

Mindfulness-based Cognitive Therapy: evolution and its application

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Brain activation of GAD

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Normal connection: amygdala to visual and auditory cortex

.basolateral amygdala

- In healthy participants, subregion linked to occipital,temporal and prefrontal cortex
- visual and auditory processing, as well as memory and **high-level emotional and cognitive function**

Normal connection: amygdala to thalamus ,
midbrain and cerebellum

- centromedial amygdala associated with deeper areas of brain

- connections included **thalamus**, helps regulate alertness from its perch in midbrain

- brain stem**, regulates **heart rate**, **breathing** and release of neurotransmitters like **serotonin** and dopamine

- cerebellum** controls motor coordination

GAD: muddled connections

.two regions still sent emissaries to separate targets, but lines of communication muddled

- "The basolateral amygdala **was less connected** with all of targets and more connected with centromedial targets"

- "And centromedial less connected with its normal targets and **more connected with basolateral targets.**"

Hard to discriminate true and false alarm

- both amygdala regions less connectivity to region of brain responsible for determining importance of stimuli
- people with the disorder have a harder time discerning truly worrisome situations from mild annoyances

Abnormal connection  excessive worrying

whether connectivity abnormalities came first or whether excessive worrying shaped the brain by reinforcing particular neural pathways.

Reduced fronto-limbic connection: deficit in emotion regulation

- .more negative functional coupling between the **pregenual anterior cingulate cortex** and the **amygdala** during the anticipation of aversion

- .**Reduced** structural connectivity of a **major frontolimbic pathway** suggests a neural basis for **emotion regulation deficits in GAD.**

Increased cortical activities

Increased frontal activities

Increased thalamus (sensory gate)

Increased parietal activities (sensory integration)

Increased visual activities

left frontal activation in expert Tibetan Buddhist compared to novice meditators practice "unconditional loving-kindness and compassion."

Left prefrontal areas are linked to positive emotions, self-control and temperament.

frontal and parietal attentional systems are both more active and the thalamus (sensory input) and basal ganglia (sequencing of cognition and behavior) are less active.

This is the brain activation pattern of restful alertness--pure wakefulness: heightened alertness in the midst of deep silence for mind and body

.MBCT related research population in KMUH

- Bipolar disorder
- Schizophrenia
- Anxiety disorder
- PTSD
- Sleep disorder
- Cognitive remediation group for major psychiatric disorder

Mindfulness-Based Cognitive Therapy (MBCT)

- .two disciplines:

- .Cognitive therapy :

- .identify and alter cognitive distortions

- .Mindfulness :

- .meditative practice from Buddhism

- .identify their thoughts, moment by moment

- .Without judgement

- .cognitive behavioral therapy (CBT)
 - focuses on *changing* negative thoughts

- .MBCT

- process* of paying attention to thoughts and feelings moment by moment and without judgment

.MBCT help with patients

- suffering caused by negative thoughts
- no possible way to alleviate all suffering

No therapy or meditation will prevent unpleasant things from happening in our daily lives

two practices combined more objectivity to view these unpleasant things

History of development

MBCT's main technique is based on the Mindfulness-Based Stress Reduction (MBSR) eight week program, developed by Jon Kabat-Zinn in 1979 at the University of Massachusetts Medical Center.

- Research shows that MBSR is effective for patients with
 - chronic pain, hypertension, heart disease,
 - cancer
 - Chronic depression
 - anxiety and panic

Misunderstood and clarification

- .X Relaxation and happiness are not the aim
 - ○ "freedom from the tendency to get drawn into automatic reactions to thoughts, feelings, and events"
 - ○ Patients change the relationship to chronic pain so the pain becomes more manageable.

- Mindfulness-Based Cognitive Therapy grew largely from Jon Kabat-Zinn's work.
- Zindel V. Segal, J. Mark G. Williams and John D. Teasdale
 - helped adapt the MBSR program
 - could be used with people who had suffered repeated bouts of depression in their lives.

- .MBCT programs usually consist of
 - .8-weekly two hour classes with weekly assignments to be done outside of session.
 - .to enhance awareness so to respond to things instead of react to them

. "We can respond to situations with choice rather than reacting automatically. We do that by practicing to become more aware of where our attention is, and deliberately changing the focus of attention, over and over again".

.The structure of MBCT

- requires strong commitment and work on the clients' part but the rewards can be lasting.

- .Patients participating in the program
 - .meet as a group on a weekly basis.
 - .*The Mindful Way Through Depression* is used as the patient manual for the program and contains
 - .guided Mindfulness practices on CD that are assigned as homework

Effectiveness of MBCT

prevention of relapse

UK National Institute for Health and Clinical Excellence (NICE) endorsed MBCT as an effective treatment for prevention of relapse.

.Recurrent depression with MBCT to reduce relapse

- MBCT "reduced relapse from 66% (control group) to 37% (treatment group)"
 - most people might be able to ignore sad mood
 - in previously depressed persons a slight lowering of mood with a devastating thought

- .The core skill of MBCT

- recognizing these thought patterns in order to break away from the false constructs of our mind.

- .Relapse avoided because

- onset of depression is early recognized
 - vicious cycle is stopped before relapse

Benefits of MBCT and mindfulness practice

.Often, our pain and mental discomfort are caused by

- the judgment placed on the present moment and

- not by what is actually happening.

.MBCT prioritizes learning

- how to pay attention or concentrate with purpose, in each moment and without judgment.

.meditation focuses our attention back to the present,

- to what is happening right now in this exact moment.

- When one is mindful, the attention is focused on the present so judgment cannot be placed.

- .Segal and his partners found that
 - "thoughts and feelings could interact with each other in a damaging, vicious spiral".
- .Viewing things mindfully requires
 - not turning away from any feeling
 - but instead being open to the experience while trying not to engage defense mechanisms.

.All thoughts are welcomed into the mind equally

- so that one does not judge the thought or the self for thinking the thought.

.As a therapist, mindfulness can be

- implemented into therapy sessions, and
- used as a means of self-care in the therapist's personal life.

• "Meditating therapists often report feeling more 'present', relaxed, and receptive with their patients if they meditate earlier in the day".

• having that non-judgment,
• the therapist allows the patient to fully express true feelings by having that openness.

. "As the therapist learns to disentangle from her own **conditioned patterns of thoughts** that arise in the therapy relationship, the **patient** may discover the same **emotional freedom**".

mindfulness meditation

.therapist to see

- other solutions to a patient's problem he or she may not have been originally aware of.

- "Having this [perspective] enables the therapist to have some flexibility in finding a formulation that accords with the patient's understanding".

."offering love and care to ourselves replenishes the physical and emotional reservoirs that are necessary to care for others as therapists"

**Why do we remain
vulnerable to depression?**

- .during any episode of depression, negative mood occurs alongside negative thinking
 - such as 'I am a failure', 'I am inadequate, 'I am worthless'
 - bodily sensations of sluggishness and fatigue
- .When the episode is past,
 - the mood has returned to normal,
 - negative thinking and fatigue tend to disappear

.when negative mood happens again (for any reason)

- a relatively **small amount of such mood** can **trigger** or reactivate the **old thinking pattern**.

- people start to think they have failed, or are inadequate

- even if it is **not relevant to** the current situation.

THANK YOU