

**USING MINDFULNESS TO PROMOTE POSITIVE EMOTION**

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## Abstract

This paper highlights the research literature on emotion, mindfulness, and the related brain sciences, as well as presents a client booklet based on research findings. One function of emotions is that they serve to solve problems. Negative and positive emotions are valuable in some contexts. Emotional modulation and dysfunctional regulation strategies are part of everyday life. Evidence suggests an association between positive emotion on the one hand and physical health and psychological well-being on the other. Interventions based on mindfulness training and designed to promote positive emotions have burgeoned in recent years. *Mindfulness* is an intentional way of orienting oneself to current experiences in the present moment with an attitude of nonjudgment and acceptance. The benefits of mindfulness are closely linked to the following mechanisms: exposure, cognitive and behavioural change, self-regulation, relaxation, and acceptance. This paper highlights three types of mindfulness—sitting meditation, walking meditation, and mindfulness in everyday life—and their application in psychotherapy. Scientific findings are presented about how brain activities associated with positive and negative emotions differ. Research on the effects of mindfulness on the brain is critiqued. Despite the abundance of studies on the effectiveness of mindfulness practice, methodological rigour needs to be the next focus for the research. Guidelines for teaching mindfulness in counselling settings are discussed. Finally, a psychoeducational booklet is provided in order that professionals can offer material to clients interested in using mindfulness to promote positive emotion.

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## Chapter 1: Introduction

Mindfulness-based psychotherapeutic treatments have gained much attention in 21st-century psychotherapies (Baer & Huss, 2008). The field of psychology, in addition to concerning itself with relief of symptoms, has begun to explore how mindfulness can be used to develop positive states of mind (Begley, 2007; Goleman, 2003; Siegel, 2007), which serve more active mental health functions than symptom relief. The importance of promoting positive emotion is illustrated in the following scenario.

A female client enters the counselling room, with a furrowed brow and a tightly-held body posture. When asked what she is feeling, she tells the counsellor what happened 20 years ago, what triggered her this morning, and what she is worried about for the future, but nothing regarding the experience of the current moment. She begins to cry, her tears alternating with expressions of anger, hatred, and shame. Unfortunately, she also appears to be averse to emotional display; she apologizes for losing control over her behaviour but then seems to feel even worse.

This scenario is not uncommon in counselling settings. Old or young, female or male, clients with various presenting concerns share the same symptom: living in the past or future rather than in the present moment. They also show difficulty accepting the emotion they display. The frequency of such situations raises a lot of questions: Are these clients aware of their body sensations in the present moment? Are they conscious of the thoughts that accompany the event? What is so bad about feeling emotions? Can the client justify his or her emotional behaviour? Is there any way to help the client shift to positive emotions? Does living in the moment help?

In the second half of the 20th century, psychologists devoted considerable resources to learning how to combat such problems as depression, anxiety, violence, antisocial behaviours, and low self-esteem. Much less attention was paid to the strengths, virtues, and potentials that can lead to high levels of happiness (Gable & Haidt, 2005). “Psychology was said to be learning how to bring people up from negative eight to zero, but not as good at understanding how people rise from zero to positive eight” (p. 103). The aim of this paper is to contribute to the optimal functioning of people by focusing on mindfulness and its possible path to positive emotions.

This paper begins with a discussion of emotions in psychological contexts, including definitions of emotion, its process and regulation, and the impact on health and well-being. The benefits of positive emotions are also examined. Next, the roots, philosophy, and benefits of mindfulness and three types of mindfulness are explored, followed by a review and critique of the application of mindfulness within the practice of psychology. An examination of the literature on the brain science of emotions and mindfulness is highlighted. A discussion follows about research into how the practice of mindfulness can change the mind over time and why that is beneficial to clients. Guidelines are provided for teaching mindfulness in counselling settings. Chapter 6 presents a booklet for adult clients; the booklet provides information about mindfulness, emotion, and the steps clients can follow to practice mindfulness in their daily life.

## Chapter 2: Psychology of Emotion

### *Understanding Emotion*

#### *Defining Emotion and Its Process*

Though seeking an operational definition of emotion is important in the discussion of mindfulness, agreeing on a definition to encapsulate the meaning and operational characterization of emotions has been a challenge for theorists (Carlson & Hatfield, 1992; Edelstein & Shaver, 2007; Niedenthal, Krauth-Gruber, & Ric, 2006). Keltner and Gross (1999) provided a multifaceted definition of *emotions* as “episodic, relatively short-term, biologically-based patterns of perception, experience, physiology, action, and communication that occur in response to specific physical and social challenges and opportunities” (p. 468); this is the working definition used in this paper. This definition not only views emotion as having many psychological and behavioural manifestations, but also acknowledges its functions.

Explanations of emotions have taken different forms to serve the needs of various professionals and their research parameters. For example, cognitive theorists generally focus on aspects of thoughts and evaluations, physiologists focus on physiological reactions, and behaviourists concentrate on emotional behaviours (Carlson & Hatfield, 1992; Niedenthal et al., 2006). The definition of emotions is complicated by the existence of divergent orientations or perspectives regarding what causes an emotion to occur in the first place (Niedenthal et al.). No single perspective is sufficient for understanding emotions; each view has some specific functionality and validity. From a process viewpoint, emotion starts with an internal or external stimulus event that the individual appraises as relevant to his or her well-being. This appraisal gives rise to a state of action

readiness, which in turn generates a coordinated set of verbal, physiological, behavioural, and neural responses to those events (Fox, 2008; Manstead & Fischer, 2000).

Another common argument addresses how emotion differs from *feelings*, *moods*, and *affect* (Davidson, 1994). Fox (2008) argues that whereas emotions are the public representation of responses to internal or external events, feelings are the subjective and private representation of these responses. Moods, on the other hand, are generally less intense and longer lasting, and are characterized primarily by the appraisal of a specific object or situation (Fox; Manstead & Fischer, 2000). Finally, affect refers to emotions, feelings, and moods all together, and this term is often used interchangeably with emotion (Fox). In this review, and for the purposes of the accompanying manual on mindfulness training, the term *emotion* mainly encompasses emotion, feeling, and mood.

### *Functions of Emotion*

In line with the multifaceted view of emotion defined by Keltner and Gross (1999), various therapists focus on the functional account of emotions (Niedenthal et al., 2006). According to the functional perspective, emotions are the adaptive and goal-defining aspects of experience that help in problem solving concerning movement toward or away from particular actions or plans (Mennin, 2005). Therefore, in practical terms, the primary function of emotion is to help humans solve problems at the individual, dyad, and group levels.

*Function of emotion for individuals.* Contemporary approaches suggest that for individuals, the fundamental function of emotion is adaptation (Fox, 2008; Mennin, 2005; Niedenthal et al., 2006). Emotions are cues of individuals' concerns, needs, or goals in the moment; thus they prepare individuals to respond to their internal and external

environment. Emotion systems are continuously present but constantly changing (Mennin).

In order to explain the adaptive function of emotion, researchers have investigated some organism changes—such as physiological changes or cognitive processes—during emotional states (Niedenthal et al., 2006). Two integrative theories of intraindividual functions of emotion have been developed. One hypothesis is explicated through evolutionary theory (Cosmides & Tooby, 2000), which claims that emotions are superordinating mental programs. This theory suggests that emotion coordinates and prioritizes the functioning of subprograms governing perception, attention, inference, learning, memory, goal choice, physiological reaction, motor systems, communication processes, and so on. When triggered, emotion interacts with other systems, deactivating some, activating others, or adjusting some parameters in order for the whole system to operate in an efficient way. According to this theory, emotions aid humans in adapting to environmental challenges and opportunities that are presented over the course of human evolution.

Though Oatley and Johnson-Laird (1987) also shared this general evolutionary approach, they postulated a different view of how the mechanism works. They theorized that emotions arise when an individual consciously or unconsciously assesses that progress toward his or her goal is threatened or requires adjustments. The emotions are the forms of internal and external communication that redirect the individual's behaviours toward meeting a new goal or responding to a signal. Oatley and Johnson-Laird offered five basic emotions in response to five situations: (a) happiness when a subgoal is achieved, (b) sadness in response to failure or loss of a major goal, (c) anxiety when self-

preservation goals are threatened, (d) anger when a goal is frustrated, and (e) disgust when a goal is violated.

*Function of emotion in dyad communication.* Given that the primary function of emotion is to promote adaptive actions, individuals need to know what other people are feeling in order to understand others' actions and adjust their own behaviours accordingly (Keltner & Haidt, 1999). Thus, emotional expressions such as facial displays, vocal patterns, and postures serve as social signals, rather than merely outward signs of internal states (Campos, Mumme, Kermoian, & Campos, 1994). Emotion also discloses and communicates important information such as beliefs, intentions, and the nature of interpersonal relationships, thus facilitating social interaction (Keltner & Haidt).

*Function of emotion in a group.* Emotions can be socially constructed (Fox, 2008; Keltner & Haidt, 1999). Theorists have claimed that emotion helps individuals define group boundaries and identify group members (Keltner & Haidt). For example, collective expression of joy while a team wins in a sports event gives the members a sense of shared identity. Within the group, differential experience and display of emotion help individuals negotiate group-related roles and statuses. Emotion also plays a role in facilitating group governance. A study on teasing reported that embarrassment displayed by low-status group members delivers a message of submission to higher-status members and therefore serves an accession function (Keltner, Young, Oemig, Heerey, & Monarch, 1998).

### *Emotion Regulation*

#### *Justification and Criteria of Emotion Regulation*

Research indicates that at all ages, the experiences of positive emotions lead to more affect regulation and, in turn, managed behaviours (Fredrickson, 1998, 2000;

Schore, 2003). Because emotion starts with a stimulus, it can be regulated. Though emotions have their functions, emotional responses are not always desirable, and not every emotion is comfortable to experience or appropriate to express. Emotion regulation is a process by which individuals make various efforts to influence the emotion they want to have, when they can have it, and how the emotional experiences can be expressed (Gross, 1998).

People engage in emotion regulation for various reasons. First, emotion regulation might be due to hedonic motivation, a common human drive to avoid unpleasant, painful feelings and to seek out pleasant feelings. Thus, when an emotion is painful, an individual might try to suppress the feeling and focus on thoughts or actions that produce the opposite effect (Niedenthal et al., 2006). Second, emotion regulation may serve self-protection or prosocial motives to protect the feelings of self and others. It may be necessary to suppress an emotion or pretend an emotion in order to protect one's personal safety or to elicit salutary reactions from others. Finally, if people fear being judged negatively because of inappropriate emotion expression, they might have a desire or feel pressured to confirm social customs or social demands (Manstead & Fischer, 2000).

Some criteria are required for emotion regulation. First, individuals need to have a knowledge of norms that serve as guides for deciding which emotions are appropriate in a particular context (Manstead & Fischer, 2000). Emotion regulation only occurs when people are able to perceive a discrepancy between what they are feeling at the moment and what they consciously want to display (Feldman Barrett, Gross, Conner Christensen, & Benvenuto, 2001). In addition, individuals need to be aware of the causes of emotions and their bodily sensations, as well as relevant behaviours and the possible ways of



modifying them. Such knowledge helps people to judge the suitability of their emotional experience and to consider possible options for dealing with discrepant emotions (Niedenthal et al., 2006).

### *Commonly Used Emotion Regulation Strategies*

Emotion may be regulated at several points in the emotion-generative process, which can be antecedent focused or response focused (Gross, 1998). This section discusses common antecedent-focused and response-focused emotion regulation strategies.

*Suppression of expressive behaviour.* A commonly researched aspect of emotion regulation is the attempt to not show outward facial expressions of emotion (Campbell-Sills & Barlow, 2007; Horowitz, 1976; Niedenthal et al., 2006). Though inhibiting spontaneous expressions may have some temporary advantages within specific contexts, there is little evidence of the positive effects of this strategy. Researchers have found that suppression of expressive behaviours not only fails to decrease the subjective experience of the emotion (Gross & Levenson, 1993), but also damages health by disturbing immune function (Lazarus & Lazarus, 1994). Thus, it is possible that suppression of emotional expression reflects a desire to confirm social norms and protect social relationships, rather than a wish to decrease negative feelings (Niedenthal et al.). When people value certain relationships or fear losing a relationship, they may sense a need to moderate their emotional displays and actions in the direction of suppression. Sometimes spontaneity or the expression of certain emotional displays is not conducive to achieving a certain end or containing a situation.

*Cognitive reappraisal.* Creatively thinking about things in a different way facilitates changing one's evaluation of a situation before the emotion becomes fully developed (Campbell-Sills & Barlow, 2007; Gross & Thompson, 2007; Horowitz, 1976; Niedenthal et al., 2006). This strategy intervenes at the early stage, so it can modify not only what people express behaviourally, but also what they feel inside, leading to a higher level of positive emotion overall (Campbell-Sills & Barlow; Gross & John, 2003). The research generally supports the effectiveness of this strategy for reducing negative emotional experience, expression, and physiological arousal (Campbell-Sills & Barlow; Gross & John; Gross & Thompson; Lazarus & Lazarus, 1994; Niedenthal et al.). For example, framing a mathematical task as challenging rather than threatening can help a student determine the situational meaning of the task (Tomaka, Blascovich, Kibler, & Ernst, 1997). Thus, cognitive reappraisal allows people to adjust their emotional experience, their physiological arousal, and their self-reported anxiety.

*Emotional thought suppression.* Individuals can regulate their emotions by purposefully stopping themselves from thinking about unwanted or unpleasant feelings (Lazarus & Lazarus, 1994; Niedenthal et al., 2006). Despite having a short-term effect, this stop-thought strategy suffers from rebound effect, that is, an increase in the likelihood that the previously suppressed feelings will reoccur (Page, Locke, & Trio, 2005). Consequently, one drawback to suppression as a defence is that suppressing unwanted thoughts often has a negative effect on physical health, such as inhibition of immune function (Lazarus & Lazarus; Petrie, Booth, & Pennebaker, 1998). The fact that suppression of emotional thoughts promotes the development of symptoms suggests that

suppression may in some circumstances be a cause of psychopathology, rather than a consequence (Wenzlaff & Wegner, 2000).

*Social sharing of emotion.* Healthy talking about personal emotions, particularly negative ones, enables individuals to reexperience emotional events. More importantly, it also provides people with chances to either (a) integrate various views related to the emotional experiences of certain perceived events into their existing emotional schemas, or (b) restore their beliefs regarding the meaning of such events (Horowitz, 1976; Zech, Rime, & Nils, 2004). Social sharing is more than the act of talking about the experience in detail over a period of time; it is also a means of seeking social support and social affirmation. Thus, social sharing is beneficial in the long run as a means of facilitating emotional adjustment and promoting psychological and physical health (Horowitz; Niedenthal et al., 2006).

*Summary.* Of the commonly adopted emotion regulation strategies noted above, cognitive reappraisal and social sharing are more effective than avoiding, inhibiting, and suppressing emotional response. Furthermore, cognitive reappraisal may be seen as a prerequisite for social sharing. Nevertheless, it is difficult for an individual to redirect thoughts connected with negative emotions. Therefore, other adaptive strategies are needed, such as those that maintain high levels of positive emotions and integrative processing of information regarding positive and negative emotion (Labouvie-Vief & Medler, 2002). Positive resource building and constructive reframing are important aspects of many therapeutic approaches.

## *Emotion and Health*

### *Negative Emotion and Health*

Experiences of unpleasant cognition, emotions, and sensations are an inevitable part of everyday life. However, when negative emotions are present, prolonged, extreme, or contextually inappropriate, they are associated with a variety of problems. For example, fear and anxiety contribute to phobias and anxiety disorders, and sadness and grief may lead to unipolar depression (Fredrickson, 2000; Lazarus & Lazarus, 1994). Negative emotion can generate physical tension, aches, pains, fatigue, and turmoil (Williams, Teasdale, Segal, & Kabat-Zinn, 2007)—which when present over time are associated with suppressed or less effective immune functioning—or even worse, it can promote permanent damage to the immune system (O’Leary, 1990). Persons with constant negative emotion are reported to allocate more of their energy to scanning their thoughts and internal signs of pain, which then elevate their everyday symptom level and lead to chronic health concerns (Stegen, Van Diest, Van de Woestijne, & Van den Bergh, 2001). Anger and its expression are common etiologies of heart disease and are also linked to cancer (Scheier & Bridge, 1995). Shame may lead to depression, eating disorders, and sexual dysfunction (Fredrickson & Roberts, 1997).

### *Emotion Regulation and Health*

Emotion regulation is commonly considered an essential component of mental health, and problems with regulation are associated with various forms of psychopathology (A. M. Hayes & Feldman, 2004). Studies consistently report that chronic emotion suppression or avoidance of negative emotion is associated with detrimental effects on physical health, fewer positive emotions, lower levels of

interpersonal functioning, more depressive symptoms, lower life satisfaction, weaker self-esteem, and lower overall well-being (Gross, 1998; Gross & John, 2003; Lazarus & Lazarus, 1994). In particular, chronic suppression of anger and hostility is associated with heart disease, cancer, and hypertension (Scheier & Bridge, 1995; T. W. Smith, 1992; Suls, Wan, & Costa, 1995). In contrast, disclosure of stressful, traumatic events is reported to enhance the immune functioning (Pennebaker, Kiecolt-Glaser, & Glaser, 1988).

### *Mood Disorder and Dysfunction in Emotional Processes*

Barlow (2002) claimed that anxiety and mood disorders are primarily emotional disorders, as they involve dysfunction in emotional processes not limited solely to anxiety or fear. Some researchers (Parker, Taylor, Bagby, & Acklin, 1993; Roemer & Orsillo, 2005; Turk, Heimberg, Luterek, Mennin, & Fresco, 2005) also found unique emotional disturbance patterns in the prediction of generalized anxiety disorder (GAD), phobia, social anxiety disorder, and depression. These common emotional disturbances are characterized by (a) experiencing strong negative emotion frequently, easily, intensely, and quickly; (b) poor understanding of emotions and difficulty in identifying, describing, and clarifying primary emotions; (c) reacting negatively to emotional states; and (d) adopting maladaptive emotion regulation (Campbell-Sills & Barlow, 2007; Mennin, Turk, Heimberg, & Carmin, 2004; Turk et al.). In short, these mood disorders can be characterized in terms of absence of positive emotion and inability to regulate negative emotions (Greenberg & Watson, 2005).

### *Summary*

The goal of a successful therapy is to change the client's relationship to his or her particular form of suffering (Germer, 2005a). Suffering from negative emotion and the

consequences of dysfunctional emotion regulation are strongly linked to the prevalence of mood disorders. Thus, personal efforts and therapeutic practices that promote positive emotions and adaptive emotion regulation are of great benefit to the field of psychology.

### *Positive Emotion*

#### *Why Is Positive Emotion Marginalized?*

Despite there being two independent and distinct emotion types—positive and negative—research regarding them is imbalanced (Avia, 1997). Several factors may account for this phenomenon. First, negative emotions are associated with problems of individuals and problems for society, so psychology gravitates toward problem solving. Next, compared to negative emotions, positive emotions are few in number. In addition, research into positive emotion tends to focus on one emotion, without considering possible distinctions between positive states (Fredrickson, 1998). Finally, positive emotions are much harder to elicit in the laboratory, in part because of the general tendency of organisms to react more strongly to negative stimuli than to positive ones (Davidson, 2004).

#### *What Is Included Under the Term of Positive Emotion?*

Generally speaking, positive emotion is described as a conscious feeling of pleasure (Berridge, 2003). However, each particular positive emotion serves a specific function. Therefore, it is necessary to identify what is included under the label of positive emotions, as well as the characteristics of positive emotions (Avia, 1997). Fredrickson (1998) described four distinct and recognizable positive emotions and their action tendency and outcomes. These four emotions are joy, interest, contentment, and love.

*Joy* is often used interchangeably with happiness, accomplishment, or progress toward one's goal, and other relatively high-arousal positive emotions. According to Fredrickson (1998), joy arises in contexts that an individual appraises as safe and familiar; it leads to free activity and therefore facilitates motor skill acquisition. *Interest* is commonly associated with curiosity, intrigue, excitement, or wonder, and shares some of the elements of challenge and intrinsic motivation. Interest tends to arise in contexts when an individual is offered novelty, change, and a sense of possibility or mystery, leading to exploration and knowledge acquisition. *Contentment* denotes low-arousal positive emotions such as tranquility or serenity. Contentment promotes appreciation of one's current life circumstances and facilitates integration of recent events and achievements into one's overall self-concept and worldview. Individuals experiencing contentment tend to broaden their ideas, and thus contentment leads to the integration and elaboration of knowledge. *Love* is more complex in that it represents many other specific positive emotions. People feeling love have a tendency to seek attachment and bonding, which are beneficial for social relationships (Fredrickson).

#### *The Benefits and Functions of Positive Emotion*

As a pioneer in positive emotion research, Fredrickson (1998) proposed the broaden-and-build theory to explain some phenomena observed in positive emotion states. Fredrickson maintained that positive emotions broaden an individual's momentary thought-action repertoires, which in turn build a variety of permanent personal resources that help the individual adapt to adverse circumstances.

*Positive emotion alters mindsets and related actions.* In contrast to negative emotions, which entail the narrowing of attention in order to facilitate fast and instant

reactions, positive emotions can broaden a person's patterns of thinking so that the mindset is effectively enhanced (Fredrickson, 1998, 2000; Fredrickson & Losada, 2005). The enhanced mindsets affect individuals in many ways. First, positive emotions promote widening of the scope of attention. People in positive emotional states tend to take a wider number of cues and meanings from the environment, rather than focusing exclusively on details. For example, in a recent study (Fredrickson & Branigan, 2005), participants responded more globally on visual processing tasks after viewing a video clip producing positive emotions, suggesting that positive emotions tend to broaden attentional focus.

Secondly, positive emotions aid in broadening the scope of cognition (Ashby, Isen, & Turken, 1999; Fredrickson, 1998, 2000; Fredrickson & Losada, 2005). Specifically, people experiencing positive emotions are more flexible and creative in constructing categories, as they are more able to see relatedness and interconnections among thoughts and ideas (Isen & Daubman, 1984). This ability is reflected in problem-solving capability (Ashby et al.; Isen, Daubman, & Nowicki, 1987) and readiness to make inferences based on general knowledge structure (Bless & Fiedler, 1995).

Thirdly, positive emotions promote wider variety and scope of actions, rather than reliance on typical or consistent actions (Fredrickson, 1998). Children whose interests were elicited generated more varied ways of playing with objects, as well as more types of behaviour within each way of playing (Renninger, 1992). A study of adult consumers' choices also reported that positive emotion promoted variety seeking (Kahn & Isen, 1993).



*Positive emotion leads to physical health outcomes.* Positive emotions may enhance physical outcomes by undoing the negative bodily after-effects of negative emotion, thus building physical resources that can be relied on in the future (Fredrickson, 1998, 2000; Fredrickson & Losada, 2005). In experiments by Fredrickson and Levenson (1998) and Fredrickson, Mancuso, Branigan, and Tugade (2000), participants were first shown a film that induced fear and heightened cardiovascular activity. Participants who later watched films that elicited positive emotions (such as contentment or amusement) returned to their baseline level of cardiovascular activation more quickly than those who watched films that elicited neutral emotion, and much more quickly than those who watched sad movies. Other research results suggest that positive emotion can interrupt the damaging impact of negative emotion on cardiovascular reactivity sparked by negative emotion (Fredrickson & Levenson; Fredrickson et al.; Tugade, Fredrickson, & Feldman Barrett, 2004). These results corroborate the hypothesis that positive emotions serve to reestablish equilibrium following negative emotional arousal such as high activity of the autonomic nervous system caused by fear and anger (Fredrickson, 1998, 2000).

Experiencing more positive emotions affects how people make choices in promoting better health practices that can influence physical health. For example, higher levels of positive emotions and positive emotional disclosure (e.g., counting personal blessings) have been associated with more exercise, increased dietary intake, and improved sleep quality (Emmons & McCullough, 2003; Pressman & Cohen, 2005). People with high levels of positive emotions were less likely to develop a cold when exposed to a virus (Cohen, Doyle, Turner, Alper, & Skoner, 2003), had lower rates of stroke in old age (Ostir, Markides, Peek, & Goodwin, 2001), and, in a study of older

persons, had lower readmission rates after being hospitalized for cardiovascular disease (Middleton & Byrd, 1996). In addition, emotional state affects individuals' perception of their health. When the objective signs of illness were held constant, people with higher levels of positive emotions reported less severe cold symptoms (Ostir et al.).

Finally, positive emotions predict how long people will live; this prediction is perhaps a reflection of the above factors in combination (Fredrickson & Losada, 2005). A longitudinal study of Catholic nuns found a strong relationship between longevity and positive emotional content in autobiographical writing in early adulthood (Danner, Snowdon, & Friesen, 2001).

*Positive emotion enhances psychological well-being.* The repeated occurrence of daily positive emotion moderates stress reactivity and mediates stress recovery, and these effects, in turn, assist individuals in becoming more resilient (Ong, Bergeman, Bisconti, & Wallace, 2006). A twin study reported that, after the average positive emotion of subjects and level of depressed symptoms were controlled, the experience of positive emotion in the moment buffered against negativity in daily life (Wichers et al., 2007). These findings suggest that genetic vulnerability to depression matters less than the experiencing of moment-to-moment positive emotions.

In contrast to the downward spiral that occurs in depression, positive emotions generate an upward spiral effect in which positive emotions and broadened coping skills mutually build upon each other and result in enhanced subjective well-being (Fredrickson, 1998, 2000; Fredrickson & Joiner, 2002; Tugade et al., 2004). In other words, positive emotions not only facilitate feeling good in the present, they also help build capabilities for dealing with future adversities (Fredrickson & Joiner).

*Positive emotion builds social resources.* Shared experiences of positive emotions in social settings provide more than shared mutual enjoyment in the moment; they also enhance enduring alliances, friendships, or family bonds (Fredrickson, 1998). Pressman and Cohen (2005) proposed that positive emotion serves a stress-buffering function in social life, in that people with a high level of positive emotions engage in fewer social conflicts and are more able to reduce the potential harm when conflicts occur.

Specifically, positive emotions, such as love, joy, and interest, are associated with the major tasks for successful relationships: identifying potential relationship partners, and developing, negotiating, and maintaining intimate relationships once initiated (Shiota, Campos, Keltner, & Hertenstein, 2004). Positive emotions tend to enhance the quality of intimate relationships, parent–child relationships, and friendship relationships (Fredrickson).

#### *Implications for Counselling: Cultivating Positive Emotion*

Given the problems associated with excessive, prolonged, or contextually inappropriate negative emotions and the physical and mental health benefits resulting from positive emotions, the cultivation of positive emotions should be seriously considered in counselling practice. More and more psychologists channel positive emotions or adaptive emotional regulation into their prevention and treatment programs, in the form of relaxation techniques, mindfulness, allowance of emotional experience, and coping strategies marked by finding positive meaning from adversity, in addition to teaching optimistic explanatory styles and how to recognize emotional phenomena (Fredrickson, 2000; Greenberg & Watson, 2005; Mennin, 2005; Tugade & Fredrickson, 2007). As part of this movement, mindfulness-based intervention may offer a means of

broadening emotional awareness and helping to sustain positive emotional engagement in daily life (Ong et al., 2006).

## Chapter 3: Mindfulness in Psychology

### *Mindfulness Conceptualization*

#### *Defining Mindfulness*

*Mindfulness* is an intentional way of orienting oneself to current experiences in the present moment with an attitude of nonjudgment and acceptance. Theorists refer to three closely interrelated components of mindfulness: awareness, acceptance, and present moment experience (Baer & Huss, 2008; Brown, Ryan, & Creswell, 2007; Germer, 2005a; Kabat-Zinn, 2003, 2005; Thompson & Waltz, 2007). The *present moment experience* includes internal stimuli such as cognition, bodily sensation, or emotional state, and external stimuli such as sights, sounds, or smells. *Awareness* is our direct and most immediate contact with the reality of the present; it is pure apperception and perception. *Acceptance* is a receptive attitude toward ongoing events and experiences, in which the individual is open to observe and to fully experience the entire reality without suppressing or acting out (Baer & Huss; Brown & Ryan, 2004; Brown et al.). An individual cannot reach awareness without having an attitude of acceptance; that is, he or she cannot give full attention to something and resist it at the same time (Brown & Ryan).

People can be easily caught by *mindlessness* when they are not consciously choosing to notice the present. Their minds are distracted by past or future oriented thoughts, or by opinions about what is happening in the moment (Germer, 2005a). When someone encounters an experience, his or her primary appraisal and reactions are strongly attached to and conditioned by previous experiences. Such processing implies that people rarely perceive objects or events impartially or purely (Brown et al., 2007). In contrast, mindfulness allows people to perceive experiences or objects receptively; their attention

is merely on the facts observed. They are then able to be present to the reality and have a real contact with it.

*Is Mindfulness Specific to Meditation?*

It is widely reported that meditation practice is strongly associated with greater mindfulness in some domains (Brown & Ryan, 2003; Thompson & Waltz, 2007). Nevertheless, mindfulness is not a peculiar product of meditation (Brown & Ryan, 2004; Germer, 2005a). Mindfulness can also be cultivated through any form of practice that directs attention to one's postures (e.g., sitting posture) or daily life practices at a given moment, in a way that allows one to see into the nature of the mind and world (Germer). Furthermore, theorists have suggested that some psychotherapy strategies that facilitate open or receptive attention to life experiences—such as psychodynamic, Gestalt, and cognitive behaviour therapy—can enhance people's level of mindfulness (Brown & Ryan, 2004).

As the foremost form of mindfulness, meditation is a deep, sustained, and disciplined introspection that affords a way of seeing into the nature of one's mind and world (Germer, 2005a; Kabat-Zinn, 2003; Shapiro & Walsh, 2003). A wide range of meditation forms have evolved throughout centuries and continue to evolve. According to some researchers, meditative practices include the relaxation response, mindfulness meditation, mantra meditation, breathing meditation, walking meditation, Chi gong, Tai chi, and Yoga (Cahn & Polich, 2006; Hart, 2007; Ospina et al., 2008; Walsh & Shapiro, 2006). Some scholars, on the other hand, describe only two main approaches to meditation: concentration and mindfulness meditation (Brown & Ryan, 2004; J. C. Smith, 2005). Whereas concentrative meditation involves fixing one's attention on a specific

mental activity or a sensory focal point—such as the breath, a word, a mantra, a candle or mandala—mindfulness meditation brings consciousness to bear on the moment-to-moment flow of our present experience. The two approaches overlap in some regards and have similar goals; in general, neither one is superior to the other (Hart).

In practice, the terms mindfulness and meditation are often used interchangeably (Kabat-Zinn, 2003). To make the discussion in this paper succinct, mindfulness will refer to specific types of meditation, such as sitting meditation, walking meditation, and mindfulness in daily life. The other forms of meditation or means of cultivating mindfulness, such as relaxation, Chi gong, Tai chi, and Yoga, are not included in this paper. Both concentrative and mindfulness meditations are included in the discussion.

#### *The Mechanism of Mindfulness: How It Helps?*

Mindfulness has attracted substantial interest as an approach to reducing people's vulnerability to stress and emotional suffering (Bishop et al., 2004). The mechanisms that explain how mindfulness skills lead to these benefits are explored as follows.

*Exposure.* Mindfulness training can entail sustained exposure to sensation, thoughts, and emotions, leading to the desensitization of conditioned responses and the reduction of avoidance behaviours. Exposure may promote the reduction of a negative or passive response, thus facilitating a reduction of anxiety or fear (Baer, 2003; A. M. Hayes & Feldman, 2004).

*Cognitive change.* Mindfulness training facilitates the development of a nonjudgmental and decentred view of one's thoughts, influencing one's ruminative thinking pattern to be disrupted (Teasdale, Segal, & Williams, 1995). Furthermore, mindfulness training enables individuals to redirect negative thoughts to other aspects of

the present moment, such as breath, walking, or environmental sounds, thus allowing the individuals to view the thoughts as temporary phenomena. However, the cognitive change through mindfulness differs from that resulting from cognitive therapy, in that the former does not involve the evaluation of certain thoughts as rational or distorted (Baer, 2003).

*Self-regulation and behavioural change.* Mindfulness brings an individual's awareness to current experience by regulating the focus of attention (Bishop et al., 2004), which promotes skills in recognizing early signs of problems and the consequences of the problems (Baer, 2003). This awareness allows the individual to build self-management skills, such as reduction of impulsive or maladaptive behaviours (Baer). Being assigned to regular mindfulness practice encourages responsibility for one's own behavioural change. In these ways, mindfulness relates to a positive orientation and a disciplined life.

*Relaxation.* Although inducing relaxation is not the primary goal of mindfulness, its effect is closely and strongly embedded in mindfulness training. While learning nonjudgmental observation in the moment, people learn to observe autonomic arousal, racing thoughts, muscle tension, and other phenomena that are incompatible with relaxation (Baer, 2003). Thus, the relaxation outcome is concomitant with these observations and learning.

*Acceptance.* As one of the three components of mindfulness, acceptance (and its relationship with change) has been the central ingredient of psychotherapy (Baer, 2003). Mindfulness training requires an accepting attitude toward one's encounters with any bodily, cognitive, or emotional phenomena, such as pain, thought, feelings, or urges. Acceptance plays an important role in alleviating the internal conflict that may occur due



to the dissatisfaction of the current situation (Siegel, 2007). Only with an attitude of accepting the current situation can the relevant change take place.

### *The Roots and the Philosophy of Mindfulness*

#### *The Root of Mindfulness*

The concept of mindfulness is most strongly associated with Buddhist psychology, which originated 2500 years ago (Baer & Huss, 2008; Epstein, 2003; Kabat-Zinn, 2003). Mindfulness is also conceptually associated with diverse philosophical and psychological traditions. These traditions include not only ancient Greek philosophy, Taoism, and Hinduism, but also the phenomenology, existentialism, and naturalism of Western European thought. Furthermore, relevant to the mindfulness concept are the cognitive, behavioural, and psychodynamic approaches to psychology, as well as research into learning, development, and intelligence (Andersen, 2005; Brown et al., 2007; Epstein; Walsh & Shapiro, 2006).

Historically, mindfulness is the core of Buddha's teaching (Hanh, 1998). Buddha urged people to use their own mind, body, and experience to comprehend human nature, and to treat the six main fundamental mental afflictions (Kabat-Zinn, 2003), which are greed, hatred, pridefulness, ignorance, doubts, and afflictive views (Goleman, 2003). Although the various Buddhist traditions vary significantly from one another, mindfulness always nests within a conceptual view in which it addresses the transcendence of human suffering through understanding how unexamined behaviour and untrained minds can contribute to that suffering (Kabat-Zinn).

*The Philosophy Underlying Mindfulness*

*The ubiquity of human suffering and its source and cessation.* Mindfulness carries the meanings of dharma, which means *the way things are*, as in the Chinese notion of Tao (Kabat-Zinn, 2005). Buddhism holds the view that suffering is inevitable in human experience and that lasting pleasure is unobtainable. Everything in human experience is suffering, ranging from death and separation from loved ones to experiences commonly viewed as joyful, such as birth or love. The source of suffering is attachment or craving, which blinds our mind to the true self and the reality of the world (Ekman, Davidson, Ricard, & Wallace, 2005; Hanh, 1998; S. C. Hayes, 2002; Olendzki, 2005). Mindfulness counteracts this craving by helping one understand how suffering is caused and by helping one learn how to undo the conditions of suffering (Ekman et al.; Kumar, 2002; Olendzki).

*Human beings' potential for positive growth and the importance of experience.* Buddhists believe in human beings' innate potential for positive growth, and that the resources are available from higher states of mind (Robins, 2002; Shapiro & Walsh, 2003). Therefore, many mindfulness techniques focus on self-exploration and self-development, eventually leading to self-actualization (Shaw, 2006; Shapiro & Walsh). Unlike the Western traditions, which emphasize using rationality to govern human nature, ancient Asian tradition seeks growth through experiences (Olendzki, 2005). Mindfulness is an example of the latter approach, as it embraces the true value of experiencing in the moment. In this sense, rationality is merely a tool to validate what we are driven to and why; it does not attempt to offer sufficient knowledge about the life experience (Olendzki).

*Self and compassion.* Buddhism describes the self as a construct that exists in certain conditions and that passes when those conditions are absent. Basic to Buddhist belief is the construct that self is not enduring. Suffering occurs when human beings mistake the self to be more than it is, or when there is a fundamental delusion about who one is, as in some psychiatric disorders (Olendzki, 2005). Given the ubiquity of human suffering, the boundaries that define ourselves and others are dispelled when we develop compassion toward all living beings (Kumar, 2002). Buddhist philosophy may help some clients, but mindfulness awareness training is not dependent on an acceptance of Buddhism, and more secular versions are taught as *mindful awareness* (Kabat-Zinn, 2005).

### *Tasting Mindfulness*

Given the various forms of mindfulness practice, it is not feasible to describe all forms of mindfulness here. In this section, three common forms are described: sitting, walking, and mindfulness in daily life.

#### *Environment and Physical Preparation*

Mindfulness can be practiced anytime and anywhere; for mindfulness to be effective, however, a regular period of time should be set aside. Although the timing may vary according to individual circumstances, it is preferable not to practice within 2 hours after finishing a meal (Ott, 2002). For sitting meditation and formal walking meditation, a time and place are chosen that are free of interference from outside noise, distractions, light, and activities of other people. Preparation includes wearing loose clothes, removing watch and glasses, and emptying the bladder. For walking meditation or all-day

mindfulness, individuals are advised to be watchful of the external environments they are in (Kabat-Zinn, 1990).

### *Sitting Meditation*

Sitting meditation is regarded as the heart of formal meditation (Kabat-Zinn, 1990). Those practicing sitting meditation, whether sitting in a chair or on the floor, may need a round cushion under the buttocks (Kapleau, 1989). If using a chair, it is advisable to choose a chair that has a straight back and allows one's feet to be flat on the floor. In order for the spine to be self-supporting, practitioners sit away from the back of the chair (Kabat-Zinn; Kapleau).

Generally there are four postures for practicing sitting meditation on the floor: full-lotus, half-lotus, Burmese, and kneeling postures (Kapleau, 1989). Practitioners sit on a mat for these four forms. *Full-lotus* is a posture with right foot over left thigh and left foot over right thigh. This posture forms a tripod base that gives 360-degree stability. It looks like the pyramid structure of the seated Buddha and is described as the most powerful position for meditation throughout the evolution of Buddhism. Nevertheless, it is the most difficult posture to learn. *Half-lotus* is a posture with left foot over right thigh and right foot under left thigh. In *Burmese* posture, the legs are uncrossed; both left and right foot are in front. Burmese posture has the advantage of being relatively comfortable for beginners. Both half-lotus and Burmese postures do not provide for the base that the lotus posture does, so the spine cannot be kept absolutely erect for long. Therefore, it may be beneficial to use a support cushion under the regular one to facilitate the knees resting on the mat (Kapleau). Finally, in *kneeling* posture, the knees are bent in line with one another on the mat, and a cushion is placed between the feet (Kabat-Zinn, 1990; Kapleau).

No matter which posture is chosen, the buttocks are thrust out; the back, neck, and head aligned in the vertical; and the shoulders relaxed. The chin should be slightly drawn in, and the abdomen relaxed and slightly protruded. Hands are comfortably placed on the knees or resting in the lap with the fingers of the left hand above the fingers of the right and the tips of the thumbs touching each other (Kabat-Zinn, 1990; Kapleau, 1989). Eyes can be closed, or open with the gaze downward (Baer & Huss, 2008). Experience has shown that the mind is quietest when the eyes are open in a lowered position, not focusing on anything (Kapleau).

When the postures have been settled, practitioners bring attention to the breathing, feeling the breath coming in and going out, letting breath just happen, observing and feeling it, gross or subtle, long or short, and so on. Some people may choose to count each inhalation and each exhalation, beginning with the number 1 and counting up to 10. When the count reaches 10, the counting begins again, starting from 1. Note that counting numbers is the subject of attention; it is not used to control the breathing. When the mind wanders, practitioners simply bring the attention back to the numbers and the breath, without judgment (Kabat-Zinn, 1990; Kapleau, 1989; Segal, Williams, & Teasdale, 2002).

Normally, when the mind moves, the body follows. Practitioners may sense discomfort of the legs and have the urge to move the body. They are encouraged to do so with awareness, noticing the intention to move, the act of moving, and any changes in sensation. Or, practitioners may find their mind wanders from the breath to numerous other thoughts. They simply observe their thoughts nonjudgmentally and bring their focus back to the breath or other body sensation (Baer & Huss, 2008; Kabat-Zinn, 1990; Williams et al., 2007).

After several minutes, the focus of attention may shift to other sensations such as physical discomfort or an emotion, or to foci such as a point in the room, a visualization, a repeated sound, a mantra, an imagined image, or compassion (Begley, 2007; Cahn & Polich, 2006; Goleman, 2003). However, counting breaths, as described earlier, is the easiest focus for beginners, as all reasoning is excluded and the discriminative mind is at rest (Kapleau, 1989).

In terminating a period of sitting meditation, practitioners begin by rocking from one side to another, first in small swings, then a couple of large ones. Rising abruptly after the meditation is not advised (Kapleau, 1989). Doing some mild exercise before and after the sitting meditation is suggested.

There is no general rule for the length of the sitting meditation. Considering the possible discomfort of the body, beginners are advised to sit for shorter periods of time. Some people are able to sit for a longer time, say 1 hour. However, sitting for more than 30 or 40 minutes is not recommended, because the mind cannot sustain its vigour for a longer period. In addition, practicing meditation regularly is more important than the length of each practice (Kapleau, 1989).

### *Walking Meditation*

The walking meditation consists of deliberately drawing attention to the body sensations while walking. The focus is upon walking and knowing that we are walking. The attention is on the movements, shifts of weight and balance, and sensations in the feet and legs associated with walking. Practitioners can choose to focus on a single aspect of attention or to change their focus with awareness (Baer & Huss, 2008; Kabat-Zinn, 1990).

To practice walking meditation, practitioners have their knees unlocked, allowing the arms to hang loosely by the sides or holding the hands loosely together in front of the body. The gaze is softly directed straight ahead (Segal et al., 2002). Walking meditation is often practiced at a pace that is far slower than normal walking. It starts with either foot and proceeds in such a way that the foot sinks into the floor, first the heel and then the toes. Then the weight of the body is transferred onto the other foot (Kapleau, 1989; Segal et al.). Walking meditation can be done at a moderate or fast pace. For safety reasons and in order not to have a goal other than the meditation itself, people often practice by walking back and forth across a room (Baer & Huss, 2008). It is also advisable to practice walking meditation for 5 minutes after each sitting meditation (Kapleau).

A more informal walking meditation may be practiced while walking from parking lot to office or while taking a walk at a normal pace, without exaggerating or stylizing the movements of walking. The key is to bring the awareness to the present movement, walking and knowing that one is walking, and knowing the full spectrum within the body of what walking actually is. Thus the routine walking would be transformed into a rich and nurturing activity (Kabat-Zinn, 1990, 2005).

### *Mindfulness in Daily Life*

The ultimate goal and challenge of mindfulness is to be present in daily life. The emphasis of mindfulness in daily life is on really knowing what we are doing throughout the moment-to-moment experience (Kabat-Zinn, 1990; Shapiro & Walsh, 2003). This is a critical exercise, as it extends the self-awareness and insight cultivated from formal sitting meditation into a practice that reduces habitual, automatic, and maladaptive behaviours of daily living (Baer & Huss, 2008).

As it is hard to be mindful all day long, some people may choose some tasks that they tend to do unconsciously or impatiently, or tasks that occur a couple of times a day, as reminders to return to the present and to do those tasks mindfully. Examples of such tasks are brushing the teeth, drinking water, eating, doing laundry, cooking, exercising, washing dishes, cleaning house, taking the bus, or standing in line. Being mindful does not mean people cannot rush or do multiple tasks. Instead, it means they will be mindful while they are rushing or multitasking.

Furthermore, people bring their attention to what is happening in the moment in a very purposeful way. Take eating a raisin as an example. One may touch, observe, smell, and listen to the raisin, feel the raisin on the tongue and teeth, feel the mouth watering, and feel the difference between one raisin and another. With mindfulness, eating a raisin can be a vivid experience (Ott, 2002; Segal et al., 2002). Paying close attention to each aspect associated with eating a raisin is an example of beginner's mind—the willingness to set aside any previous thoughts and to see the situation afresh (Epstein, 2003).

### *The Benefits of Mindfulness*

#### *Enhancing Physical Health*

*Regulation of physical sensation and experience of symptoms.* Strategies have been explored to help people cope with pain, which is the most common physical distress and the consequence of illness (Brown et al., 2007). Paying attention, an integrated component of mindfulness (Valentine & Sweet, 1999), has been found to be superior to other strategies (Cioffi, 1991; Suls & Fletcher, 1985). Studies have demonstrated that patients with pain from burns or psoriasis or who were suffering from a cold reported greater pain relief or showed rapid recovery when they drew their attention to the



physical sensation, rather than to their physical state or their emotional or cognitive reactions to the sensory experience (Cioffi & Holloway, 1993; Haythornthwaite, Lawrence, & Fauerbach, 2001; Kabat-Zinn et al., 1998).

*Increase physical health outcomes.* Practicing moment-to-moment mindfulness, even for brief periods, helps develop calmness and relaxation in body and mind (Kabat-Zinn, 1990). This practice can increase an individual's ability to reduce physiological response when facing stressors (Barnes, Treiber, Turner, Davis, & Strong, 1999; Bishop, 2007; Murata et al., 2004). Researchers reported an interconnectedness between regular meditation and increased healing of cancer cells (Yu, Tsai, & Hwang, 2003). Subjects in an 8-week meditation training group were found to have a significant increase in immune response to influenza vaccine, suggesting that mindfulness intervention enhances immune responsiveness (Davidson, Kabat-Zinn, et al., 2003).

#### *Increasing Behavioural Regulation*

Mindfulness, the receptively observant processing of internal and external stimuli in the present, helps people have more flexible or adaptive responses to life experiences. Individuals then have the capacity to respond to those experiences according to their values, beliefs, goals, or needs, rather than on the basis of autonomic, habitual, or impulsive reactions (Bishop et al., 2004; Wenk-Sormaz, 2005). Brown and Ryan (2003) found a positive correlation between mindfulness and behavioural self-regulation. Brown and Ryan used the Mindful Attention Awareness Scale (MAAS) to assess individuals' frequency of mindful states over time. They found that participants with a higher disposition to mindfulness were more mindful of their overt behaviour and more likely to regulate their behaviour.

*Enhancing Emotional Regulation and Psychological Well-Being*

Mindfulness is an attribute long believed to be linked to psychological well-being, because of its fundamental adaptive function in emotion (Brown & Ryan, 2003). Brown and Ryan reported that people with higher MAAS scores were more aware of and more receptive to their inner experiences. Moreover, these individuals were less likely to be socially anxious and ruminative, as the higher MAAS scores suggest that they were more in tune with their emotional states and able to fulfill their basic psychological needs. In addition, the state of mindfulness was associated with higher positive emotion, lower negative emotion, and more effective emotion regulation, including a greater awareness and acceptance of one's own emotions as well as a greater ability to correct or repair unpleasant emotion states (Brown & Ryan). Conversely, higher levels of negative emotion states were significantly associated with lower levels of acceptance, awareness, and mindfulness skills (McKee, Zvolensky, Solomon, Bernstein, & Leen-Feldner, 2007).

Research on the efficacy of mindfulness intervention in promoting emotion regulation is promising. Studies repeatedly report that people using a mindfulness-based intervention experienced significant decreases in distress and in distractive and ruminative thoughts, as well as significant increases in positive mood over time (Chang et al., 2004; Jain et al., 2007). Arch and Craske (2006) found that people who received a mindfulness induction showed more emotional stability and less negative emotion in response to affective valenced picture slides and were more willing to have visual contact with aversive slides. This result suggests that an induced mindfulness may facilitate recovery after emotionally provocative experiences. Similarly, a study of strategies for coping with negative emotion found that a meditation group showed quicker recovery

from an induced sad mood than the rumination group and the distraction group. The meditation group also reported significantly lower levels of negative emotion (Broderick, 2005). Furthermore, mindfulness serves as a buffer for negative emotions, thus leading to greater ability to regulate emotion. People who were high in mindfulness were reported to be less reactive to threatening emotional stimuli than those who were low in mindfulness (Creswell, Way, Eisenberger, & Lieberman, 2007).

Mindfulness has shown notable benefits in treating a wide range of symptoms, including depression, anxiety, social phobia, eating disorders, and pain—and most substantially, reducing stress (Baer & Huss, 2008; Kabat-Zinn, 2003; Schreiner & Malcolm, 2008; Segal et al., 2002; Teasdale et al., 1995; Teasdale et al., 2000). The next section describes therapies that have integrated mindfulness in their treatments.

It is postulated that mindfulness intervention is compatible with an emotional regulatory framework (A. M. Hayes & Feldman, 2004). The effectiveness of mindfulness in emotion lies in its decentred stance toward emotion. Individuals practicing mindfulness maintain a distance from the emotional experience and thus are able to clarify their feelings and perceived ability to restore their mood. As a result, their emotional reactivity is decreased and they are able to rapidly return to their baseline level of serenity (Bishop et al., 2004; A. M. Hayes & Feldman).

### *Enhanced Social Functioning*

Although research into the effect of mindfulness on social function is a relatively new area of study (Brown et al., 2007), the findings are positive. Brown and Ryan (2003) reported that mindfulness was predictive of felt sense of relatedness and interpersonal closeness. Mindfulness skills not only build the capabilities and willingness to identify

and describe a partner's thoughts, emotions, and well-being, but also facilitate the skills for attending to the verbal or nonverbal communication of the partner (Dekeyser, Raes, Leijssen, Leysen, & Dewulf, 2008; Goleman, 2006). Thus, mindfulness helps individuals interact in interpersonal relationships with nonjudgmental acceptance and awareness, and the individuals' social anxiety is reduced (Dekeyser et al.).

### *Application of Mindfulness in Psychotherapy*

In psychotherapy, mindfulness offers rich possibilities for developing positive states of mind beyond symptom relief. Of the abundance of mindfulness-based psychotherapeutic treatments, two forms are presented here: stand-alone treatments and treatments offered as aspects of integrative approaches (Roemer & Orsillo, 2003). The mindfulness-based treatments that have received the most attention are mindfulness-based stress reduction (MBSR), mindfulness-based cognitive therapy (MBCT), and dialectical behavioural therapy (DBT). These therapeutic approaches are discussed in the following sections.

#### *Mindfulness-Based Stress Reduction (MBSR)*

Jon Kabat-Zinn, the clinician who popularized mindfulness meditation in Western society (Hart, 2007), founded the University of Massachusetts Medical School's Stress Reduction Clinic in 1979 (Kabat-Zinn, 2003). The vision of the program was to create a vehicle for patients to cope with their stress, pain, and illness. Participants are provided with an environment within which they experiment with various methods for facing, exploring, and relieving suffering at the levels of body and mind, and for perceiving the inherent power within the connection of body and mind. The intent of the program is not to teach Buddhism or make great meditators. However, participants are

encouraged to remain loyal to the universal dharma dimension that is at the core of mindfulness (Kabat-Zinn).

MBSR was originally framed as a complementary treatment, serving patients with a wide range of presenting concerns who did not respond well to traditional treatments (Kabat-Zinn, 2002, 2003). The MBSR is an 8-week group program, with 2.5-hour weekly sessions (Baer & Huss, 2008). There is an all-day session during week 6, called the Day of Mindfulness, providing participants with opportunities to practice meditation over several hours with minimal disruption or distraction (Brantley, 2008).

The MBSR program is also a model for other hospitals running compatible programs (Kabat-Zinn, 2002, 2003). Currently, mindfulness-based programs are offered in hospitals and clinics around the world, as well as in schools, workplaces, corporate offices, adult and juvenile prisons, and a wide range of social and ethnic settings. The population ranges from clients with cancer, heart disease, and chronic fatigue syndrome to those with panic disorder, anxiety disorder, and panic disorder with agoraphobia. Mindfulness-based programs are employed for pain relief, reducing stress in the workplace, and relationship enhancement for couples (Baer & Huss, 2008; Kabat-Zinn, 2002, 2003). In addition to these reported applications, many other potential contexts need to be further researched and reported in the literature in order for professionals to continue collaborative efforts and to discern how to apply mindfulness effectively and efficiently with a variety of clients.

#### *Mindfulness-Based Cognitive Therapy (MBCT)*

Mindfulness-based cognitive therapy (MBCT) was developed in 1992 by Zindel Segal, John Teasdale, and Mark Williams (Baer & Huss, 2008). In response to the high

rates of relapse in cases of depression, Segal et al. (2002) aimed to develop a cost-effective treatment that would teach individuals skills for preventing depression relapse. Initially, they focused on attentional control training, which they found to be ineffective. They then integrated mindfulness in their programs, in which practitioners adopted an attitude of allowing, accepting, and even welcoming unpleasant inner states, without attempting to fix or avoid them (Baer & Huss; Segal et al.; Teasdale et al., 2000). They found that personal mindfulness practice was essential to effective teaching of mindfulness. As a consequence, mindfulness training skills were incorporated into their standard program (Segal et al.).

Like MBSR, MBCT comprises eight 2.5-hour weekly sessions and an all-day session during week 6. MBCT is designed for participants who have previous depressive episodes and are currently in remission. MBCT is conducted in the context of an explicit analysis of the processes involved in depressive relapse and of the relevance of mindfulness in changing those processes. Currently, professional training in MBCT is offered periodically in North America and the United Kingdom. In addition to being used to treat depression, MBCT has been reported to be effective in treating children's problems and in the treatment of binge eating (Baer & Huss, 2008).

#### *Dialectical Behavioural Therapy (DBT)*

In her investigation of why some clients did not respond to a well-established cognitive-behavioral therapy, Marsh Linehan found that acceptance was a central element of success. To learn more about acceptance, Linehan studied Zen Buddhism. She went on to integrate nonreligious acceptance-based strategies into traditional cognitive-behavioural therapy. Because some of her clients were unable to or unwilling to engage

in meditation practice, she developed behavioural exercises for teaching the core skills of mindfulness and acceptance in her practice (Baer & Huss, 2008).

Dialectical behavioural therapy has been practiced by many mental health professionals. Standard DBT is 1 year in duration and includes individual therapy, group skills training, and telephone consultation, as well as weekly consultation meetings for the therapists delivering the treatment (Miller, Rathus, & Linehan, 2007; Baer & Huss, 2008). The treatment has been applied to various areas, including generalized anxiety disorder, borderline personality disorders, depression, substance abuse problems, eating disorders, and suicide prevention (Baer & Huss; Miller et al.; Orsillo, Roemer, & Holowka, 2005).

#### *Criticisms of Mindfulness Practice and Research*

Even though research has broadly reported the effectiveness of mindfulness practice, mindfulness must be applied with care. The following paragraphs discuss research weaknesses and practice limitations.

##### *Inadequacies of Research Methodologies*

Some meta-analyses of empirical research on mindfulness-based interventions have highlighted several flaws of the related mindfulness research. These flaws caution users to view research findings as tentative.

*Lack of complete presentation of data.* Baer (2003) noted that some mindfulness studies reported either only raw data or percentage changes in scores, without referring the severity of participants' symptoms. In addition, most research used uncontrolled pre-post designs. Thus the proximity of the range of functioning before and after the treatment is hard to determine.

*Problems of group design and attrition.* Most studies evidenced lack of control group design. In studies using between-groups design, the control group came from a waiting list or were being treated with unspecified interventions (Baer, 2003; Bishop, 2007; Ospina et al., 2008; Walsh & Shapiro, 2006). Moreover, many studies had high participant dropout rates. For example, one study had a 60% completion rate (Baer). In studies that had lower dropout rates, the participants were mainly premedical or medical students (Baer). Furthermore, only 2% of the studies implemented a double-blind design. In experiments that did not use double-blind methods, participants may have had expectations regarding the efficaciousness of the treatment (Ospina et al.).

*Insufficient reports of treatment integrity.* An effectiveness evaluation requires a sound administration system. Most studies relied heavily on self-report, or they did not report the procedures being conducted to evaluate the integrity of the delivery of mindfulness, such as the training of therapists and the regular supervision of counsellors, either through direct visit, or observation or by reviewing video or audio tapes of sessions. Furthermore, although many mindfulness-based programs include home practice and continuing practicing after the program, few of the studies reported the extent to which participants followed these instructions (Baer, 2003; Walsh & Shapiro, 2006).

#### *Lack of Consensus on Operational Definition of Mindfulness*

As discussed earlier, mindfulness is a term used to describe a wide variety of forms, methods, and processes (Bishop et al., 2004; S. C. Hayes & Wilson, 2003). For both practical and research purposes, it is crucial to differentiate between types of mindfulness (Shapiro & Walsh, 2003). Unfortunately, the construct of mindfulness was neither operationalized nor evaluated in most studies; therefore, no evidence can be cited



in support of the validity of the construct of mindfulness (Bishop, 2007; Ospina et al., 2008). Without a shared consensus regarding the core component of mindfulness or the mechanisms of change under each subtype, the research findings are questionable to implausible. Thus, the first-line research should focus on development of an operational definition of mindfulness (Dimidjian & Linehan, 2003).

#### *Lack of Standardized Measurement of Mindfulness*

The inconsistent findings regarding the effects of meditation on mental states and traits may be attributable to the lack of a standardized measurement of mindfulness across studies (Cahn & Polich, 2006). Although researchers have suggested the measurement of mindfulness in a meditative context (Bishop et al., 2004; A. M. Hayes & Feldman, 2004) and described the multifaceted nature of mindfulness (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006), a long debate is expected, given the depth and complexity of the phenomenon and the various forms of mindfulness (Brown & Ryan, 2004).

#### *Awareness of Unhelpful Situations*

Although research shows that clients with three or more episodes of depression halved their relapse rates after completion of MBCT (Teasdale et al., 2000), this high success rate does not exist in some other situations. Clients who had experienced only two previous episodes of depression show nonsignificantly greater recovery rates than clients who continued with traditional treatment. Therefore, offering mindfulness training to different types of clients must be undertaken with necessary caution (Teasdale, Segal, & Williams, 2003). Generally speaking, taking the client's history and evaluating the client's needs appropriately can help guide recommendations for treatment.

### *Integrating Problem Formation into Practice*

Some researchers have argued that the effectiveness of mindfulness depends partially on the success of problem formulation with the clients and establishing an initial effective framework and orientation for the problem in question (Teasdale et al., 2003). For example, MBCT uses mindfulness in a program that is specifically designed to address the processes underlying depressive relapse (Segal et al., 2002). MBSR and DBT are other examples of mindfulness training being adequately embedded in the symptoms context. An important factor for effective treatment through the use of mindfulness is that clients be provided with information that relates their emotional suffering to the ideas inherent within mindfulness. This cognitive connection has been shown to be one of the important variables in the context of therapeutic application (Teasdale et al.).

### *Summary*

The field of research on mindfulness is clouded by a lack of methodological rigour, though standards are being developed and raised (Kabat-Zinn, 2005). It is imperative that future research be more rigorous in design, execution, analysis, and reporting of results (Ospina et al., 2008). Nevertheless, despite methodological flaws and practical limitations, the current literature generally suggests that mindfulness intervention has significant psychological and somatic effects (Baer, 2003; Walsh & Shapiro, 2006). Fortunately, the methodological rigour of mindfulness research is improving (Ospina et al.). Being aware of these limitations, however, facilitates counsellors' ability to appropriately use the research findings in their practice.

## Chapter 4: Brain Science Regarding Emotion and Mindfulness

Following earlier research on how mindfulness could be applied to treat symptoms and to reduce stress, the field of psychology is now beginning to explore how mindfulness can be used to develop positive states of mind (Seligman, Steen, Park, & Peterson, 2005). A pertinent research question is whether mindfulness is capable of rewiring the brain to maintain the positive emotions in the long run. Just as neuroscience has provided valuable insights for research into cognition, recent brain studies regarding affective processing have made it possible to study this topic at a more profound level (Kosslyn & Koenig, 1995). In this chapter, the brain science research on emotion, mindfulness, and brain plasticity are explored.

### *Brain Science Research on Emotion*

#### *Emotion and Cognition: A Separate, Hierarchical, or Intertwined Function?*

Until recently, the proposition that controlling the emotions was a prerequisite for successful living prevailed in Western culture. This perspective reflected Descartes's (1694/1989) dualistic view that mind and body are separate and that the mind is superior to the primitive functioning of the body, including the displaying of emotion. More modern approaches contend that the foundations of complex emotion and cognition overlap considerably (Davidson, Scherer, & Goldsmith, 2003). Some emotions are essential for certain types of cognition functioning, such as decisions regarding marriage or buying a house (Damasio, Adolphs, & Damasio, 2003). Conversely, cognition also plays an important role in human emotional processes (Fox, 2008). In short, contemporary research suggests that cognition and emotion are closely intertwined and interdependent at both the neural and psychological levels (Berridge, 2003; Fox).

*The Emotion Centres and Emotion Circuits of the Brain*

A traditional view of brain processes is that emotions are limbic and subcortical, whereas cognitions are cortical. This view has been scientifically challenged (LeDoux, 1987, 1991). Contemporary research has demonstrated that no single region of the brain is dedicated to emotions; different aspects of emotion processing are distributed in different brain circuits (Davidson, Scherer, et al., 2003).

In the production of emotion, three limbic structures (amygdala, hippocampus, and nucleus accumbens) and three frontal and prefrontal cortex structures (dorsolateral prefrontal cortex, anterior cingulate cortex, and orbitofrontal cortices) are involved (Berridge, 2003; Whittle, Allen, Lubman, & Yucel, 2006). Systematic studies designed to disentangle the specific role that each structure plays in emotion are lacking (Davidson, 2004). Therefore, the following discussion uses the general term *frontal or prefrontal cortex structure*.

Two different pathways exist for producing emotions: low road and high road (LeDoux, 1987, 1993, 1996). The *high road*, involving more detailed analysis, is a slower path in which emotional stimuli are relayed through the thalamus to the amygdala and up to the cortex. In contrast, the *low road* is the fast route. When the amygdala senses danger, it broadcasts a signal directly to the brain and body. Because the low road is the shorter pathway and transmits the signal more than twice as fast as the high road, the thinking brain often cannot intervene in time to stop automatic emotional responses. The low road allows people to respond quickly to important events, and it predisposes an individual's behaviours toward appetitive stimuli and away from aversive stimuli prior to a more

detailed processing of the stimuli. However, it is the same mechanism that causes people to overreact to minor annoyances (Greenberg & Watson, 2005).

### *Measures of Emotion*

Studies of emotions have largely relied on the use of subjective self-report measures (Berridge, 2003). Neuroscience research provides independent physiological data to enhance the analysis into more specific constituents. The electroencephalogram (EEG) is a measure of brain electric activity, which is used for making inferences about regional cortical activation (Berridge; Davidson, 1992). The EEG measure is noninvasive and is easy to use with any age group and many types of research. Most importantly, its fast time resolution is capable of capturing such brief periods as 1 or 2 seconds of a specific expressive sign (Davidson).

Nevertheless, as EEG is measured from the surface of the scalp, it is hard to identify the particular neural circuits that might be involved in different affective states. Neuroimaging methods such as position emission tomography scanning (PET) and functional magnetic resonance imaging (fMRI) are used to capture these subcortical activities. PET can also indicate the amount of metabolic activity occurring in the amygdala, which is helpful in determining whether the functional circuits among a subset of these areas are related to the problems of emotional disorders (Berridge, 2003; Fox, 2008).

### *Amygdala and Negative Emotion*

Scientific findings frequently report the prominent role of the amygdala in emotional processes, especially for the establishment of conditioned fear (LeDoux, 1991). Patients with amygdala damage were found to be more likely to infer that unfamiliar

faces were trustworthy and approachable (Adolphs, Tranel, & Damasio, 1998). They also had difficulty recognizing vocal signs of fear and anger (Scott et al., 1997) and had impaired aversive autonomic conditioning (Bechara et al., 1995). Activation of the amygdala has been observed while anxiety-disordered subjects were exposed to specific anxiety-provoking stimuli (Davidson, 2004), for example, when people diagnosed with social phobia viewed neutral faces or responded to facial expressions of fear (Phillips et al., 1997). In addition, faster judgments of negative information were associated with amygdala activation (van Reekum et al., 2007).

The answer to why the amygdala responds preferentially to aversive versus appetitive stimuli has not yet been consistently resolved (Davidson, 2004). Davis and Whalen (2001) argued that a major function of the amygdala is to detect ambiguity and to optimize sensory and perceptual processing of stimuli. However, it is still not clear whether mood disorder is a result or a cause of anxiety or depression (Fox, 2008).

#### *Brain Asymmetry and Affective Style*

In humans, the cerebral cortex is the largest part of the brain and the part that is involved in all our higher-order cognitive capability and emotional processing. The cerebral cortex has two hemispheres: left and right (Kabat-Zinn, 2005). Among various other functions, the left cerebral hemisphere controls the motor and sensory functions on the right side of the body, whereas the right cerebral hemisphere controls those of the left side. A study of patients with unilateral brain injury suggested brain activation asymmetry between left and right hemispheres during expression of emotion (Davidson, 1992). To illustrate, the left frontal and prefrontal cortex region is activated for certain forms of positive emotion, such as joy, happiness, or high energy. In contrast, right-sided

activation is generally associated with the expression of difficult and disturbing emotions such as fear and sadness. In short, right-sided activation is linked to withdrawal, and left-sided activation with approaching responses (Davidson, 1998).

In any individual, the frontal and prefrontal cortex activation asymmetry is relatively stable. The EEG measures of frontal and prefrontal cortex activation for subjects at two different times, 3 weeks apart, demonstrated that this asymmetry quality has acceptable test-retest stability and excellent internal consistency reliability (Tomarken, Davidson, Wheeler, & Doss, 1992). Another study measured EEGs of previously depressed subjects and reported that the subjects exhibited higher activation in the left frontal region, even when they were in normal situations (Henriques & Davidson, 1990). The frontal activation asymmetry in a person is present as early as the age of 10 months. Researchers found that the infants' distress response to separation with their caregivers can be predicated from prior measures of baseline frontal activation asymmetry, and infants who showed right-sided frontal activation were more likely to cry upon maternal separation (Davidson & Fox, 1989).

Asymmetric frontal and prefrontal activation has impact on individuals' affect styles and emotional experience (Davidson, 1998). Subjects demonstrating stable and more left prefrontal activation experience more generalized positive emotion and less generalized negative emotions than their counterparts who demonstrated stable and more right prefrontal activation (Tomarken et al., 1992). This finding helps explain why people often habitually and unconsciously react to their daily life events. It is an important task for an individual to find a way to increase his or her degree of control over highly conditioned emotional responses.

### *Frontal and Prefrontal Cortex Asymmetry and Emotion Disorders*

The right brain hemisphere is strongly associated with the reception and expression of negative affective states (Davidson, 1992). Neuropsychological investigators reported that damage to the left frontal lobe was likely to induce depression, whereas damage to the right hemisphere was linked to euphoric mood (Davidson). A pattern of asymmetry with decreased left prefrontal activity and increased right prefrontal activity was found to be a marker of depression (Fox, 2008). Studies report that depressed subjects differed from control group subjects in their decreased left-sided frontal activation (EEG measurement; Henriques & Davidson, 1991) and in their decreased blood flow or metabolism in left prefrontal activity at rest (PET measurement; George, Ketter, & Post, 1994). The severity of depression is also associated with the degree of right frontal activation (Schaffer, Davidson, & Saron, 1983). Prefrontal asymmetry is also found in anxiety disorders. Social phobia participants exhibited a large increase in right frontal cortex activation when they believed they were going to make a speech (Davidson, Marshall, Tomarken, & Henriques, 2000).

### *Brain Asymmetry and Positive Emotion*

The association of depression with damage in the left side of the brain is interpreted to mean that the left brain participates in certain forms of positive emotions. Interestingly, the damage in this area leads to deficits in capacity to experience positive emotion (Davidson, 2004). This interpretation is in line with observations of differential EEG measures when people were expecting either reward or punishment. Greater left-sided frontal activation was found in response to the reward expectation (Miller & Tomarken, 2001). There is also a strong correlation between baseline measures of left-



sided frontal EEG asymmetry and self-reports of psychological well-being (Urry et al., 2004).

### *Brain Activity in Mindfulness Contexts*

Emerging evidence reveals that mindfulness, especially in the form of meditation, has led to neurologic rewiring (Cahn & Polich, 2006). Examples include changes of alpha power (Aftanas & Golocheikine, 2005; Lo, Huang, & Chang, 2003; Murata et al., 2004; Takahashi et al., 2005); theta power (Aftanas & Golocheikine; Takahashi et al.); gamma power (Lutz, Greischar, Rawlings, Ricard, & Davidson, 2004); and brain asymmetry activities (Davidson, Kabat-Zinn, et al., 2003; Goleman, 2003). The more consistent findings are on the brain asymmetry activities. The following studies show inspiring evidence of brain asymmetry activation found in meditators, including short-term and long-term meditators, similar to the asymmetry activation that accompanies positive emotions.

### *Brain Asymmetry Activities in Short-Term Meditators*

Wishing to address the issue of whether repeatedly practicing mindfulness for a short period of time would lead to enduring changes in patterns of neural activation, Davidson, Kabat-Zinn, et al. (2003) examined the changes in brain activity in response to meditation. The study revealed that, before the meditation training, the meditation and control groups were indistinguishable in their patterns of brain activation. After 8 weeks of training in mindfulness meditation, the meditation group showed a significant shift to a higher ratio of left prefrontal activation. Moreover, this pattern was shown not only in the measures of resting baseline condition but also in response to various stressful tasks, and

persisted for 4 months after the end of the training program. As noted previously, such asymmetry has been reported to be associated with positive affect (Davidson, 2000).

#### *Brain Activation in Long-Term Meditators*

For more than 20 years, the Dalai Lama has convened scientists from various fields to explore the interface between Buddhism and neuroscience. The topics of the conferences have been a continuous exploration of the role of meditation in emotion, health, and disease (Hart, 2007). Among the speakers and panelists in the conferences were many prominent researchers in related fields, including Richard J. Davidson, Jon Kabat-Zinn, Zindel V. Segal, and John Teasdale. The work of the conferences included the following two studies.

*Brain asymmetry activation.* In a follow-up to the 2000 conference, Davidson conducted an experiment to examine how the brain activation of a long-time meditator, a lama with hundreds of thousands of hours in intensive and solitude retreats, differed from that of ordinary people (cited in Goleman, 2003). The fMRI and EEG measures found that the lama had a very large left-to-right ratio at baseline brain activation. More remarkably, during compassion meditation, the left asymmetry was higher than that of 99.7% of people ever measured (Begley, 2007).

*Changes in gamma waves.* In another experiment arising from the conventions, Lutz and his colleagues (2004) found that long-term meditators self-induce sustained electroencephalographic high-amplitude gamma-band oscillations during baseline and compassion meditation. Just as astonishing as the high left-to-right ratios of brain activity in other long-term meditators (Goleman, 2003), the high-amplitude gamma activities found in this study were the highest reported in the literature in a nonpathological context.

Gamma waves reflect the activation and recruitment of neural resources when the brain brings together different sensory features of an object, such as look, feel, sound, and other attributes (Begley, 2007). These findings suggest that meditation training involves a brain integrative mechanism.

### *Changes of Mental Traits*

The brain response to meditative practice can be measured by *mental states* and *mental traits* (Cahn & Polich, 2006). Mental state measurement records the brain activity that arises during meditation. In contrast, trait measurement refers to the lasting changes in the brain that persist in the meditators. People's habits of thinking and feeling are reflected in enduring changes in the circuitry of the brain even when not in the state of meditation (Begley, 2007; Cahn & Polich). The research findings outlined in the previous paragraphs document the trait changes of meditators. Of importance, the brain patterns observed in long-term and short-term meditators are in the same direction and in the same regions of the frontal cortex, demonstrating that practicing mindfulness meditation, even for a short period, impacts mental states over the long term.

### *Train the Mind to Change the Brain*

#### *Neuroplasticity*

Even though individuals' predisposition to a particular affect style is developed as early as the first year of life, "predisposition is not predestination" (Hamer & Copeland, 1998, p. 126). Previously, it was believed that people were born with a certain number of neurons—that changes in the neurons occur only in the connections among cells and the dying of the cells, but that new cells do not grow (Goleman, 2003). This view has been challenged dramatically. The topic of neuroplasticity, the ability of the mind to shape the

brain, has been under intensive study (Germer, 2005a). Studies have demonstrated that new neurons do grow throughout the entire life span (Goleman).

Individuals' behaviours are not subject to the tyranny of the genes. It has become evident that the manifestation of behaviours is the result of a complex and highly responsive synergy between genes and environment (Douthit, 2006) and that genetics and environment affect each other bidirectionally (Gatz, 1990). One animal study demonstrated that early maternal care, such as frequent licking, grooming, and arched-back nursing, facilitated the development of specific neural systems that mediate the expression of fearfulness (Francis & Meaney, 1999). The findings regarding animals have inspired researchers to study whether comparable effects may be revealed in human beings.

Some psychotherapies have been demonstrated to facilitate humans' ability to increase or decrease the likelihood of disposition of affect style and eventually rebuild a new style. For example, researchers have documented that cognitive behavioural therapy has the potential to modify the dysfunctional circuitry associated with anxiety disorders. In a study of spider phobia using fMRI measures, patients who successfully completed cognitive behavioural therapy experienced adaptive regional brain activity changes comparable to those produced by medication (Paquette et al., 2003).

These two examples suggest that the brain change at the mind level can be functionally rewired. Although how the process works is not exactly clear, the brain activities and mind function mutually create each other (Siegel, 2007). Affect style is not like a blood type, which remains constant throughout one's life. The power of

neuroplasticity to transform the emotional brain opens up new possibilities, one of which is mindfulness-based intervention.

### *Power of Integration*

Personal transformation involves integration in different layers. For example, body and mind do not function in isolation; the change in an individual's kinetic temperament is strongly associated with emotion, cognition, action, and memory (La Barre, 2008). Further, changes in mental traits due to mindfulness could, in turn, facilitate consciousness integration, memory integration, and so on. Moreover, the more attuned individuals are, the more effective their relationships are. Therefore, an effective therapy trains the brain toward neural integration, promotes coherence of mind, and inspires empathy in relationships. An integrated state, either interpersonal or intrapersonal, enables people to construct the most flexible, adaptive, coherent, and energized environment within a complex system. Thus, mindfulness can provide integrative well-being through coordinating and balancing brain functions (Siegel, 2007).

### *Prospects of Using Mindfulness-Based Intervention to Promote Positive Emotion*

The prospects for using mindfulness-based intervention to promote positive emotion are bright. First, although not the sole focus of the mindfulness process, emotions and the related regulation properties are an integral aspect of the mindfulness experience (Baer, 2003; Mennin, 2005; Roemer & Orsillo, 2003). Various research has demonstrated that mindful people are more able to gain perspectives and allow feelings to emerge and are therefore less likely to be caught up in negative emotions. This ability can predispose people to greater emotional balance and ultimately to greater psychological well-being (Baer & Huss, 2008; Broderick, 2005; Creswell et al., 2007; Kabat-Zinn,

2005). The impact of this resource is not only on the mental state level of functioning, but also on the long-term mental trait level. This functional proposition now has a further scientific basis in that meditation has been shown to have the potential to change brain circuitry (Begley, 2007; Davidson, Kabat-Zinn, et al., 2003; Goleman, 2003; Lutz et al., 2004). Considering the brain's profound neuroplasticity in response to life experiences and training, the elicited positive emotional experience can, in turn, augment an upward spiral effect. It is fair to conceptualize positive emotion as a product of a trainable skill, which can be enhanced through such mental training as mindfulness (Begley).

Moreover, the positive emotion effect promoted by mindfulness can occur within a reasonable time. The comparison of long-term and short-term meditators suggests that ordinary people practicing meditation for a rather short period of time, as short as 8 weeks, can show changes in the brain and in the body comparable to changes in those with far greater training and practice experience (Davidson, Kabat-Zinn et al., 2003). This finding offers hope to those who regard mindfulness training as a long and difficult path.

For those who are motivated to practice mindfulness, numerous related workshops, books, and papers provide abundant resources they can study and compare before devoting themselves to practice. Furthermore, mindfulness is a practice that people can master by themselves. Once they are trained and know the essence of mindfulness, they can do it anytime and almost anywhere. Lastly but foremost, the benefits go far beyond promoting positive emotions, although this is a crucial component of integrating the other benefits. Mindfulness practice is strongly recommended for anyone wanting to increase her or his psychological well-being.

## Chapter 5: Teaching Mindfulness to Promote Positive Emotions in Counselling Settings

Adequate case assessment, conceptualization, and psychoeducational work are priorities when teaching mindfulness to deal with clients' emotional suffering. The counsellor's personal credentials are another concern. Only after these issues have been clarified can a counsellor start teaching mindfulness techniques.

### *Case Conceptualization and Assessment*

Although practicing mindfulness is beneficial in many aspects, its effectiveness in a particular domain requires successful problem formation (Teasdale et al., 2003).

Assessment procedures are critical for conceptualizing the case. Once the counsellor has determined that emotions and emotion regulation are concerns, and that the client is probably a suitable candidate for mindfulness intervention, it is important to adequately elaborate to the client the relationship between mindfulness, positive emotions, and personal well-being (A. M. Hayes & Feldman, 2004).

The counsellor begins by broadly discussing the functions of emotions and the relationship between emotions and behaviours, highlighting the fact that emotions influence our action tendency but do not control our behaviours (Orsillo et al., 2005). The counsellor helps the client make the connection and analyze his or her own emotions and behaviours. After being presented with information about humans' innate urge toward avoidance or suppression, the client is given opportunities to explore alternatives for changing his or her relationship with emotional suffering.

In introducing mindfulness, the counsellor focuses on the role of mindfulness in regulating emotions. The counsellor offers information about scientific research on brain changes resulting from mindfulness practice and how mindfulness offers an opportunity

to change one's mind to change one's brain. Finally, before starting to teach mindfulness, the counsellor explores the client's views regarding mindfulness, particularly any religious factors that must be respected.

### *Psychoeducational Work*

Although not many people are adept in mindfulness, there is much popular interest in the topic. Misunderstandings, myths, and mistaken beliefs are fairly widespread. Therefore, psychoeducational work is critical for integrating mindfulness into the counselling process.

### *Goal Setting*

Mindfulness looks like doing nothing, which is not compatible with the values of modern society (Kabat-Zinn, 2005). People want to get something back from their endeavours, especially those therapeutic activities that they spend a lot of time on. Goal setting is normally considered an important ingredient of successful counselling. However, caution should be applied when referring to the goal of practicing mindfulness. For example, clients may seek counselling for reducing pain or for changing thoughts or emotions; these identified problems do not directly relate to the practice of mindfulness (Kabat-Zinn, 1990). Perhaps, but not always, there could be personal justifications for practicing mindfulness that are indirectly linked to hoping for symptom reduction, but having this kind of intentional goal orientation is not a way of mindfulness. It may seem therapeutically contradictory that in mindfulness practice, although there is a prescribed task—such as sitting still, closing the eyes, or paying attention—one does not strive to reach a particular goal (Andersen, 2005; Baer, 2003; Baer & Huss, 2008; Roemer & Orsillo, 2003). In mindfulness practice, we never get it right, and we never get it wrong



(Germer, 2005b). Clients need to recognize that the best way is daily practice for its own sake, not trying to get anything from meditation (Germer; Kabat-Zinn, 1990).

#### *Commitment and Motivation*

Clients need to commit to a minimum of six 1-hour sessions, spread out over 6 to 8 weeks, to receive an introduction and to learn the technique of mindfulness itself (Hart, 2007). Furthermore, as these skills are developed over time, clients are required to apply them in their daily lives (Orsillo et al., 2005). Thus, a fixed time and place need to be devoted to the practice (Kabat-Zinn, 1990). Another important commitment is the willingness to suspend the urge to tense one's muscles while trying to maintain an unfamiliar posture, especially at the initial stage (Germer, 2005b).

#### *Self-Monitoring and Observation*

During the period of practicing mindfulness, clients are encouraged to observe internal and external experiences with openness and curiosity. Typically they are encouraged to record their thoughts, particular emotions, and specific physiological reactions that occur during the practice (Orsillo et al., 2005). These records are for their own reference and not to be viewed by others.

#### *Who Is Not a Suitable Candidate for Mindfulness Practice?*

Research indicates that mindfulness works well in treating stress-related conditions such as insomnia, anxiety, and depression, and also for people who suffer from stress as a result of chronic disease (Hart, 2007). Meditation practice may not be advisable for people who experience hallucinations or who have psychoses such as unstable bipolar disease or schizophrenia, because mindfulness could potentially aggravate these symptoms (Lukoff, Lu, & Turner, 1998). However, the effect of

mindfulness on these conditions is not clear, and more research is needed in this area (Hart).

#### *Mindfulness Is Not Avoidance or Blocking the Senses*

Some people may seek mindfulness training to dull the senses or to avoid emotions, especially people who are suffering from serious emotional distress. Unfortunately, this kind of relief cannot be attained through mindfulness. On the contrary, by heightening awareness, mindfulness helps people become more comfortable with reality and face their experiences, whether good or bad, desirable or undesirable (Hart, 2007).

#### *Safety Concerns*

Generally speaking, mindfulness is a relatively safe practice. It is noninvasive and can be practiced independently. However, despite abundant evidence for the effectiveness of mindfulness, risks may arise for those who pursue its benefits without taking other factors into consideration. For example, a physically ill patient aiming to strengthen his or her immune system cannot rely on mindfulness alone to achieve this result. Medical care, in these situations, should also be part of the treatment. In other words, for medical patients, the practice is strictly an adjunct to conventional care, rather than a substitute (Hart, 2007).

#### *Delivering Psychoeducational Materials*

The success of mindfulness lies in its utility or workability within the clients' own experience (S. C. Hayes, 2004). Therefore, counsellors are cautioned not to argue with or attempt to persuade clients with regard to mindfulness (Orsillo et al., 2005). Given the many contradictory viewpoints and details regarding mindfulness practice, it is

recommended that counsellors provide clients with written educational material and subsequently discuss the information therein (Orsillo et al.). An educational booklet containing information about mindfulness is presented in Appendix.

### *Counsellor's Credentials*

#### *Personal Experience in Mindfulness Practice*

Generally speaking, many challenges, obstacles, and questions arise from mindfulness practice. Therefore, in order to guide clients in mindfulness practice, counsellors must have firsthand experience of mindfulness themselves (Germer, 2005b). Whether a counsellor aiming to teach mindfulness has to have years of personal practice depends on how the counsellor uses mindfulness in his or her practice. For example, dialectical behaviour therapy trainers do not need to practice meditation, as this is not a part of the treatment; however, this kind of therapy does require the trainers to practice mindfulness in daily life (Dimidjian & Linehan, 2003; Germer, 2005b). On the other hand, extensive training in meditation practice is a requirement for instructors in the MBSR program (Kabat-Zinn, 2003) and instructors of MBCT, as both MBSR and MBCT programs involve daily meditation practice (Dimidjian & Linehan; Germer).

#### *Personal View of Mindfulness*

Counsellors can put clients at risk if they believe there is only one way to do mindfulness practice or that their mindfulness practice is the best. Therefore, it is in the clients' interest to ask a potential instructor questions about the mindfulness practice, such as the time needed for learning, options for doing the mindfulness practice, and the instructor's mindfulness experience or training (Hart, 2007).

## *Settings and Arrangements*

### *Self-Learning Versus Learning With Instructors*

Although there are books and compact discs (CDs) that provide mindfulness instructions, it is beneficial to have an instructor to address questions and concerns that may arise (Hart, 2007). As mindfulness is clearly difficult to master (Roemer & Orsillo, 2003), people are likely to get stuck at some point, or even give up, without an instructor's guidance.

### *Group or Individual Setting*

Most mindfulness practice is arranged in group settings, such as MBSR or MBCT. Most group settings also set time aside for individual participants to share their questions or challenges with instructors. Clients learning in an individual setting are encouraged to supplement their experience with occasional attendance in groups, classes, or retreats (Roemer & Orsillo, 2003).

### *Prepare Clients to Know Their Body: Progressive Relaxation or Body Scan*

Relaxation is the foundation of mindfulness; however, many people have not truly experienced what relaxation and tension are. Progressive relaxation is often used to prepare clients to have a taste of these experiences (Hart, 2007). A *body scan* is defined as having the client mentally think about what the body is physically sensing or experiencing from head to foot. It is used to prepare clients for acknowledging or witnessing the wider range of body reactions that might be occurring but are often not consciously identified (Kabat-Zinn, 1990; Ott, 2002; Segal et al., 2002). Progressive relaxation and body scanning are often practiced at the beginning stage of the practice.

## Chapter 6: Synthesis

Positive emotion has been documented to be strongly associated with physical health and psychological well-being. The upward spiral effect of positive emotion serves as a buffer against a negative environment. Unfortunately, people are often unconsciously caught in negative emotion and dysfunctional regulation of emotion. Psychology is now focusing on building strong resources instead of merely fixing what is wrong. Mindfulness, which redirects people's focus from negative to positive emotion, reflects this movement.

Mindfulness requires practitioners to be aware of what is happening in the moment. The practice gives people opportunities to be repeatedly exposed to sensations, thoughts, and emotions, thus leading to the desensitization effect of previously conditioned emotional responses. The nonjudgmental attitude required by mindfulness practice facilitates cognitive and behavioural change. People also learn self-management and relaxation from this practice. These mechanisms lead to various benefits: enhancing physical health, increasing behavioural regulation, enhancing emotion regulation and psychological well-being, and enhancing social functioning.

Mindfulness has gained great attention in Western psychology in the last two decades and is increasing in popularity. Currently, it is widely applied in various settings. Although a lot of studies have documented the benefits of mindfulness, the research suffers not only from inadequacy of empirical design and reports but also from lack of standardized measurements for the mindfulness state. More importantly, mindfulness encompasses many forms of practice. Considering the increasing popularity of

mindfulness practice, it is critical to develop a consensus on the operational definition of mindfulness and to enhance empirical designs.

Brain science research in emotion and mindfulness supports the value of mindfulness. There is growing evidence of asymmetry in brain activity. Whereas the left frontal and prefrontal cortex region is activated for certain forms of positive emotion, activation of the right side is generally associated with the expression of difficult and disturbing emotions such as fear and sadness. This frontal and prefrontal cortex activation asymmetry is relatively stable and is reflected in individuals' affect styles and emotional experiences. Inspiringly, brain measurements indicate that people with long-term or short-term meditation experience have significantly more left frontal and prefrontal activity. This finding shows that the practice of mindfulness has a long-term effect in changing individuals' traits, rather than merely adjusting the state during meditation.

Counsellors using mindfulness to promote positive emotion are cautioned not to use it in isolation. Problem formation and psychoeducational work are critical for successful treatment. Counsellors also need to evaluate their own credentials for teaching this skill and appropriately integrating it into the selected treatment plans. Diagnostic and situational circumstances need to be addressed. Only when these factors have been considered with a client-centred focus, can meditation be taught to clients who meet the specific criteria indicated in this manual.

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## Appendix

### Using Mindfulness to Promote Positive Emotion



Prepared by Pi Yu Jasper Wu

June 2009



### A SCENARIO

*Amy, your best friend, comes to you with a furrowed brow and at tightly-held body posture. When asked what she is feeling, she talks about what happened 20 years ago, what triggered her this morning, and what she is worried about for the future, but she says nothing regarding the experience of the current moment. Her tears alternate with expressions of anger, hatred, and shame. Unfortunately, she also appears to be averse to emotional display; she apologizes for losing control over her behaviour but then seems to feel even worse.* Does this scenario seem familiar to you? Maybe you have friends like Amy, or perhaps you think you are one of the Amys.

It is okay to identify with Amy's situation. Unfortunately, too many people are bound up in the shame that Amy feels. This scenario is very common in contemporary society. Old and young, female or male, people with various presenting concerns seem to present the same symptom: living in the past or future rather than in the present moment. We are so easily caught up in our emotions and have difficulty accepting the emotion we display.

Perhaps this is the time to ask yourself:

- Are you aware of your body sensations in the present moment?
- Are you conscious of the thoughts that accompany the event?
- What is so bad about feeling negative emotions?
- Can we justify our emotional behaviours?
- Is there any way to shift to positive emotions?
- Does living in the moment help?

## EMOTION

- *Defining Emotion*

Emotion refers to episodic, relatively short-term, biologically based patterns of perception, experience, physiology, action, and communication that occur in response to specific physical and social challenges and opportunities (Keltner & Gross, 1999).

- *Functions of Emotion*

Emotion is an adaptive, goal-attaining experience that aids in making decisions about moving toward or away from particular actions or plans. In short, the primary function of emotion is to solve problems.

- *Emotion Regulation*

Some emotions can make us feel uncomfortable, and expressing certain emotions may seem inappropriate. When individuals are aware that some aspects of their current emotional expression or experience do not match the prevailing standard, they might wish to regulate their emotions.

- *Emotion Regulation Strategies*

- Suppression of expressive behaviour: trying not to show it
- Cognitive reappraisal: thinking about it differently
- Emotional thought suppression: trying not to think about it
- Social sharing of emotions

- *Emotion and Psychological Well-Being*

Emotion regulation is commonly considered important to mental and physical health. Chronic emotional suppression or constant inhibition of emotion are found to be associated with

- Fewer positive emotions
- Worse interpersonal function
- More depressive symptoms
- Lower life satisfaction
- Weaker self-esteem
- Lower overall well-being
- Increased risk of cancer and accelerated cancer progression
- Increased heart disease and hypertension

## POSITIVE EMOTION

- *Why Don't We Know More About Positive Emotion?*

Negative emotion is associated with problems for individuals and for society, so people gravitate toward problems and work to solve them. Compared to negative emotions, positive emotions are fewer in number and harder to differentiate from one another.

- *What Are the Positive Emotions? (Frederickson, 1998)*

- *Joy* is a term that is often used interchangeably with happiness, accomplishment, progress toward one's goals, or other relatively high-arousal positive emotions. Joy arises in contexts that an individual sees as safe and familiar. When feeling joy, people tend to play freely, which leads to motor skill acquisition.

- *Interest* is used interchangeably with curiosity, intrigue, excitement, or wonder. It is also related to challenge and motivation. Interest is aroused when an individual is offered novelty, change, and a sense of possibility or mystery. People who are interested tend to explore, so interest can lead to acquisition of knowledge.

- *Contentment* is used for low-arousal positive emotions, such as tranquility or serenity. This emotion prompts individuals to appreciate their current life circumstances and can improve their overall self-concept and worldview. Individuals who are content tend to broaden their ideas; contentment can lead to the integration and elaboration of knowledge.

- *Love* is the fusion of other positive emotions. People who feel love seek attachment and bonding, which are beneficial for social relationships.

- *What Is Good About Positive Emotion?*

Positive emotion can

- Broaden an individual's momentary thought-action repertoires, which in turn permanently build a variety of personal resources and help with adaptation to adverse circumstance in the long run

- Change one's mindset and related actions

- Enhance physical health

- Increase emotional well-being

- Build social resources

## MINDFULNESS

- *Defining Mindfulness*

*Mindfulness* is a way of intentionally orienting oneself to experiences in the present moment, with an attitude of nonjudgment and acceptance (Kabat-Zinn, 2005).

- Awareness: our direct and most immediate contact with the reality of the moment; awareness is pure apperception and perception.
- Acceptance: a receptive attitude toward ongoing events and experiences. An individual is open to observe and to fully experience the entire reality without suppressing or acting out.
- Present moment experience: including internal stimuli such as cognition, bodily sensation, or emotional state, and external stimuli such as sights, sounds, or smells.

- *Mindfulness Is Not Specific to Meditation*

Although meditation is associated with mindfulness, mindfulness is not limited to the practice of meditation. Mindfulness can also be cultivated through directing attention to one's postures at a given moment or to daily life activities. Some researchers include the following under the umbrella of meditation practices: relaxation response, mindfulness meditation, mantra meditation, breathing meditation, walking meditation, Chi gong, Tai chi, and Yoga.

- *The Mechanism of Mindfulness: How It Helps*

- *Exposure*: Mindfulness training allows sustained exposure to sensations, thoughts, and emotions, resulting in desensitization of conditioned responses and allowing the negative or passive response to be extinguished.
- *Cognitive change*: Mindfulness facilitates development of a nonjudgmental and decentred view of one's thoughts, influencing the situation so that one's ruminative thinking patterns can be interrupted.
- *Self-regulation and behavioural change*: Mindfulness brings people's awareness to current experiences, leading to skills in recognizing early signs of problems and problem consequences. This results in more effective self-management skills, including reduction of impulsive and maladaptive behaviours.
- *Relaxation*: Mindfulness helps people learn to observe and reduce autonomic arousal, racing thoughts, muscle tension, and other phenomena that are incompatible with relaxation.

## WHAT'S GOOD ABOUT MINDFULNESS?

- *Enhancing Physical Health*

- *Regulation of physical sensation and symptom experience.* Mindfulness helps with pain relief and rapid recovery, as the attention is drawn to the physical sensation, rather than physical states or emotional or cognitive reactions to the sensory experience.
- *Improved physical health outcomes.* Mindfulness increases individuals' ability to reduce physiological responses when facing stressors, thus increasing melatonin levels and immune functions.

- *Increasing Behavioural Regulation*

Mindfulness trains people to receptively and observantly process internal and external stimuli in the present, enabling more flexible or adaptive responses to life experiences. Individuals then have the capacity to respond according to their values, beliefs, goals, or needs, instead of resorting to autonomic, habitual, or impulsive reactions.

- *Enhancing Emotional Regulation and Psychological Well-Being*

- People with a higher disposition to mindfulness are more aware of and receptive to inner experiences, so they are more in tune with their emotional states and are more likely to fulfill their basic psychological needs.
- People who are mindfully aware are less likely to be socially anxious and ruminative.
- Mindful people are more able to relate their emotions; they also have a greater awareness of and a greater ability to correct or repair unpleasant mood states.
- Mindfulness is helpful in facilitating recovery after emotionally negative experiences.

- *Enhanced Social Functioning*

The quality of mindfulness not only enhances the ability or willingness to take an interest in partners' thoughts, emotions, and well-being; it also increases the ability to attend to the verbal or nonverbal communication of partners.

## BRAIN SCIENCE OF EMOTIONS AND MINDFULNESS

- *LeDoux (1987) posited two pathways for producing emotions*
  - *High road:* a slow path. Emotional stimuli are relayed through the thalamus to the amygdala and up to the cortex, involving more detailed analysis.
  - *Low road:* a fast route. When the amygdala senses danger, it broadcasts a signal to brain and body, and then the automatic emotional response occurs.
  - The low road is twice as fast as the high road. The low road enables people to respond quickly to important events. The low road predisposes an individual's behaviours toward appetitive stimuli and away from aversive stimuli. However, the low road also causes people to "lose control" of their emotions.
  
- *Brain Asymmetry and Affective Style*

As the pioneer researcher of brain asymmetry in emotion, Richard J. Davidson and his colleagues has found unique brain activation during different emotional states and mindfulness (see Begley, 2007, and Goleman, 2003, for discussions).

  - People's left frontal and prefrontal cortex region is activated during certain forms of positive emotion, such as joy, happiness, or high energy. In contrast, right-sided activation is generally associated with the expression of difficult and disturbing emotions such as fear and sadness.
  - The frontal and prefrontal cortex activation asymmetry is relatively stable in a person and is present as early as 10 months of age.
  - People with stable, predominantly left prefrontal activation reported more generalized positive emotions and fewer generalized negative emotions than their counterparts with stable, predominantly right prefrontal activation.
  - Patients with mood disorders such as depression and anxiety exhibit patterns of asymmetry with decreased left prefrontal activity and increased right prefrontal activity.

## MINDFULNESS AND BRAIN ACTIVITY

- *Brain Asymmetry*
  - In both long-term and short-term (8 weeks) meditators, brain patterns are in the same direction as those for positive emotion (greater left-sided activation).
  - The left asymmetry in long-term meditators is far higher than ordinary when the meditators practice compassion meditation.
  
- *Changes in Gamma Waves*
  - Long-term meditators self-induce sustained electroencephalographic high-amplitude gamma-band oscillations during the baseline and compassion meditation.
  - The high-amplitude gamma activity of these long-term meditators was the highest reported in the literature in a nonpathological context.
  - Gamma waves reflect the activation and recruitment of neural resources when the brain brings together different sensory features of an object, such as look, feel, sound, and other attributes.
  - These findings suggest that meditation training involves the brain's integrative mechanism.
  
- *Changes in Mental Traits*

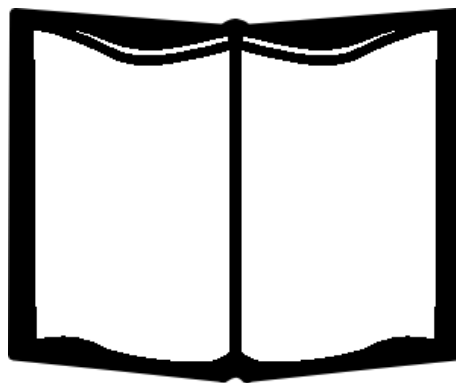
The neuroscience findings suggest that meditation not only changes one's mental state during meditation practice, it also changes one's mental traits. In other words, meditation changes habits of thinking and feeling even when the person is not in a state of meditation, thus reflecting an enduring physical or functional change in the circuitry of the brain.
  
- *Neuroplasticity*
  - People have the ability to use their mind to shape their brain.
  - Developing positive emotions is a trainable skill, which can be attained through mindfulness training.

### THINKING OF TRAINING YOUR MIND?

*Consider the following:*

- Have you suffered from excess and prolonged negative emotion?
- Do you find it difficult to identify your feelings?
- Have you felt embarrassed after expressing an emotion?
- Have you tried unsuccessfully to control your emotions using different methods?
- Are you tired of trying to control your emotions?
- Do you find it hard to listen to other people because you tend to do something else at the same time?
- Do you find it difficult to stay focused on what's happening in the present?
- Have you noticed that you walk or eat quickly without knowing where you are going or what you are eating?

*If you answered "yes" to most of the above questions, or you simply want to know what you can gain from mindfulness, please turn to the next pages to learn more about mindfulness.*





### TASTING SITTING MEDITATION: THE HEART OF MEDITATION

- You can choose to sit in chair or on the floor to practice sitting meditation.
- You need a round cushion under the buttocks, whether you are sitting in a chair or on the floor.
- *Sitting on a chair* (see figure 1):
 

Use a chair that has a straight back and that allows your feet to be flat on the floor. Sit away from the back of the chair in order that the spine can be self-supporting.
- *Sitting on the floor or sitting on a mat*:
  - Full-lotus posture (figure 2):
    - ❖ The right foot is over the left thigh, and the left foot is over the right thigh.
    - ❖ This posture forms a tripod base that gives 360-degree stability.
    - ❖ This is the most powerful position for meditation throughout the evolution of Buddhism, but it is the most difficult posture to learn.
  - Half-lotus posture (figure 3):
 

The left foot is over the right thigh, and the right foot is under the left thigh.
  - Burmese posture (figure 4):
    - ❖ Legs are uncrossed, both feet in front.
    - ❖ It has the advantage of being much less uncomfortable for beginners.
    - ❖ Both half-lotus and Burmese postures do not provide the base that the full-lotus posture does, so the spine cannot be kept absolutely erect for long. Therefore, it may be beneficial to use a support cushion under the regular one so the knees can rest on the mat.
  - Kneeling posture (figure 5):
 

Knees are bent, in line with one another on the mat. Place the cushion between the feet.

(Please refer to Kabat-Zinn, 1990, and Kapleau, 1989, for more detailed descriptions.)

## SITTING MEDITATION POSTURES

Figure 1: Sitting in a chair

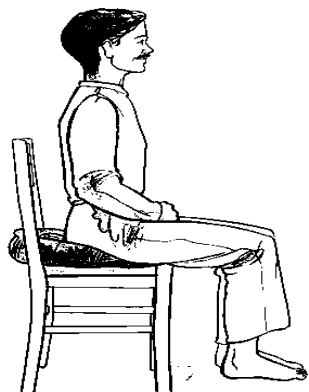


Figure 2: Full-lotus posture



Figure 3: Half-lotus posture

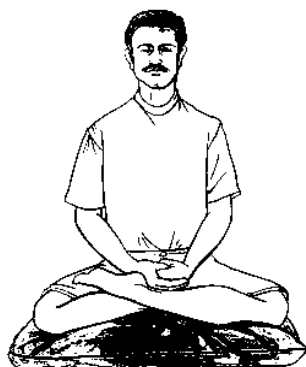


Figure 4: Burmese posture



Figure 5: Kneeling posture



## GUIDELINES FOR POSTURES AND SETTINGS

- *Structures:*
  - The buttocks are thrust out.
  - The back, neck, and head are aligned in the vertical.
  - The shoulders are relaxed.
  - The chin is slightly drawn in.
  - The abdomen is relaxed and protruding slightly.
- *Hands:*
  - Hands are comfortably placed on the knees or lap.
  - Or rest hands on lap with the fingers of the left hand above the fingers of the right and the tips of the thumbs touching each other.
- *Eyes:*
  - Close your eyes.
  - Or open your eyes, with the gaze downward. The mind is quietest when the eyes are in the lowered position without focusing on anything.
- *Environment and physical preparation:*
  - Choose a time and place free of interference from outside noise, distractions, light, and activities of other people.
  - Wear loose clothes; remove watch and glasses.
  - Empty bladder.
  - Wait for 2 hours after finishing a meal.

## GUIDELINES FOR MEDITATION

- *Breathing and Counting Breaths:*
  - When settled into the posture, bring your attention to the breathing. Feel the breath coming in and going out, observing it and feeling all the sensations of the breath, strong or subtle, long or short, and so on.
  - You can choose to count each inhalation and each exhalation, beginning with the number 1 and counting up to 10. When you reach 10, start over.
  - When the mind wanders and you lose count, firmly but gently, and without judgment, bring the attention back to the numbers and the breath.
  - The counting is the subject of attention; it is not used to control the breathing.
  
- *Mindfulness on Bodily Sensations:*
  - When the mind moves, the body follows.
  - If you feel discomfort in your legs and have an urge to move your body, do so with awareness, noticing the intention to move, the act of moving, and changes in sensations as you move.
  - Or you may find that your mind wanders from the breath to various thoughts. Simply observe the thoughts without judgment, and bring your focus back to the breath or other body sensation.
  - You can choose to draw your attention to the breath or other objects. For beginners, counting breaths is easiest, as all reasoning is excluded and the discriminative mind is at rest.
  
- *Termination of a Period of Sitting Meditation:*
  - When you decide to terminate the meditation after a period of time, do not rise abruptly.
  - Prepare by rocking from side to side, first in small swings, then a couple of large swings.
  
- *Length of Meditation:*
  - Beginners sit for shorter periods of time.
  - Sitting for longer than 30 or 40 minutes is not recommended, as the mind cannot maintain the meditation for such a long time.

## TASTING MINDFULNESS: WALKING MEDITATION

- *Walking and Knowing That We Are Walking, the Attention Is On*
  - The sensations in the body while walking,
  - Or the movements, shifts of weight and balance, and sensations in the feet and legs associated with walking.
  - You can choose to focus on one aspect of attention and change it with awareness.
  
- *The Posture:*
  - Walking meditation is practiced at a pace far slower than normal walking.
  - Knees are unlocked; allow your arms to hang loosely by your sides, or hold your hands loosely together in front of your body.
  - Direct the gaze softly, straight ahead.
  - Start with either foot and walk in such a way that the foot sinks into the floor, first the heel and then the toes. Then transfer the weight of the body onto the other foot.
  
- *Settings:*

For safety reasons and in order not to have a goal or destination, people often practice by walking back and forth across a room.
  
- *Informal Walking Meditation at a Normal Pace:*
  - May be practiced when you walk from parking lot to office or while taking a walk.
  - The key is to bring your awareness to the present movement and transform it from a dull, unconscious chore into a rich and nurturing activity.

## MINDFULNESS IN DAILY LIFE

- *What:*
  - Really know what we are doing throughout our daily moment-to-moment experience.
  - Extend the self-awareness and insight cultivated from formal sitting meditation, which in turn reduces habitual, automatic, and maladaptive behaviours in daily life.
  
- *When:*

You may choose some tasks that you tend to do unconsciously or impatiently, or tasks that occur a couple of times a day, as reminders to return to the present and do those tasks mindfully.

  - Doing laundry
  - Brushing teeth
  - Cooking
  - Washing the dishes
  - Cleaning the house
  - Eating
  - Taking the bus
  - Standing in line
  
- *An Example:*

To bring your full attention to eating a raisin,

  - Touch it.
  - Observe it.
  - Smell it.
  - Listen to it.
  - Feel the raisin on your tongue and teeth.
  - Feel your mouth watering.
  - Feel the difference between one raisin and another.
  
- *Use Your Beginner's Mind*

See a situation freshly and to be willing to set aside any previous thoughts about the situation.

### SAFETY CONCERNS FOR PRACTICING MINDFULNESS

- Generally speaking, mindfulness is a relatively safe practice; it is noninvasive and can be practiced independently. However, despite abundant evidence for the effectiveness of mindfulness, risks may arise for those who pursue its benefits without taking other factors into consideration.
- Keep the following in mind as you begin practicing mindfulness:
  - *Mindfulness cannot be used as a substitute for conventional medical care:*  
*A physically ill client aiming to strengthen his or her immune system* cannot rely on mindfulness alone to achieve this result. Medical care should also be part of the treatment. In other words, for medical patients, the practice is strictly an adjunct to conventional care, rather than a substitute.
  - *Mindfulness practice may not be suitable for some people:*  
Generally, research indicates that mindfulness works well in treating stress-related conditions such as insomnia, anxiety, and depression, and also for people who suffer from stress as a result of chronic disease. Meditation practice is generally not advisable for people who experience hallucinations or who have psychoses such as unstable bipolar disease or schizophrenia, because mindfulness could aggravate these symptoms. Therefore, check with your doctor and counsellor before beginning mindfulness practice. More research is needed in this area, as it is not clear how mindfulness affects these conditions.
  - *Mindfulness is not avoidance or blocking the senses:*  
People who are suffering from serious emotional distress may seek mindfulness training to dull the senses or to avoid emotions. Unfortunately, this kind of relief cannot be attained through mindfulness. On the contrary, by heightening one's awareness, mindfulness helps people become more comfortable with reality and face their experiences, whether good or bad, desirable or undesirable.
  - *There is no "best" mindfulness practice:*  
Counsellors can put clients at risk if they believe there is only one way to do mindfulness practice or that their kind of mindfulness practice is the best. Therefore, it is in the client's interest to ask a potential instructor questions about mindfulness practice, such as the time needed for learning, options for doing the mindfulness practice, and the instructor's mindfulness experience or trainings.

**WHAT YOU NEED TO PLAN BEFORE STARTING TO PRACTICE MINDFULNESS**

- *What is my goal and commitment?*
  - You need to commit to a minimum of 3 times a week for 8 weeks.
  - Your goal is simply to do the prescribed task.
  - People can't willfully force meditative change. The more you want to make changes, the less likely you are to attain them.
  
- *Where can I learn mindfulness techniques?*
  - You can learn mindfulness on your own by following instructions in books or on CDs. Nevertheless, you will gain more benefit with the support of an instructor.
  - You can choose group settings or individual instruction.
  - Talk to potential instructors. Ask about their personal experiences of mindfulness and their views regarding mindfulness.
  - Some medical units, community centres, universities, and hospitals offer related courses.



### Final Word

*Now you know what mindfulness looks like, sounds like, and feels like, its benefits when practiced, and how it might change your life. You might have the urge to start practicing right away. Don't rush. This is a lifelong journey. This booklet has merely provided an introduction. Before you start, I encourage you to do some more research using websites, books, or workshop promotion brochures. Prepare a lot of questions to ask your potential instructors. No one will have all the answers, because mindfulness practice has such a long history and wide range of forms. However, the more you prepare for it and think about it, the more you will benefit. Once you start, remember not to set goals.*

*Simply do it.*

## References and Suggested Resources

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