Mindfulness-Based Biofeedback: Clinical Application and Practice

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Overview

- Introduction
  - Experience with complex medical problems
  - Unique considerations
- Biofeedback
- Mindfulness Meditation
- Mindfulness-Based Biofeedback (MBB)
  - Case study
  - Protocol
- Practice Moments
Unique Considerations in Treating Illness

• Are not single traumatic events.
• They represent a series of new, ongoing and continuing demands such as:
  – The disease’s symptoms
  – Course and prognosis
  – Treatment and Side effects
  – As well as Social, Emotional, physical and financial consequences
Role of Biofeedback

- Patient trained to engage small, appropriate changes in performance which are immediately noted and rewarded
- Eventually larger changes in performance can be accomplished leading to improvement
- Goal is to train the patient to become more aware and able to make adjustments in psychophysiology without the use of a biofeedback unit
Role of Mindfulness

- Awareness
- Non-Judgement
- Acceptance
Biofeedback

- Definition- The use of monitoring instruments to provide physiological feedback re:
  1. Responses not ordinarily under voluntary control and
  2. Responses that ordinarily are easily regulated but for which regulation has broken down
Biofeedback

- Introduced in the clinical setting 1960s
- Abundant scientific research supporting its efficacy in numerous health conditions:
  1. Headaches:
  2. Neck, shoulder, and back pain and overall myofascial pain
  3. Repetitive Strain Injury, Carpal Tunnel
  4. High blood pressure
  5. Temporal Mandibular Joint Disorder (TMJ)
  6. Raynaud’s Syndrome
  7. Diabetes
  8. Post Traumatic Stress Disorder
  9. Sleep Disorders
  10. Rheumatoid Arthritis
Biofeedback: How it works

- Nervous System
  - Sympathetic Nervous System
  - Parasympathetic nervous system
Biofeedback Modalities

- Respiration
- Thermal
- Electro dermal activity
- Heart Rate (RSA training)
- Electroencephalography (EEG)
- Electromyography (EMG)
Your Breathing
Benefits

Meditation Induces Alpha Brain wave Activity

- Alert & goal oriented thinking such as active concentration
- Awake but relaxed and restful posterior parts of brain
- Relaxed attention monitoring experience frontal and midbrain
- Slow wave sleep
Goals

- Activate the parasympathetic nervous system
- Identify when we are not relaxed so we can learn what true relaxation feels like
Biofeedback
Relaxation Techniques

- Diaphragmatic Breathing
- Progressive Muscle Relaxation
- Guided imagery
- Autogenic training
Meditation Is Not What You Think
Mindfulness-Based Meditation

Cultivating a different relationship with one’s experience
Mindfulness-Based Meditation

- Introduced to western practice 70’s
  1. Herbert Benson- (1971) Relaxation Response
  2. Jon Kabat-Zinn (1979) MBSR

- Growing scientific research re:
  1. Reduction in negative mood states
  2. Increased immune response
  3. Activation of left prefrontal cortex
Mindfulness-Based Meditation

Definition - Paying attention in a particular way on purpose in the present moment, nonjudgmentally

- Jon Kabat-Zinn

1. Be Aware
2. Do not control - but allow
Balanced Approach

Awareness

MBB

Effort
Mindfulness Based Biofeedback: Pain management Psychotherapy
Vulnerability to Stress and Health Problems

Non-awareness

Behavior & body habits

Cognitive distortions

Habits & Rumination

Maladaptive arousal

Biased Perception & Problem solving

Increased Stress, poor reactions & health problems
Mindfulness-Based Biofeedback™: Prevention of Stress & Health Relapse

Stressor

Behavior and body habits

Cognitive distortions

Mindfulness-Based Biofeedback™

Observe vs react

Regain relaxation

Coping
MBB Treatment Format

- Session 1 Assessment
  - Identification of Target Goals
  - Establishing expectations
- Session 2-3 Diaphragmatic breathing training: Respiration and Heart rate
- Sessions 4-6 Biofeedback training according to tx goals
  - Relaxation Modalities
  - Muscular evaluation
  - Mindfulness modalities
- Sessions 7-8 Expansion of MBB skills
Relaxation Response

- Not the same as “relaxing”
- Immediate effect
- Long term effect
- Physical & emotional
Contraindications

- Non-compliance
  - History or current behavior
  - External locus of control
- Psychiatric Conditions
  - Severe depression
  - Psychopathic personalities
  - Caution with severe PTSD

* Possibility of decompensation with relaxation
Mindfulness-Based Biofeedback Treatment

Mindfulness

Insight
Reduced Need for Control

Biofeedback

Relaxation
Greater Control
Mindfulness Based Biofeedback Treatment

Awareness & Skill

Behavioral Modification
Overall Treatment Goals

- Improved Coping Skills
- Improved Functional ability
- Return to work
- Improved Quality of Life
- Increased Self Efficacy/Internal Locus of Control
One’s Practice

To know how other people behave takes intelligence, but to know myself takes wisdom. To manage other people's lives takes strength, but to manage my own life takes true power.

--John Heider: The Tao Of Leadership
Simple Starting Points

- Quieting reflect
- Hourly 3-second breath
- Mindfulness in everyday tasks
- The yoga of meditation
The Quieting Reflex

- A 6 second technique that can be used “anywhere”

1. Identify the stressor
2. Smile to release muscle tension
3. Repeat “I can keep a calm body & a relaxed mind”
4. Take a quiet, easy breath
5. Visualize heaviness and warmth flowing throughout your body
Recommended Reading

- A Path with Blart
- The Language of Letting Go
- Going to Pieces Without Falling Apart
- Zen Living
- Full Catastrophe Living
- Back Sense
- Wherever You Go There You Are
- The Power of Now
- The Relaxation Response
- The Wisdom of No Escape
- Thoughts Without a Thinker
- Or the Quieting Reflex
References


References


