

Mindfulness training - a clinical intervention for anxiety

By Timothea Goddard and Fiona Pavlakis

I have experienced many terrible things in my life – some of which actually happened.

Mark Twain

Anxiety is an inevitable part of every day life for most of us. It is a primitive bio-physiological process, which primes the individual to act in self preserving ways under threat. Experientially, it generates all kinds of complex phenomena, which are expressed in sensations, affects, images, behaviour, language and meanings. Individuals can be constitutionally predisposed to suffering anxiety and certain developmental experiences are strongly implicated in the likelihood of someone developing an anxiety disorder. (Siegel, 1999)

Anxiety - a view from the nervous system

A healthy nervous system responds to threat by mobilising the fight/flight response – that is, the sympathetic branch of the autonomic nervous system (ANS), with its attendant high emotional arousal and muscle tension, and focus on external threat. The sympathetic branch is essentially energy-mobilising and prepares us for active engagement with the environment. As an emotional signal, this mobilisation can help us generate the right kind of attention and focus to deal with a particularly difficult and challenging situation.

Once the threat/challenge has past, a well-regulating nervous system can return to a base state of lower arousal. This involves the activation of the parasympathetic branch of the ANS, which is essentially energy-conserving. It allows us to let go, give up, but also recuperate.

Optimally, with the acquisition of healthy flexibility in self-regulation, the two branches of the ANS work in a coupled reciprocal mode i.e. they counterbalance each other, thus establishing the rhythms of activity and rest, expansion and contraction which are such an integral part of all life processes, and necessary for an experience of integrity and resilience. The capacity to self-regulate involves the capacity to switch from one mode of functioning to the other, from arousal to relaxation to arousal, as required (Schoore, 1999)

Habitually anxious people don't seem to be able to return to a state of lower arousal easily. They consistently live in a state of anticipatory vigilance about the possibility of future negative events. Interpretations or appraisals of external events, as well as internal "events" – like thoughts, feelings and sensations - can then become the triggers which create new cycles of sympathetic arousal. This is neurotoxic for the brain and damaging to other systems of the body, and can lead to all sorts of secondary problems, such as substance misuse, or constriction of life options – both of which can be seen as efforts to self-regulate. Hence an emotional response, rooted in adaptive human physiology, can become a problem. (McEwen, 2002)

Mark Twain elegantly points to the trap of anxiety: one can spend a lot of one's life engaging in life-threatening situations which are largely being generated by the patterns of one's own brain and body. Rather than a useful transitory signal, anxiety becomes an ongoing painful state of being.

Mindfulness in the Western context

*All descriptions of reality are but temporary hypotheses.
Buddha*

Over the last 30 the Western scientific community has been increasingly interested in examining “mindfulness” - a construct derived largely from Buddhist and other contemplative traditions. (Buddhism offers a rich and detailed psychology, an overview of which is beyond the scope of this article. Please see www.openground.com.au for article by Malcom Huxter outlining this perspective and its relevance to Western therapies.)

Across the fields of psychology and medicine, mindfulness has come to be defined in many ways such as a state, a psychological process, a collection of methods, a technique and an outcome (Hayes & Wilson, 2003). Perhaps the most cited definition of mindfulness is “the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally to the unfolding of experience moment to moment” (Kabat-Zinn, 2003, p.145).

Research on mindfulness has proliferated since its initiation in the 1970's (Brown & Ryan, 2003). Since this time research has demonstrated that mindfulness enhances psychological, physical and behavioural functioning (Brown et al., 2003) and is associated with a range of well-being outcomes such as reduced stress (Specia, Carlson, Goddy & Angen, 2000), anxiety and depression (Kabat-Zinn, Massion, Kristeller, Peterson, Fletcher, Pbert, 1992; Astin, 1997; Williams, Kolar, Reger & Pearson, 2001) as well as increased mental clarity and psychological health (Reibel, Greenson, Brainard, Rosenzweig, 2001).

Numerous studies have offered support that with effort this state of mindfulness can be cultivated (Davidson, Kabat-Zinn, Schumacher, Rosenkranz, Muller, Santorelli, Urbanowski, Harrington, Bonus, Sheridan, 2003; Kabat-Zinn, Massion, Kristeller, Peterson, Fletcher, Pbert, et al., 1992; Teasdale, Segal & Williams, 2000) and several mindfulness programs have been developed to facilitate this, such as Mindfulness Based Stress Reduction (MBSR; Kabat-Zinn, 1998), Mindfulness Based Cognitive Therapy (MBCT; Teasdale, et al., 2000), and Mindfulness integrated Cognitive Behaviour Therapy (MiCBT, Cayoun, 2007). Mindfulness is also an integral element of multifaceted therapies such as Dialectical Behavioural Therapy (DBT; Linehan, 1993) and Acceptance and Commitment Therapy (ACT; Hayes, 2004).

Intensive mindfulness training has been systematised for use in heterogeneous groups in the health context by Jon Kabat-Zinn and colleagues at the University of Massachusetts's Medical Centre for outpatients (Mindfulness Based Stress Reduction). Other programs have grown out of Kabat-Zinn's work and are now being offered for specific client groups as well as heterogeneous groups ((MBCT and MiCBT).

In these adult education therapeutic programs, people are given experiential training in mindfulness over a period of eight weeks, 2.5 hours a week (plus one full day in MBSR). They engage in formal practices (yoga, body scan, breath and walking meditations) as well as informal practice - where attention is brought in sustained way to ordinary life activities during the day. There is strong emphasis on home meditation practice - up to one hour per day and CDs are provided as guidance for this home practice. Specific information about stress physiology, self-regulation, the nature of thoughts and feelings, interpersonal communication is given over the eight weeks.

What is mindfulness?

Bishop et al (2004) write:

We see mindfulness as a process of regulating attention in order to bring a quality of non-elaborative awareness to current experience and a quality of relating to one's experience within an orientation of curiosity, experiential openness, and acceptance. We further see mindfulness as a process of gaining insight into the nature of one's mind and the adoption of a de-centred perspective (Safran & Segal, 1990) on thoughts and feelings so that they can be experienced in terms of their subjectivity (versus their necessary validity) and transient nature (versus their permanence).

Two important aspects are highlighted here:

Self regulation of attention and awareness

Self regulation of attention involves bringing awareness to present moment activity, rather than operating on "automatic pilot". The danger of out-of-awareness "automatic pilot" living is that unhelpful patterns of thinking, feeling and acting be triggered and escalate without a person being aware of it. Once escalated, it may then be difficult to reflect on the experience and choose a skilful response. For example a person suffering from anxiety may habitually respond to out-of-awareness body signals of arousal with "catastrophizing" thoughts and escalating affect – which in turn leads to thoughts which exacerbate the anxiety.

Mindfulness encompasses both awareness and attention as described succinctly by Weston (1999):

"Awareness is the background "radar" of consciousness, continually monitoring the inner and outer environment. One may be aware of stimuli without them being the centre of attention. Attention is a process of focussing consciousness, providing heightened sensitivity to a limited range of experience."

Developing this capacity to shift one's focus from the narrow perspective (attention) to the broader perspective (awareness) is a powerful experience for anxious people and leads to a sense of increased self-reflexivity and self-agency.

Orientation to experience

In mindfulness practice, the orientation to experience involves acceptance, inquiry and an attempt to bring a sense of non-judgemental curiosity to all experiences – whether they are pleasant, unpleasant or neutral. The individual practices focusing on the *process* rather than the *content* of thoughts, feelings and sensations. Rather than trying to control or change any experience, they are invited to practice acceptance towards the dynamic field of changing thoughts, sensations and feelings as they arise and subside. This leads to an experience of equanimity.

Mechanisms of mindfulness

You are the landscape, not the storm.
James Thornton

So how can paying attention in this way enhance people's capacity to regulate fear and interrupt habitual patterns of anxiety in a way that is stable and maintained over time?

Of central importance in mindfulness training is that a safe structure is created in which people can begin exploring previously avoided experiences. Embodiment (by the teacher) of some key values - empathic attunement, acceptance, non-judging, non-striving – contribute to people feeling safe to shift out of an aversive motivational system into an exploratory one, and provide modelling that equanimity is possible. The highly structured tasks and group experience also enhance safety in this exploration.

Physiological regulation

Although it is not a relaxation or mood management technique, a by-product of mindfulness training is the activation of the parasympathetic branch of the nervous system; sustained practice establishes new patterns of self regulation. This results in many of the improved health outcomes associated with these programs including improved immune functioning, lowered blood pressure, reduced chronic pain, reduced muscle tension and headache, and lowered serum cholesterol and blood cortisol levels. (Grossman, 2004)

At the neurobiological level, mindfulness practice has been understood to facilitate brain integration – between the two hemispheres and between the limbic system and the neo-cortex. Part of the therapeutic effects on conditions such as anxiety and depression are thought to stem from meditation's stimulation of left-hemisphere activity and reducing right hemisphere activity. Also, attending mindfully to body symptoms of anxiety – the heart beat, the sweating, the faster breathing, the tight shoulders - brings back “on – line” the functions of the neo-cortex: eg. empathy, attunement to self and other, and balance of mind, the ability to respond flexibly to situations, regulation of the stress response, and the ability to down-regulate fear. (Siegel 2007)

Acceptance

A major focus of all mindfulness based therapies – including ones which don't specifically teach a meditation practice (DBT and ACT) – is acceptance. Acceptance is particularly relevant in anxiety related disorders such as panic attack. If panic attacks can be tolerated and therefore regarded as occasional unpleasant experiences which don't last and are not dangerous, then clients may learn to let go of various maladaptive means to avoid them – including drug and alcohol abuse, constricting life choices and excessive vigilance towards body sensations. (Hayes 2004)

Exposure

In mindfulness practice, people are encouraged to “sit with” and observe their experience and to notice their reaction so it. Sustained non-judgemental observation of anxiety-related sensations without attempt to escape or avoid them, may lead to reductions in the emotional reactivity typically elicited by anxiety symptoms (Jon Kabat-Zinn, 1982, 1992).

Meta-cognitive awareness

Cognitive filters are operating all the time and gives us the impression that our thoughts are facts about the world, rather than appraisals arising out of our past experience. Mindfulness practice opens people to recognise the continuous stream of semi-conscious commentary, assessment and evaluation which goes on in daily life. People learn how to recognise thoughts as “just thoughts” and not direct reflections of truth or reality (Jon Kabat-Zinn, 1982, 1990). Teasdale et al,(2002) suggest that mindfulness trains people to recognise patterns of rumination which can lead to depressive episodes. People are invited to reflect on their beliefs, attitudes and perspectives as contingent and particular. This can be liberating for those struggling with anxiety as they begin noticing how they construct their world with their thoughts and expectations. This meta-cognitive awareness helps people recognize their own activity in the maintenance of their symptoms.

Developing boundaries through mindfulness:

“I came into the program feeling depressed and anxious. I have a very out-of-control son who had been diagnosed with Bipolar, and it was wrecking havoc with his life and mine. Through the practice I began to recognize how pre-occupied I was with his condition, his pain, his distress. I had no boundaries and literally could think of nothing else. I gradually used to the practice to interrupt this pre-occupation and to actively choose activities and time for me. It is still painful, but I feel separateness from it. Paradoxically I can be of more help him as I am not so over-whelmed and angry”
(MBSR participant, Summer, 2005).

Affect tolerance, recognition and differentiation

Many people with anxiety disorders are actually phobic about experiencing emotions and are unable to recognise certain emotions and differentiate some emotions from others. The practice provides a strong structure for people to learn how to tolerate and then explore their emotional responses.

Differentiating affects: a client example

Sophie would interpret any arousal in her body as a signal that something terrible was about to happen. She discovered through the practice that she was particularly 'blind' to feelings to do with assertion ie. frustration and anger. As she began to be able to recognize these affects, she was able to use these signals more expertly as cues to take assertive action, rather than protective action - opening her up to a broader range of adaptive responses. She was also able to use her mindfulness skills to respond to the fear that taking these new actions evoked.

Self efficacy and self management

Learning how to observe the previously overwhelming gamut of sensations, emotions and thoughts involved in anxiety - without so much reactivity - gives people a powerful sense of self efficacy. The behavioural changes people need to make in order to undertake a daily mindfulness practice builds confidence in bringing what they are learning into their lives. Specific choices about lifestyle, behaviour and the implementation of ongoing self-regulatory techniques to manage their anxiety is then made more possible. (Kabat Zinn, 1991)

Embodied cognition: an integrative model

A model, which successfully integrates all these levels of analysis, is the Co-emergence theory of Bruno Cayoun (2005). He draws on the notion of embodied cognition – in which the continuous interactions of thoughts, affects and body sensations play a central role in the generation of emotional reaction - to explain the reinforcement of psychopathology. In line with wisdom from contemporary developmental psychotherapy, (Stern 1985, Greenspan, 1999, Siegel 2003) Cayoun critiques conventional CBT as giving insufficient attention to the body-based signals which maybe out of awareness, but still contributing to reinforcing certain patterns of response.

He argues that all psychological dysfunction can be understood as an information processing problem in which there is diminished capacity for awareness of (realistic) Sensory perception and of Interoception (perception of body sensations) and an increased reliance on habitual patterns of Evaluation and Reaction to discern how to respond in any situation.

In a threat situation, it makes sense to not pay too much attention to the perceptual aspects of stimuli and body sensations as it is time consuming and not essential in the presence of an immediate danger. What is more crucial is for the organism to put mental energy into Evaluation (schematic models/established memory networks) and Reaction (rapid automatic decision-making) as this may make the difference between surviving or not. (See Fig.1) Anxious people often respond as if their ordinary life contexts are life threatening.

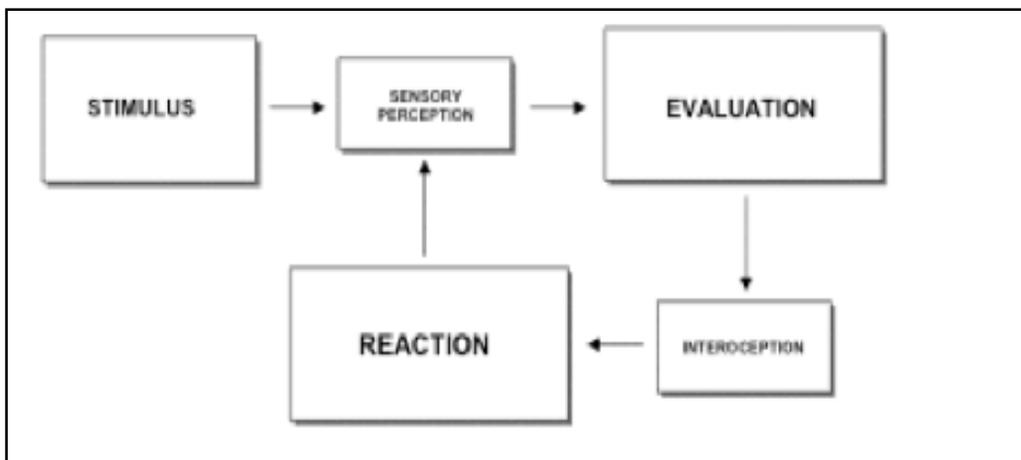


Figure 1. Disequilibrium in the information processing system.
(Taken from Cayoun, 2005)

Mindfulness training is a systematic training in observing phenomena as they arise and pass away, and provides practice in not reacting in one's habitual ways; equanimity is therefore learned and cultivated. Cayoun argues that this lack of reactivity gives the opportunity for the brain to extinguish old pathways of reinforcement, and an increased ability to take in new information from the environment. (See Fig. 2.)

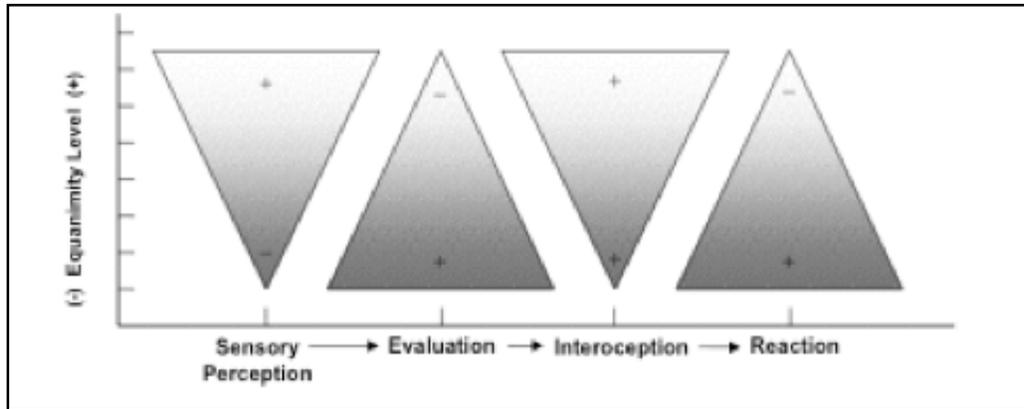


Figure 2. Consequence of increase in equanimity on the overall reinforcement system during mindfulness training. The surface area within each triangular surface represents the amount of processing dedicated to each of the four components as a function of equanimity level. (Taken from Cayoun 2006)

A word of caution

Therapists who do not have a regular mindfulness practice themselves, have difficulty effectively teaching others to cultivate a practice. Cayoun (2006) writes:

“... the most expert and efficient in implementing mindfulness training are those who, themselves, have trained in the technique and improved their capacity for equanimity. This assertion is congruent with the notion that mindfulness is an experiential approach, not one that is knowledge based.”

Programs like MBSR and MBCT make it a pre-requisite that the instructor has some years of personal practice in meditation including retreat experience before they begin teaching. The founders of MBCT discovered that without an immersion in practice, they were not able to respond to the questions that arise in such a program with effectiveness, authenticity and authority (Teasdale et al 2002). If you are interested in making mindfulness part of your professional life, it may be wise to heed the wisdom of others who have gone before – and cultivate a robust practice of your own, first.

Changes in attachment patterns?

Siegel (2007) – an integrative researcher in attachment and neuroscience - argues that mindful awareness of our ongoing experience creates an attunement or resonance within ourselves that harnesses specific social and emotional circuits in the brain, similar to those circuits that are stimulated in healthy attachment systems between child and caregiver. This is a powerful thesis that opens up the scope for mindfulness practice as one that can not only bring symptomatic relief and assist in self regulation in conditions such as anxiety, but also as an adjunct to therapy to help transform underlying developmental attachment patterns which can contribute to anxiety disorders.

Case Study

I grew up in a small family where my mum, who also suffered severe anxiety, was always reminding my brother and I of the risks involved in pretty much any potential situation. Quite early in my life, I became an expert at scanning for future disasters and unfortunately took a lot of that ability into my adult life.

Having experienced several divorces in my parents' relationships I was always quite sensitive to the prospect of being abandoned by my loved ones and found I constantly sought reassurance that they would never leave me. While this of course meant that I gave a lot of love and was very caring towards those around me, the flip side meant that I experienced severe anxiety whenever something went wrong.

At 25 years of age, this way of relating often caused great turmoil and at several points almost saw my relationship with my partner collapse. When I was 29, after several years of counselling I came across the technique of Mindfulness and thought I'd give an MBSR course in the local area a go. And I'm so glad I did. So are my family and my partner.

What I learned helped me to let go of previous ways of dealing with difficulties. For example, I found I no longer felt the need to be constantly assessing the quality of my relationship and analysing my partner's behaviour. I think this is mainly because I began to develop a deep acceptance of myself and began to have more compassion for myself. It was this self-acceptance that then really helped me to build acceptance of him, with his own flaws.

I became more and more aware of my previous habits and their effects on those people around me. Over time I was able to open up a space, a distance almost, where I could just listen to my partner as he was, without letting all my interpretations get in the way. Our communication has significantly improved as a result. Actually we are getting married in a few months and I can say with great gratitude that after 6 years of being together our relationship is the best it has ever been.

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