

# **Mindfulness-based behavioral therapy (MBBT) for severe obsessive-compulsive disorder improves therapy outcome for people who were previously unresponsive to traditional interventions**

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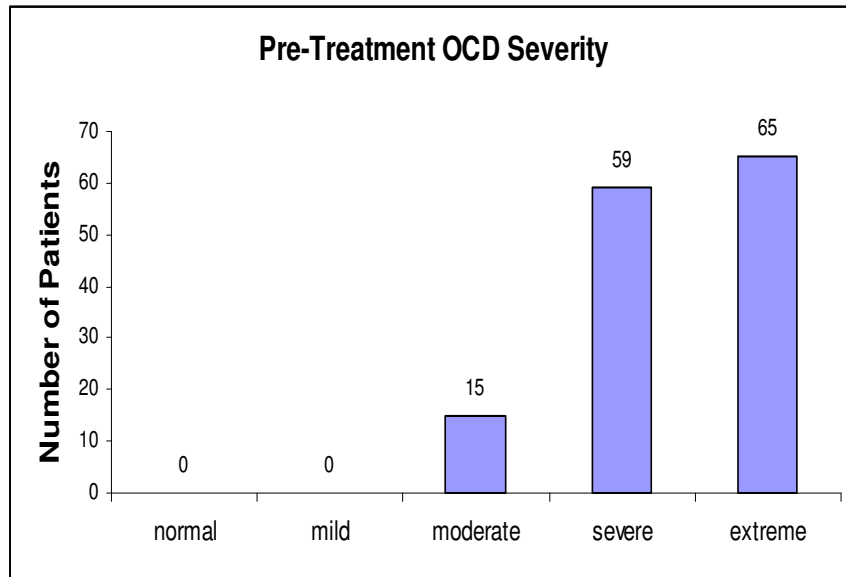
Abstract presented at the 5<sup>th</sup> annual conference of the Center for Mindfulness in Medicine, Healthcare, and Society, Worcester, MA, March 28 – April 1, 2007

**Table 2****Pre- and post-treatment scores on measures of OCD, comorbid symptoms, insight, and functioning.**

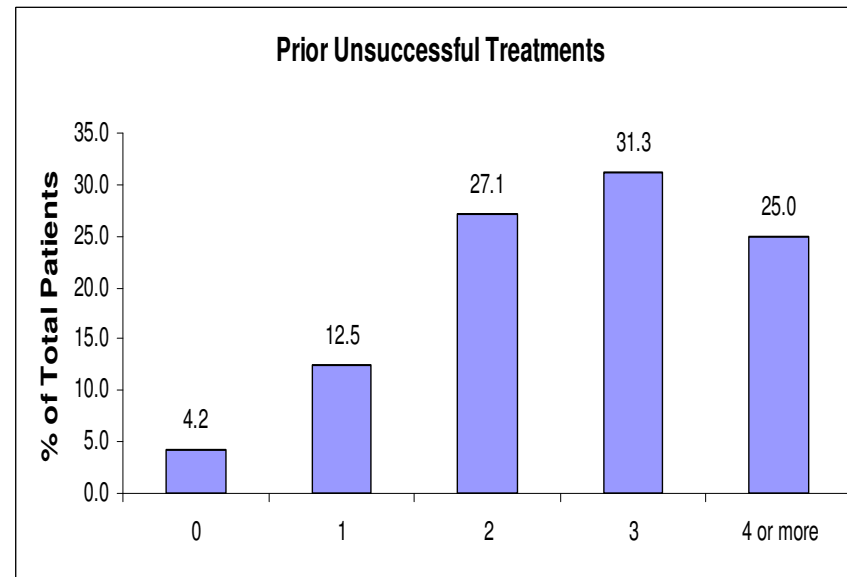
	Subjects Assessed	Pre-treatment score (s)	Post-treatment Score (s) <sup>a</sup>	Mean change	Mean % change	Repeated-measures ANOVA F value <sup>b</sup>
<b>Tests of OCD Core Symptoms</b>						
YBOCS <sup>c</sup>	142	30.6 (4.8)	12.5 (7.5)	-18.1	-59.2	699.6
OCI frequency <sup>d</sup>	131	62.1 (31.7)	32.6 (27.1)	-29.5	-47.5	157.0
OCI distress <sup>d</sup>	128	61.1 (31.0)	29.8 (25.3)	-31.3	-51.2	178.5
NIMH <sup>c</sup>	106	10.3 (2.4)	6.9 (3.2)	-3.4	-33.0	84.3
<b>Tests of Co-Morbid Symptoms</b>						
Fear Survey <sup>d</sup>	122	123.0 (67.4)	75.0 (63.1)	-48.0	-39.0	82.7
Willoughby <sup>d</sup>	116	44.3 (22.4)	29.8 (17.9)	-14.5	-32.7	99.9
HamA <sup>c</sup>	116	24.8 (10.3)	13.6 (8.2)	-11.2	-45.2	162.8
HamD <sup>c</sup>	119	26.2 (11.8)	11.3 (8.7)	-14.9	-56.9	175.1
<b>Tests of Subject Insight</b>						
Fixity of Beliefs <sup>c</sup>	111	12.3 (17.7)	5.8 (4.1)	-6.5	-52.8	12.6
BABS <sup>c</sup>	95	11.3 (6.2)	4.4 (8.4)	-6.9	-61.1	114.6
<b>Tests of General Functioning</b>						
GAS <sup>c</sup>	108	49.2 (10.0)	65.3 (15.8)	16.1	32.7 <sup>c</sup>	116.9

<sup>a</sup>Last-observation-carried-forward for subjects not completing treatment.

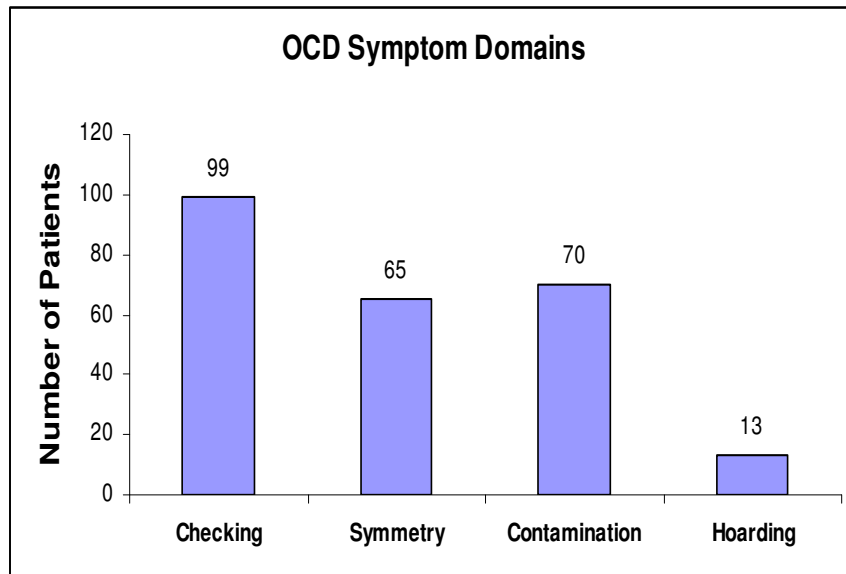
**Figure 1**



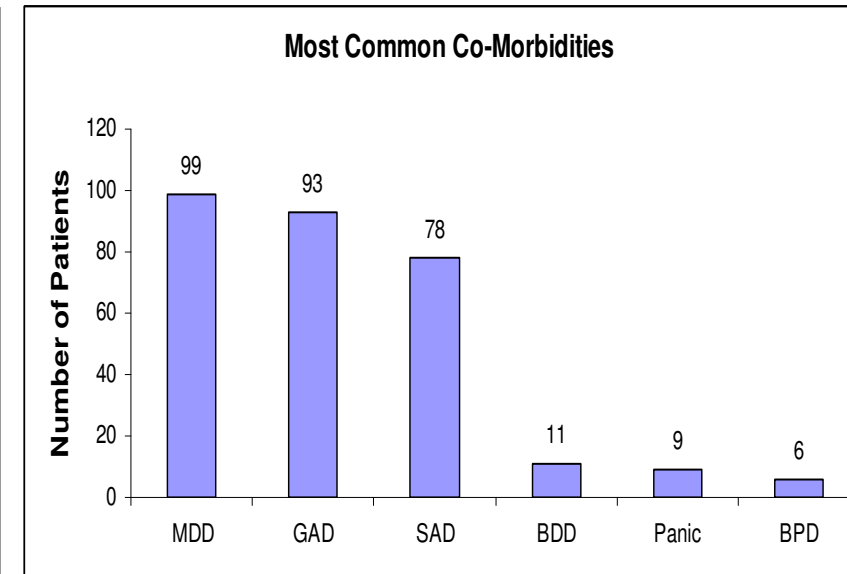
**Figure 2**



**Figure 3**



**Figure 4**



## **Abstract**

**Despite advances, many patients with obsessive-compulsive disorder (OCD) do not respond adequately to state-of-the-art treatment, i.e., exposure and response / ritual prevention (ERP) and/or serotonin reuptake inhibitor (SRI) pharmacotherapy. We present results of a retrospective study of the effectiveness of an integrative intervention called Mindfulness Based Behavioral Therapy (MBBT). MBBT combines ERP and psychopharmacologic treatment with mindfulness training, extensive writing exercises with elements of both exposure therapy and mindfulness practice, and behavioral interventions seldom offered along with ERP including behavioral activation, time, and weight management. This combined intervention was administered to 139 patients diagnosed primarily with severe or extreme OCD who were previously refractory to treatments. Post-treatment, mean Yale-Brown Obsessive-Compulsive Scale scores decreased from 30.6 (s = 4.8) to 12.5 (s = 7.6). Substantial declines were also registered in specific phobia, social phobia, generalized anxiety, and depressive disorder symptoms, along with increases in insight and general functioning. Improvements were seen regardless of sex, primary OCD symptom subtype, comorbid Axis I psychiatric symptoms, medication status, in- or out-patient treatment status, age, pretreatment level of both insight and OCD symptoms, and length of treatment. Patients previously described as “refractory” may actually be treatable with the addition of mindfulness training, writing exercises, and other non-invasive, non-pharmacologic interventions to the treatment regimen.**

## Questions and Answers

**1) Does Mindfulness Based Behavior Therapy (MBBT) improve therapy response for people with a diagnosis of OCD?**

**Yes**

**2) Does MBBT improve insight in, and general functioning of, people with OCD?**

**Yes**

**3) Does MBBT outcome vary as a function of factors often associated with response such as:**

- |   |           |
|---|-----------|
| <b>a) sex</b>                                   | <b>No</b> |
| <b>b) principle OCD symptom subtype</b>         | <b>No</b> |
| <b>c) medication status</b>                     | <b>No</b> |
| <b>d) in- vs. out-patient treatment setting</b> | <b>No</b> |
| <b>e) age</b>                                   | <b>No</b> |
| <b>f) pretreatment OCD symptom severity</b>     | <b>No</b> |
| <b>g) pretreatment level of insight</b>         | <b>No</b> |
| <b>h) length of treatment</b>                   | <b>No</b> |

## Method

### Chart Review:

**Outcome data on the below-described assessment measures were extracted from the clinical charts of 164 consecutive people who completed the MBBT protocol. Data were analyzed and summarized for the this presentation**

### Participant Characteristics:

- **246 adults screened and 164 accepted into treatment: 8 each excluded because OCD not primary diagnosis or hoarding primary OCD symptom domain, respectively and 66 excluded due to insufficient motivation for MBBT**
- **139 people (50% male) with a primary diagnosis of OCD and a mean age of 31.8 (SD = 11.1) years who completed no more than 30 two hour sessions of MBBT over a 3-week period as well as a weekly self-help support group.**
- **Some (n = 60 ) were hospitalized for some portion of MBBT, but all received at least 2.5 weeks as outpatients**
- **OCD severity level as measured by the YBOCS was primarily severe or greater (Fig. 1)**
- **96% of participants had two or more unsuccessful previous treatment interventions (Fig. 2)**
- **Multiple OCD symptom subtypes were present (Fig. 3), and primary hoarding was excluded**
- **Multiple comorbid emotional disorder symptoms were present along with OCD (Fig. 4)**
- **No one had a current diagnosis of psychosis or substance use disorder**
- **If bipolar disorder was comorbid with OCD, treatment did not occur during manic episodes**
- **“Sufficient motivation” present, meaning the person professed to seek treatment mainly for his or her own sake and not primarily to satisfy someone else.**

## Measures

<b>Acronym</b>	<b>Measurement of:</b>	<b>Scale Name</b>
<b>Y-BOCS</b>	<b>OCD symptoms</b>	<b>Yale-Brown Obsessive-Compulsive Scale</b>
<b>OCI</b>	<b>OCD symptoms</b>	<b>Obsessive-Compulsive Inventory</b>
<b>NIMH</b>	<b>OCD symptoms</b>	<b>National Institute of Mental Health Obsessive-Compulsive Scale</b>
<b>Willoughby</b>	<b>Social phobia symptoms</b>	<b>Willoughby Personality Schedule</b>
<b>HamD</b>	<b>Depression symptoms</b>	<b>Hamilton Depression Scale</b>
<b>HamA</b>	<b>Anxiety symptoms</b>	<b>Hamilton Anxiety Scale</b>
<b>BABS</b>	<b>Reality testing</b>	<b>Brown Assessment of Beliefs Scale</b>
<b>FOBS</b>	<b>Flexibility of beliefs</b>	<b>Fixity of Beliefs Scale</b>
<b>GAS</b>	<b>Social, occupational functioning</b>	<b>General Assessment Scale</b>
<b>FSS</b>	<b>Specific fears</b>	<b>Fear Survey Schedule</b>

## **Therapy Protocol: What is Mindfulness Based Behavior Therapy (MBBT)?**

**MBBT integrates ERP (Kozak & Foa, 1997: Table 1), pharmacotherapy if desired, an informal mindfulness training protocol referred to as the “Four Steps Method” (FSM: Schwartz, 1996), extensive writing exercises (Pennebaker et al., 1986, Sloan et al., 2005), behavioral activation, and psychoeducation about weight and time-management (Gorbis, 2002; 2003). The MBBT model employs partial-hospitalization for people with extreme levels of impairment that preclude compliance with the therapy regimen outside of a controlled and structured environment. MBBT occurs primarily, however, on an intensive daily outpatient basis over a period of three weeks.**

**At the core of MBBT is traditional ERP as described in Kozak & Foa (1997). In ERP, the patient undergoes prolonged and repeated exposure to both internal (e.g., violent mental images for aggressive compulsions) and external (e.g., non-symmetrical stimuli for the symmetry obsessed) objects that provoke the patient’s OCD symptoms on a daily basis. These exposures facilitate adaptive emotional processing and habituation of fear as described by Foa & Kozak (1986). Another component of ERP integral to MBBT is the assignment of repeated daily homework exercises, typically involving self-directed exposures. These usually required an additional 3-5 hr minimum of the subject’s concentrated time, as reported by family members.**

**MBBT integrates ERP with the FSM and thereby introduces an element of informal mindfulness training into the ERP therapy regimen for OCD. The FSM aims to teach the person with OCD to behave mindfully, or to focus attention on the present moment, on purpose, in a particular way, with neither judgment nor reactivity (Kabat-Zinn, 1990), toward his or her OCD symptoms. The FSM designed to be self-administered by the patient, but in MBBT the therapist actively guides a person to use the FSM during sessions. The FSM involves learning to notice each OCD symptom as it arises and thereupon to assume the role of an “Impartial Spectator” who observes and labels the OCD symptom without reactively performing the compulsive behaviors that maintain anxiety (Table 1). A person with OCD symptoms learns through the FSM to say to him- or herself, “That’s not me, that’s my OCD!” in order to cultivate the characteristic meta-attention of mindfulness practice. As well, a nonjudgmental attitude is cultivated in the person with OCD by noticing his or her OCD symptoms in a particular way:**



## The Four Steps

- 1. Relabel:** Label fear-producing cognitive activity such as thoughts and images as obsessions and label urges to engage in behaviors to reduce the fear as compulsions without reactively engaging in compulsive behaviors
- 2. Reattribute:** Attribute obsessions and compulsions to the neurobiological condition of OCD rather than calling them a product of the “self” (i.e., obsessions and compulsions are ‘not self’).
- 3. Refocus:** Repeatedly practice shifting attention away from succumbing to an OCD compulsion (e.g., hand washing) and toward an observing of the impermanence of the OCD symptoms
- 4. Revalue:** See the reality of the situation, as opposed to buying into the negatively over-valued OCD version of the current state-of-affairs.

## **How is the FSM modified in the MBBT protocol?**

**It is important to note that MBBT differs from Schwartz's (1996) FSM protocol in important ways:**

- 1. MBBT requires intensive and prolonged exposure in contrast to the shorter exposures allowed by Schwartz during his refocus step. For example, Schwartz's protocol does not require the OCD patient to expose him- or her-self to a feared stimulus until habituation (Table 1) of fear occurs. Indeed, the FSM protocol allows for very brief exposures that do not always result in habituation. This is in direct contrast to the typical 90 min or more required for habituation of fear in ERP. Similarly, distraction toward pleasant events is not permitted as part of MBBT because evidence indicates this interferes with habituation of fear in the treatment of OCD (Grayson et al., 1982).**
- 2. The FSM permits a person with OCD to actually engage in compulsions while noting such compulsive behaviors mindfully. This is NOT permitted in MBBT. Identical to the protocol of Kozak & Foa (1997), if patients engage in a compulsion (e.g., hand washing) to decrease their fear level, they are required to immediately reactivate the fear (e.g., re-contaminate the body) by re-exposing themselves to the feared stimulus and then engaging in ritual prevention long enough for the fear to peak and diminish (Riggs & Foa, 1993; Steketee et al. 1982).**

### **How is the FSM different from the MBSR curriculum?**

**The mindfulness elements integrated into MBBT in the current study differed from the more formal and intensive mindfulness training taught as part of the Mindfulness Based Stress Reduction (MBSR) curriculum of the Center for Mindfulness ([www.umassmed.edu/cfm](http://www.umassmed.edu/cfm)). MBSR requires 45 minutes of daily meditation practice whereas in MBBT the person is instructed to practice in response to OCD symptom emergence.**

### **What writing exercises are done in MBBT?**

**Patients are requested to list and elaborate upon their OCD symptoms, including flooding scripts and “nightmare / catastrophic scenarios”, in extreme detail, writing down explicitly, in some cases, things they are afraid even to think about. As well, they repeatedly write particular elements of the narratives created during the writing to promote habituation. The writing component is especially helpful in insuring that the ERP component of MBBT adequately targets each patient’s “fear structure” (i.e., cognitive-behavioral representation of fear stimuli and responses) so that its elements can be modified with corrective information as described in Foa & Kozak (1986). Some investigators have suggested that writing improves mental health by facilitating emotional processing (Gortner et al., 2006; Sloan et al., 2005), however there are also elements of mindfulness practice in the writing exercises of MBBT.**

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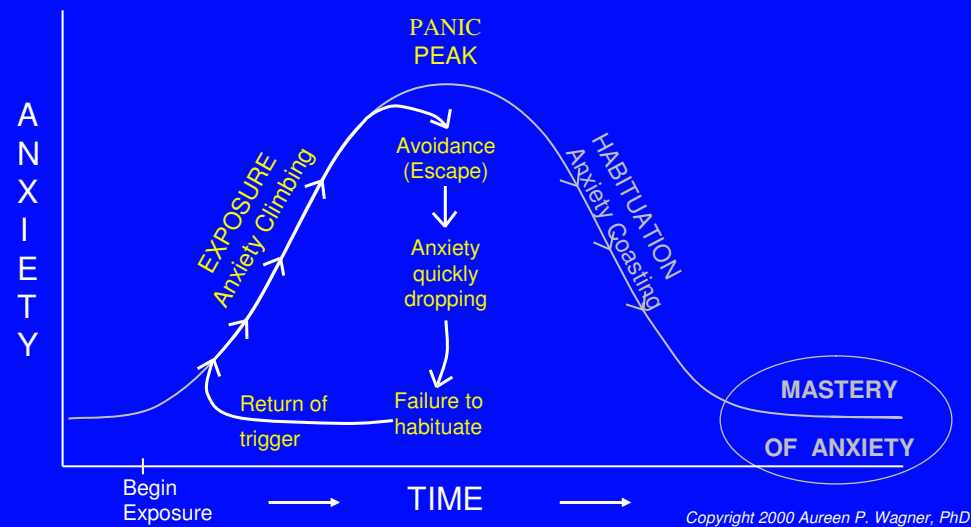
## EXPERT CONSENSUS GUIDELINES FOR TREATMENT OF OCD

- o Children      CBT is first line treatment
- o Adolescents    If mild OCD then CBT first  
                          If severe then CBT + SRI
- o Adults            If mild then CBT first  
                          If severe then SRI (first) + CBT

Notes:      CBT = Cognitive-behavioral therapy  
                  SRI = Serotonin Reuptake Inhibitor (SRI)

\*source: [www.psychguides.com](http://www.psychguides.com)

### THE VICIOUS CYCLE OF AVOIDANCE MAINTAINS OCD SYMPTOMS



## Cognitive-Behavioral Treatment (CBT) for OCD usually called Exposure and Ritual Prevention (ERP)

### Goals of CBT / ERP for OCD:

- ◆ Break the cycle of avoidance
- ◆ Face the fear
- ◆ Experience dissipation of anxiety without ritualizing
- ◆ Learn that feared consequences do not occur

### THE OUTCOME OF REPEATED EXPOSURE

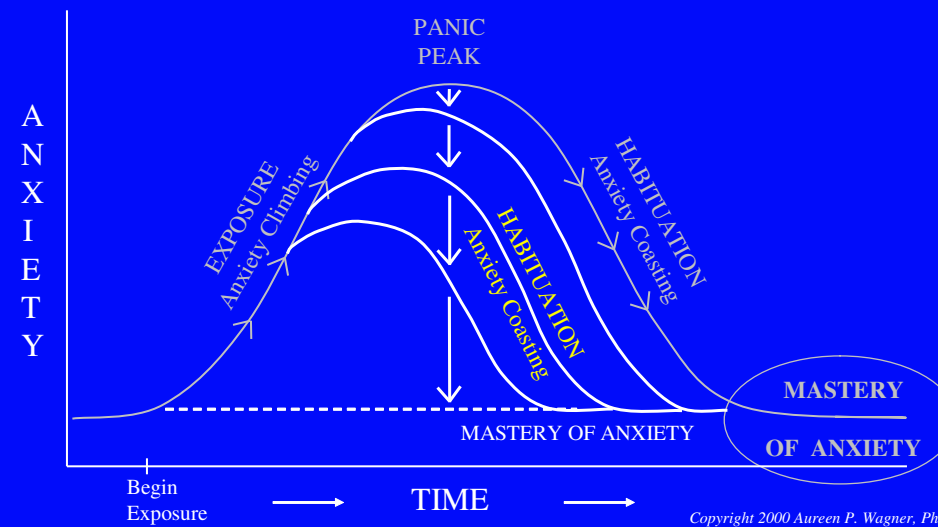


Table 1

## Conclusions

- **Mindfulness practice can be feasibly integrated into traditional interventions for OCD and such integration is associated with an improvement of therapy outcome in those who were previously described as “refractory” or “resistant” to such traditional interventions.**
- **Factors that often preclude treatment response (e.g., pretreatment OCD symptom severity level, decreased flexibility in cognition at pretreatment) do not interfere with outcome when the MBBT protocol is used**
- **MBBT reduces symptoms of not just OCD, but also multiple comorbid symptoms of emotional disorders, improves insight and reality testing, and general social and occupational functioning.**
- **MBBT offers hope to people with OCD whom many clinicians consider non-responsive to traditional interventions.**
- **We cannot yet conclude to what degree mindfulness improves therapy outcome because the current study was retrospective in nature and did not include a control comparison group. Moreover, several dismantling studies will have to be conducted to infer to what degree mindfulness practice verses other elements of MBBT reduce OCD symptoms.**