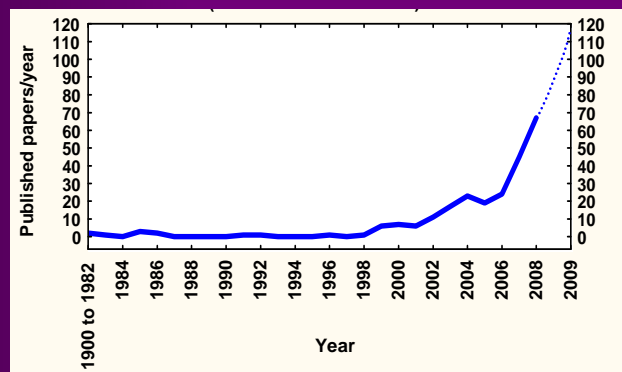


The Present Moment in Mindfulness Research: Scientific Progress and its Near Enemies

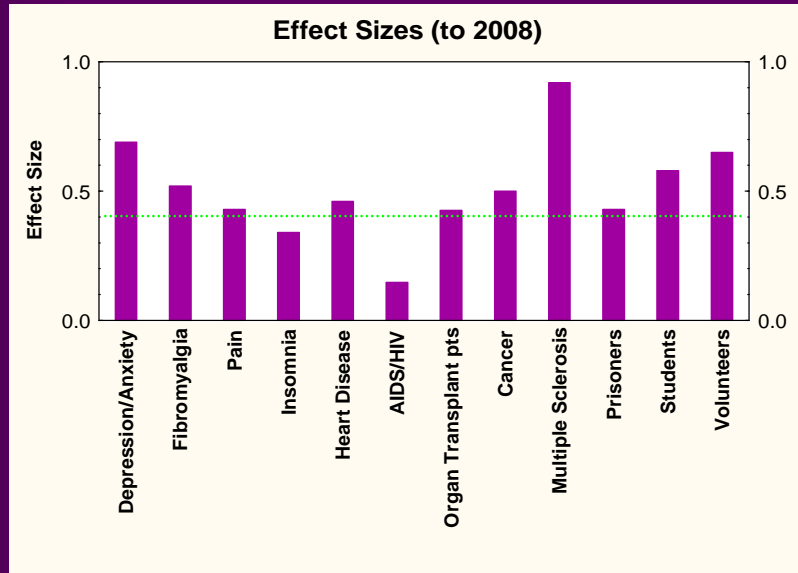
Paul Grossman
Department of Psychosomatic Medicine
University of Basel Hospital
Basel, Switzerland



Papers per year published in research journals MEDLINE & Web of Science (only papers discussing Buddhist/MBSR concept of 'mindfulness')

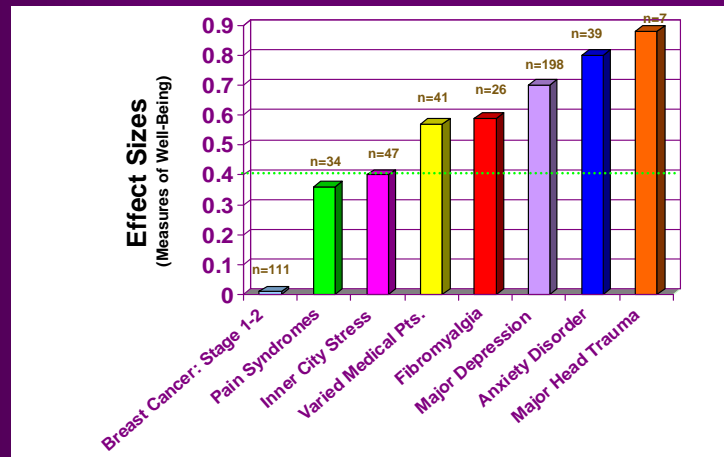


Short-term clinical benefits upon well-being of MBSR
(Effect size = standardized measure of improvement)



Long-Term Follow-up Studies
(1-3 year follow-ups)

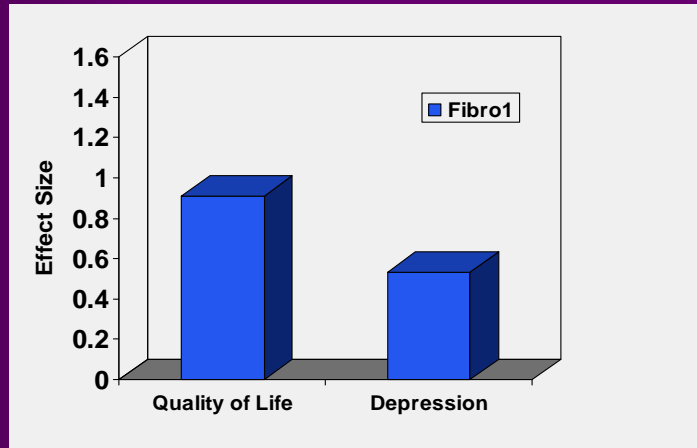
Long-Term Follow-up Studies (1-3 year follow-ups)



Rarely considered inconsistencies and problems in the scientific mindfulness-based intervention (MBI) literature

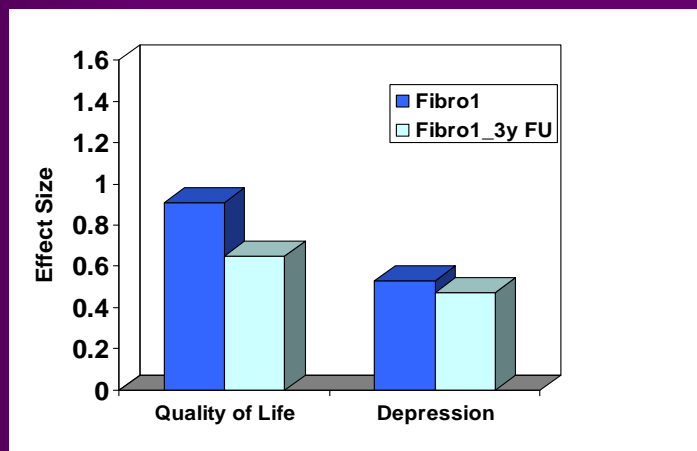
- Surge of enthusiasm for research into MBIs is exciting but it also presents potential problems
 - Interest in mindfulness outpaces experience and knowledge
 - Typical research methodologies may not always be appropriate for mindfulness studies
 - Enthusiasm may cause us to overlook possible problems and limitations of approaches
 - May affect further development of MBI's
- Some examples of inconsistencies

Own studies with MBSR for fibromyalgia patients



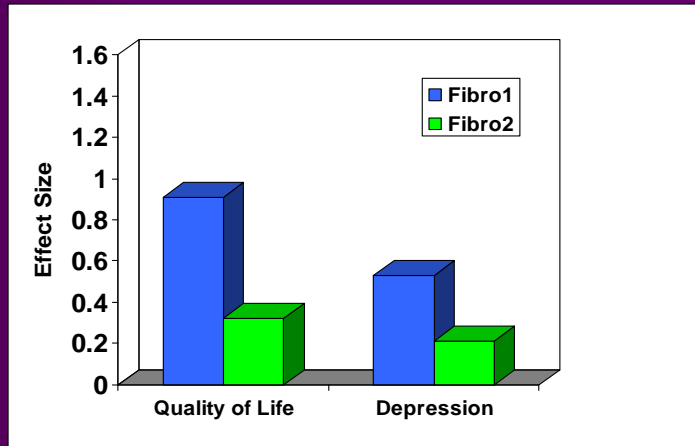
(Grossman, Tiefenthaler et al. 2007, *Psychother Psychosom*)

3-year follow-up fibromyalgia study 1



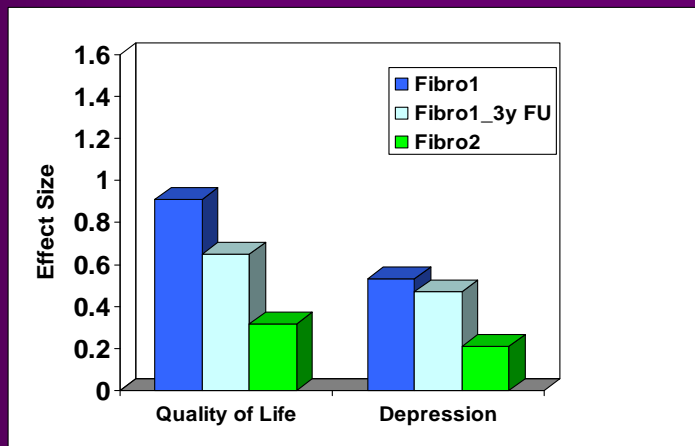
(Grossman, Tiefenthaler et al. 2007, *Psychother Psychosom*)

Fibromyalgia study 2 with same intervention: Relatively small effect sizes



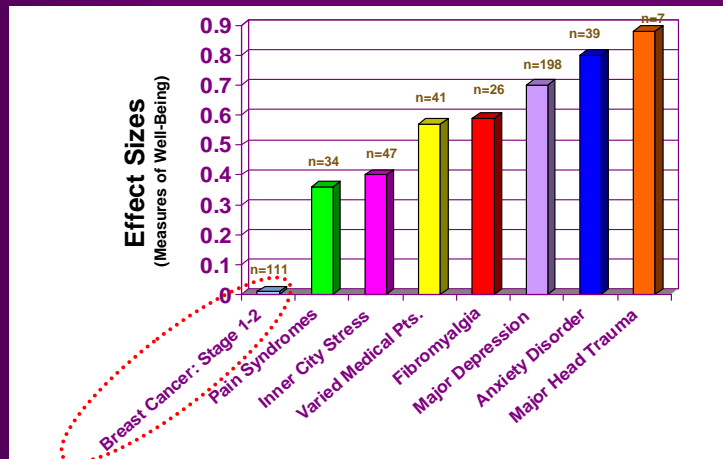
(In preparation, together with S. Schmidt & H. Walach)

Less than at 3-year follow-up followup of Study 1



(In preparation, together with S. Schmidt & H. Walach)

Long-Term Follow-up Studies (1-3 year follow-ups)



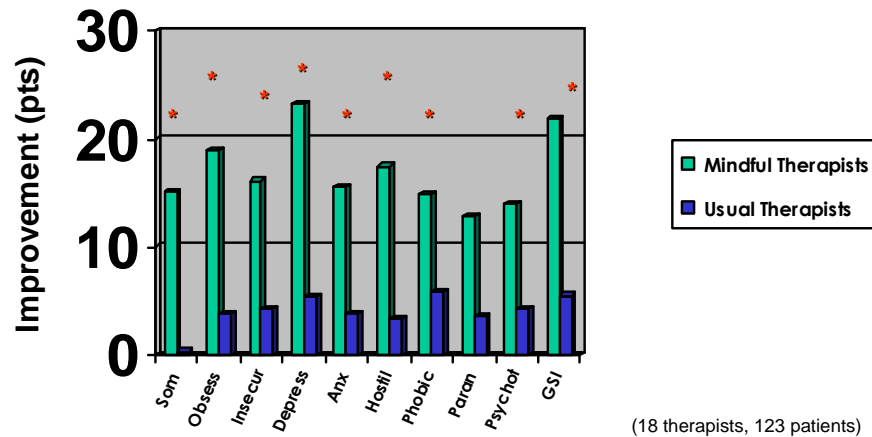
Therapist MAAS 'Mindfulness' negatively correlated with psychotherapy outcome of patients (23 psychotherapists treated 144 clients)

| | MAAS 'Mindfulness' |
|--|--------------------|
| End-of-therapy Estimated Improvement | -.23* |
| End-of-therapy Global Assessment of Functioning | -.24** |

N = 144

(Stanley et al., Journal of Cognitive Psychotherapy 2006)

Client Improvements (SCL-90) as Consequence of Therapist Mindfulness Training



(Grepmaier et al. 2007, *Psychother Psychosom*)

Examples illustrate just a few of the inconsistencies in scientific literature

- The Buddhist concept of near-enemies may be helpful here to explain what's going on with these conflicting findings.

Near-Enemies

- Concept derives from later Buddhist commentary around 410 AD (Buddhaghosa)
- Quality that seems the same or, at least, very similar to a particular characteristic but is actually very different.
 - Near-enemies often masquerade as the real thing

"Noble States of Living" (Four Immeasurables)





Compassion- feeling of deep sympathy and sorrow for another who is stricken by misfortune, accompanied by a strong desire to alleviate the suffering



Near-Enemy of Compassion

Pity: Feeling sorry for someone without real empathy--maybe even with sense of relief, distancing and/or ambivalence, often more out of fear than concern for other.

Sympathetic Joy: True joy felt for the happiness of another



VS.

Displays of joy covering envy



Real joy or inauguration blues. . . .?

. . . .or joy for others that means gains for self

Topics

1. **Examine current attempts, particularly in psychology to characterize mindfulness, even to measure it. Do these approaches capture mindfulness, or more its near enemies?**
2. Address certain issues more specifically related to scientific research on mindfulness-based interventions (MBI's) that may provide information that is the near-enemy to evidence about effectiveness
3. Brief summary of a recent study in which our research team attempted to consider each of the above factors, , as best we could, and which seems to provide support for MBI in medicine, with people suffering from serious chronic physical disorders.

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Coming to Terms with `Mindfulness`

A Brief Background and Description

Major Elements of MBIs

- Based on 2500-year-old Buddhist meditation practices and sophisticated, descriptive phenomenological system of subjective experience
- Nonesoteric, nonreligious, entirely empirical
 - BUT derives from very different paradigm of psychology and theory of knowledge
 - Based on percept, not concept
- Central process is, therefore, Buddhist idea of mindfulness ('Sati'; and no other).

Mindfulness is the process of intentional moment-to-moment attending with full awareness to what is perceptible without conceptualizing the mental content, AND with openness, kindness, patience to whatever arises.

Qualities underlying and supporting mindfulness Self-ethical system

- Nonjudging
- Nonstriving
- Acceptance
- Patience
- Trust
- Openness
- Kindness
- Letting go
- Gentleness
- Generosity
- Empathy

(Shapiro & Schwartz, 1999)

Deciding what the 'mindfulness' we mean here is

- Buddhist notion of mindfulness based on practical intentional long-term experience
 - Cannot be understood by mere rational thinking
- Is not very cultivated in untrained mind
 - Experience of mindfulness unfamiliar to those untrained
 - Apparent banal simplicity of description is deceptive

“Without training, the mind is heavy and not very skillful....
We need training in order to realize what is obscuring our
vision.”

**“The difference between a trained and an untrained
person is the understood experience.”**

Ayya Khema

So who are many of the 'expert' arbiters of mindfulness operationalization in science?

- Behavior therapists, cognitive psychologist, social psychologists, etc.
- Often, scientists with little, relatively little or no experience with mindfulness training

**“The difference between a trained and an
untrained person is the understood
experience.”**

What this `mindfulness´ is not the same as:

- Common usages of the word (dictionary)
 - "Being aware, heedful or careful of something (to be mindful of the danger)."
 - "The trait of staying aware of (paying close attention) to your responsibilities."

"Achtsamkeit heisst das neue Zauberwort und ist zurzeit in aller Munde. Eigentlich klingt es ein bisschen altmodisch, nach weisser Bluse und feinem Porzellan, nach spitzen Fingern und Glacéhandschuhen, ein bisschen betulich mit sich und der Welt, ein bisschen moralisch.

Die Achtsamkeit jedoch, die das MBSR-Programm meint, ist eine sehr spezifische und tiefgehende Form der Aufmerksamkeit. Sie ist keine mentale Gymnastik, keine zu erlernende Technik der Lebenshilfe, sondern eine Haltung, eine Art des In-der-Welt-Seins, eine Lebensform."

(Kathrin Kramer, Basler Zeitung Jan 31, 2009)

What this `mindfulness´ is not the same as:

- Common usages of the word (dictionary)
 - "Being aware, heedful or careful of something (to be mindful of the danger)."
 - "The trait of staying aware of (paying close attention to) your responsibilities."
- Technical psychological definitions
 - Cognitively `creating new categories, seeing multiple views, developing sensitivity to context.´ E. Langer (1978)
 - "Learning to observe and describe events and personal responses in words" M. Linehan (DBT, 1993)

The fabrication of mindfulness in psychology and psychotherapy:

At least seven self-rating questionnaires now published claiming to measure mindfulness:

- Freiburg Mindfulness Inventory [FMI] (Buchheld et al., 2001)
- Mindful Attention Awareness Scale Brown [MAAS] (Brown & Ryan, 2003)
- The Kentucky Inventory of Mindfulness Skills [KIMS] (Baer et al., 2004)
- Cognitive and Affective Mindfulness Scale [CAMS] (Feldman et al, 2005)
- Toronto Mindfulness Scale [TMS] (Lau et al., 2006)
- Facets of Mindfulness Scale [FoM] (Baer et al., 2006)
- Revised Cognitive and Affective Mindfulness Scale [CAMS-R] (2007)
- The Philadelphia Mindfulness Scale (Cardaciotto et al., 2008)

Most popular measure of 'mindfulness': Does it measure mindfulness at all?

(Mindfulness Awareness & Attention Scale [MAAS], Brown & Ryan, 2003)

Almost never
1

2

3

4

5

Almost always
6

- I drive places on “automatic pilot” and then wonder why I went there.
- I snack without being aware that I’m eating.
- I forget a person’s name almost as soon as I’ve been told it for the first time.
- I break or spill things because of carelessness, not paying attention, or thinking of something else.
- I do jobs or tasks automatically, without being aware of what I’m doing.
- I rush through activities without being really attentive to them. . . .

**THE OPPOSITE OF RESTLESS INATTENTIVENESS
IS NOT MINDFULNESS (maybe a near enemy)!!!**

"...the low end of depression is not happiness but rather the lack of depression; the low end of physical problems is not athleticism but rather an absence of mobility concerns."

Item Response Theory and Clinical Measurement
Reise & Waller, *Annual Review Clin Psychol* (2009) 5:27–48

Problems with other scales of mindfulness

Can we define mindfulness by people briefly rating themselves in 5-10 minutes on 15-30 statements?

An Interesting Comparison:

Leigh, Bowen & Marlatt (2006)

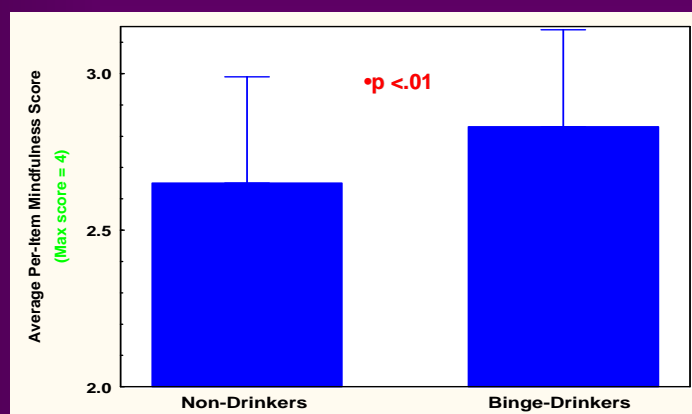
- Examined 'mindfulness' in relation to substance abuse
 - Used Freiburg Mindfulness Inventory (FMI)
- Binge-drinking vs. Non-drinking U.S. college students (n=196)

VS.

Buchheld, Grossman & Walach (2002)

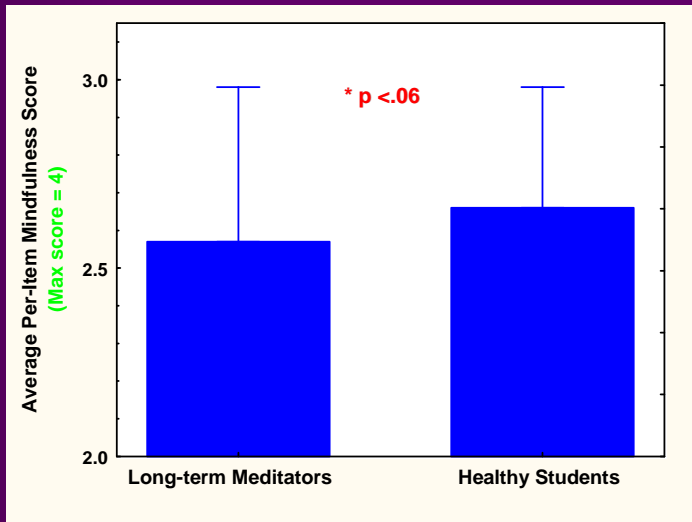
- Freiburg Mindfulness Scores among long-term mindfulness meditation practitioners after intensive multiday meditation retreats (n=100)

Comparisons of Binge-Drinking Students vs. Non-Drinking Students Freiburg Mindfulness Inventory (FMI)

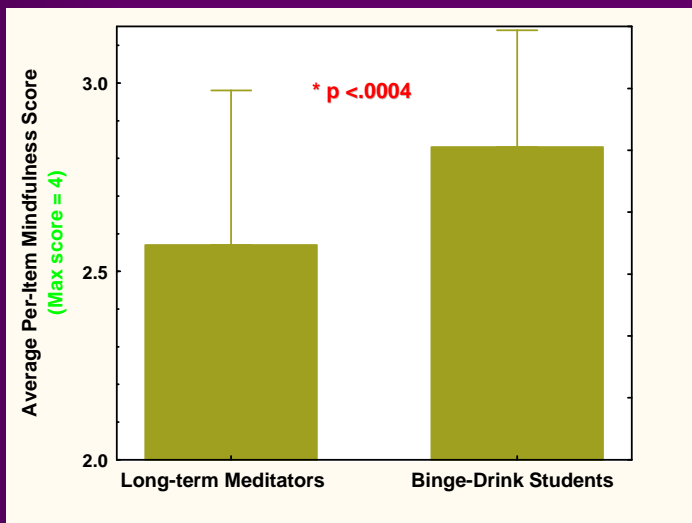


"The FMI can be measured reliably and may assist in identifying an important relationship between substance use and mindfulness." (Leigh, Bowen & Marlatt, 2006)

**Comparisons of Long Time Meditators
vs. Non-Drinking Students**
Freiburg Mindfulness Inventory (FMI)



**Comparisons of Long Time Meditators
vs. Binge-Drinking Students**
Freiburg Mindfulness Inventory (FMI)



Who is more FMI `Mindful` ?

Binging drinking students > nondrinking students > Meditators

“The difference between a trained and an untrained person is the understood experience.”

Consequences

- Failure to recognize these problems may seriously compromise progress in mindfulness research.
- Facile operationalizations of the original Buddhist idea of mindfulness may serve to trivialize our understanding.
- It may also substantially alter meaning.

Good mindfulness research and possible near-enemies?

- What's MBI anyhow?
 - Cognitive skills training?
 - A manualized, scripted technique for stress reduction?
 - Something else: the start of a radical retraining of awareness embedded in a gentle ethics of wholesomeness
 - Depends on who is teaching, their experiences and their abilities to embody what they teach

Good mindfulness research and possible near-enemies?

- What's MBI anyhow?
- Who is teaching MBI?
 - MBI may be taught by individuals with no or modest self-experience in meditation and/or little or no teaching experience
 - What is the teacher's understanding of mindfulness

“The difference between a trained and an untrained person is the understood experience.”

Good mindfulness research and possible near-enemies?

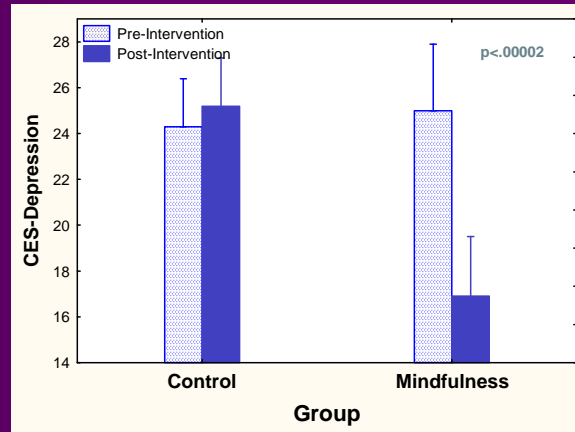
- What's MBI anyhow?
- Who is teaching MBI?
- **A long forgotten fact: the research context is part of the intervention!**
 - **Discrepancies between mindfulness embodied in MBI and treatment of patients by research team**
 - Neutral or cool interactions with participants as part of assessment
 - Excessive burdening of patients with assessment instruments
 - Many questionnaires; daily diaries; physiological measures
 - Induction of serious distress in a laboratory situation violates basic foundation of kindness inherent in MBI's
 - Often with highly vulnerable groups (e.g. depressives)

An attempt to consider these factors:

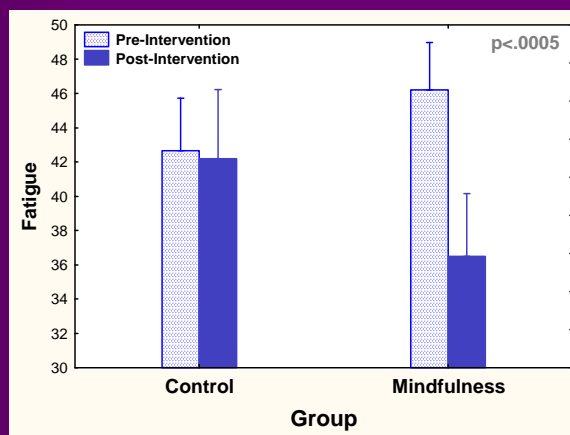
Mindfulness intervention with multiple sclerosis pts.

- 154 multiple sclerosis pts provided information and volunteered for MBSR (i.e. all chose for MBSR)
 - Aim to improve well-being (quality of life, depression & fatigue)
 - Randomized to MBSR vs. Waitlist control
- Carefully considered contextual factors
 - Research/medical staff selected and trained (as best as possible) for kindness & attentiveness
 - Patient burden kept to minimum in assessing trial
- Highly experienced teachers with many years personal meditation practice & teaching exper.

Patients complaining of depression at baseline

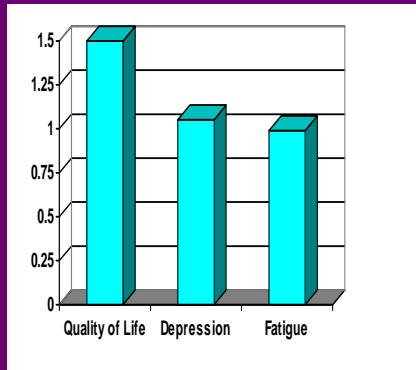


Patients complaining of fatigue at baseline



Effect sizes for groups (with depression, fatigue, reduced QoL)

Effect Size



The Best Mindfulness Checklist

