in conflict and improvements in family cohesion as a result of mindfulness interventions. Traditional and norm-referenced self-report measures of internalizing and externalizing symptoms may also have a place in evaluating the impact of mindfulness program components (Wilson, Barnes-Holmes, & Barnes-Holmes, 2014). Similarly, the *Difficulties in Emotion Regulation Scale* (DERS; Gratz & Roemer, 2004) may be useful for evaluating adaptive ways of responding to emotional distress. Neuropsychological measures have also been used to evaluate the effects of mindfulness on executive functions, including the neuropsychological processes of inhibitory control, working memory, and cognitive flexibility (Lehto, Juujärvi, Kooistra, & Pulkkinen, 2003), and suggest that mindfulness training alters working memory capacity and negative affect (Jha, Stanley, & Baime, 2010).

Considerable research also exists on the cardiovascular response to stress and its association with emotional regulation because of its proximal response to environmental stresses (Crone & van der Molen, 2007; Sumner, McLaughlin, Walsh, Sheridan, & Koenen, 2015). Moreover, research shows an association between family functioning and cardiovascular reactivity in at risk youth (Sijtsema et al., 2013), leading one research group to propose a model of neurovisceral integration which links cardiovascular response, executive function, and emotional regulation (Jennings, Allen, Gianaros, Thayer, & Manuck, 2015).

Other physiological markers that are not practical for clinical settings but widely used in research on coregulation and emotion regulation include the neuroendocrine marker cortisol. Some studies use cortisol expressed in saliva which gauges immediate stress responses (Segal, 2016), while cortisol present in human hair measures the stress response over the course of months (Stalder & Kirschbaum, 2012). Brain imaging

techniques (e.g., fMRI) have provided evidence of mindfulness leading to changes in activity in the brain regions associated with executive attention, particularly in the anterior cingulate cortex (Tang et al., 2007, 2015).

SUMMARY AND CONCLUSION

Mindfulness-based interventions demonstrate broad applicability for addressing a range of physical and behavioral health problems within individual and group treatments through physiological and cognitive processes that improve affect regulation. By expanding mindfulness-based skills to incorporate interpersonal as well as intrapersonal methods, we have outlined a rationale and conceptual clinical framework for adapting mindfulness to family therapy. Our approach emphasizes informal practices that teach present-moment awareness, distress tolerance, inner world attunement among family members, and cultivating positive emotions. These practices could be implemented alone or in conjunction with existing family interventions. For example, our group is delineating methods for integrating mindfulness techniques into an accommodation of Functional Family Therapy, with plans for a pilot study within a community setting also underway. There is, moreover, a variety of methods for assessing its effectiveness in adults and youth in both clinical and research settings. Given the profound influence of family relationships in affect regulation, the central role that affect regulation plays in family functioning, and prosocial behavior more generally, incorporating mindfulness-based practices directly into family therapy holds the promise of enhancing family functioning and enriching treatment outcomes.

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