



## RESPONSE PAPER

**Alphabet Soup: ERP, CT, and ACT for OCD**David F. Tolin, *The Institute of Living and Yale University School of Medicine*

*The present article comments on the case conference presented in this issue, namely, Himle and Franklin's (Himle & Franklin, 2009-this issue) exposure and response prevention (ERP); Chosak and colleagues' (Chosak, Marques, Fama, Renaud, & Wilhelm, 2009-this issue) cognitive therapy (CT); and (Twohig, 2009-this issue) Acceptance and Commitment Therapy (ACT). Two questions are addressed: (1) How different are these treatments? (2) What are the active vs. inert ingredients of each treatment? With regard to the first question, it is concluded that ERP and ACT appear more similar than dissimilar in terms of actual therapist/patient behaviors. CT shows more substantial differences from ERP and ACT, primarily in the therapist's direct efforts to target antecedent cognitions. With regard to the second question, examination of the likely active ingredients of each treatment suggests that interventions that encourage direct behavioral change (described as a characteristic feature of ERP and ACT and an incidental feature of CT) are most likely responsible for improvement in all three treatments, whereas evidence for the importance of altering antecedent cognitions (a characteristic feature of CT and an incidental feature of ERP) is less clear. Additional controlled research is recommended to identify which aspects of treatment are truly efficacious for OCD and other conditions.*

**H**IMLE AND FRANKLIN (2009-THIS ISSUE), Chosak, Marques, Fama, Renaud, and Wilhelm (2009-this issue), and Twohig (2009-this issue) have provided rich and descriptive examples of Exposure and Response Prevention (ERP), cognitive therapy (CT), and Acceptance and Commitment Therapy (ACT) applied to a single case. Clinicians and researchers alike should find plenty of thought-provoking and useful material in these clinical case examples, and the patient, "Caroline," would most certainly be in excellent hands, regardless of which treatment was used.

These case descriptions raise two questions that reach beyond this particular case, even beyond the treatment of obsessive-compulsive disorder (OCD) specifically, and speak to the nature of how we define our interventions: (1) How different are these treatments? (2) What are the active vs. inert ingredients of each treatment? The first question addresses the extent to which different clinicians might be providing the same basic interventions, regardless of how those interventions are labeled. The second question involves whether these (and other) treatments used by cognitive and behavioral therapists work for the reasons we think they do. This article will explore both of these thorny issues as they pertain to the present clinical

case and, more broadly, as they apply to the practice of cognitive-behavioral therapy.

**How Different Are these Treatments?**

Before we can even address this question, we must first consider what defines a given treatment. In keeping with the behavioral and empirical tradition of cognitive-behavioral therapy, a treatment is most accurately defined by what the therapist and patient actually *do* (therapist/patient behaviors), rather than their stated *reasons* for doing it (purported mechanisms). It might be most useful, therefore, to compare therapist/patient behaviors across these three forms of treatment.

**Exposure and Response Prevention (ERP)**

Himle and Franklin describe the purported mechanisms of ERP as (a) extinction (or habituation) resulting from systematic exposure to fear-related stimuli and prevention of escape or neutralizing behaviors, and (b) alterations of fear-related beliefs and memory structures resulting from exposure to corrective information (see Foa & Kozak, 1986). To these, we could also add (c) increased sense of self-efficacy or mastery over one's environment, (d) increased fear tolerance, and (e) the development of inhibitory stimulus-stimulus associations (see Barlow & Allen, 2004; Craske et al., 2008, for reviews).

Himle and Franklin provide a detailed account of what the ERP therapist actually does. These include:

1. *Psychoeducation.* Treatment begins by providing the patient with information about OCD as well as a comprehensive model of the illness and its treatment. In particular, emphasis is placed on (a) describing OCD as a neurobiological illness and as a learned habit, (b) identifying compulsive behaviors as a factor in the maintenance of the illness, (c) describing the process of extinction during exposure, and (d) emphasizing the importance of adaptive functioning despite having OCD.
2. *Self-monitoring.* The patient is instructed to attend to, and record, her compulsive behaviors (which are one of the direct targets of the intervention).
3. *Instruction to decrease avoidant and compulsive behavior.* The patient is directly instructed to refrain from engaging in compulsive behaviors.
4. *Instruction to stop attempting to control internal events.* The patient is told that it is impossible to control obsessive thoughts and emotional distress directly, and that it is unhelpful to attempt to do so. Instead, the patient is encouraged to focus her efforts on changing her overt behavior (compulsions and avoidance).
5. *Deliberately doing things that are scary and avoided.* The ERP therapist and patient develop a plan for graded confrontation of avoided activities, situations, and thoughts, and then perform these activities sequentially. For example, in the present case study, Caroline began by shaking her husband's hand and worked her way up to touching an ill friend, deliberately "contaminating" him or her with "dust," and thinking fear-evoking obsessional thoughts ("I hope you die").
6. *Encourage new ways of thinking.* The therapist encourages the patient to think realistically about the probability of negative outcomes during exposure exercises. This aspect of treatment receives less time, and is done in a less formal manner, than in CT (described below).

### Cognitive Therapy (CT)

As described by Chosak et al., the purported mechanism of CT is the modification of distorted or irrational beliefs (see Beck, Emery, & Greenberg, 1985). Some of these beliefs reflect "antecedent" cognitions that precede and are thought to trigger anxious arousal (e.g., exaggerated sense of responsibility, overprediction of harm), whereas some reflect what Wells (1995) has termed "metacognitions," or second-order thoughts about one's own thoughts and feelings (e.g., intolerance of doubt, exaggerated sense of the importance of thoughts, belief in the need to control thoughts, excessive need for certainty,

irrational beliefs about the consequences of anxiety) (see *Obsessive Compulsive Cognitions Working Group, 1997*).

Examining the therapist/patient behaviors in CT, the following interventions are identified:

1. *Psychoeducation.* Treatment begins by providing the patient with information about OCD and providing a comprehensive model of the illness and its treatment. In CT, psychoeducation also involves (a) reassuring the patient that his or her obsessions are experienced by many people, (b) teaching the patient about common cognitive distortions or errors in thinking, (c) asking him or her to identify and label troublesome or maladaptive beliefs (e.g., "Having that thought means something bad will happen to my friend!"), and (d) using Socratic questioning to illustrate how maladaptive thoughts can lead to feelings of anxiety.
2. *Self-monitoring.* The patient is instructed to attend to, and record, her maladaptive thoughts (which are one of the direct targets of the intervention).
3. *Encourage new ways of thinking.* In CT the therapist assists the patient (using strategies such as Socratic questioning) in generating "rational responses" or more helpful or realistic self-statements. The therapist encourages the patient to think realistically about the probability of negative outcomes, responsibility, and other obsessive beliefs using a variety of strategies such as probability calculation, pie charts, and taking another perspective. The therapist also helps the patient identify core beliefs about his/her identity using downward arrow and other techniques.
4. *Instruction to stop attempting to control internal events.* Although not mentioned specifically by Chosak et al., CT for OCD includes reminders in some cases "not to respond to the intrusions, but just to let them come and go without interference or special attention" (Wilhelm & Steketee, 2006, p. 33).
5. *Deliberately doing things that are scary and avoided.* The CT therapist helps patients design "behavioral experiments" to test their beliefs by engaging in avoided activities or situations, usually for limited time periods. For example, in the present case study, Caroline began by shaking the therapist's hand. Chosak et al. clarify that after this experience, the patient is instructed to go through her normal activities rather than "sit with" the anxiety. This aspect of treatment is done less frequently and for shorter durations than in ERP (described above).

### Acceptance and Commitment Therapy (ACT)

Twohig's case discussion describes the overarching mechanisms of ACT as (a) altering patients' tendency to

treat thoughts as literal and to avoid them, and (b) increasing the experience of meaningful, values-based actions. To this end, specific tactics include facilitating acceptance, defusion of thoughts, encouraging contact with the present moment, clarifying values, and behavioral commitment.

Examining the description of ACT interventions in Twohig's case presentation as well as in the original description of the therapy (Hayes, Strosahl, & Wilson, 1999), the following therapist/patient behaviors are evident:

1. *Psychoeducation.* Although not necessarily labeled as such, ACT includes a good deal of emphasis in early sessions on providing the patient with a model of treatment (although not necessarily the illness). In particular, emphasis in early sessions is placed on (a) engaging the patient in a discussion of how previous attempts to solve the problem have not worked, and (b) identifying attempts to control thoughts and feelings as a factor in the maintenance of the illness. Emphasis in later sessions is placed on (a) clarifying values and (b) discussing the importance of adaptive (or value-directed) functioning despite having unwanted thoughts and feelings.
2. *Self-monitoring.* Although not specifically discussed in Twohig's case presentation, ACT therapists frequently instruct patients to monitor the frequency of attempts to control thoughts and feelings; these control attempts become direct targets of the intervention (Hayes et al., 1999).
3. *Instruction to decrease avoidant and compulsive behavior.* The behavioral commitment exercises described by Twohig include direct instructions to refrain from compulsions (e.g., "having a meaningful conversation without engaging in compulsions" or choosing "not to mentally protect people for one hour per day"). This aspect of treatment receives less time than in ERP (described above). The patient is also instructed to increase the frequency of activities that are consistent with her core values and goals.
4. *Instruction to stop attempting to control internal events.* The patient is told that it is impossible to control obsessive thoughts and emotional distress directly, and that it is unhelpful to attempt to do so. Instead, the patient is encouraged to focus her efforts on changing her overt behavior (compulsions, avoidance, and value-directed behavior).
5. *Encourage new ways of thinking.* This may be a controversial point, as ACT is frequently presented as the polar opposite of CT. However, as noted by Hofmann and Asmundson (2008), whereas CT emphasizes teaching the patient to modify *antecedent* cognitions (i.e., thoughts about external situations or stimuli that elicit fearful reactions),

ACT emphasizes modification of *metacognitions* (i.e., thoughts about one's own thoughts and feelings). This is a subtle distinction, and in many cases of OCD (such as when the feared stimulus is a personally repugnant thought) it may be nonexistent. The ACT patient is taught (frequently using metaphors and experiential exercises, rather than direct didactic instruction) not to interpret their obsessive thoughts as literally true, and that the most effective way to respond to them might be to "observe" them without directly responding to them mentally or behaviorally. As in CT, however, the underlying message is, "The way you have been thinking about things might be part of the problem, and you may be able to feel better by practicing another way of looking at things."

6. *Deliberately doing things that are scary and avoided.* The ACT therapist encourages the patient to experience unwanted thoughts using strategies such as repeating the thought over and over again out loud, or deliberately thinking the thoughts and watching them "come and go."

### Conclusion

Table 1 summarizes the components of ERP, CT, and ACT as described above. For purposes of illustration, I have indicated whether these components are absent, present but not strongly emphasized, or strongly emphasized in the treatment. Psychoeducation and self-monitoring are aspects of all three treatments. ERP and ACT both involve persuading the patient to curtail avoidant and compulsive behavior, and all three methods encourage patients to stop attempting to control internal events such as thoughts, feelings, and bodily sensations. CT most strongly emphasizes encouraging the patient to think more realistically or adaptively, although this component is present in ERP to some extent as well. Of note, all three treatments involve asking the patient to deliberately encounter external and/or internal stimuli that are considered frightening and are commonly avoided.

Is this oversimplifying things? After all, aren't there subtle but important within-component differences across the three treatments? This is certainly possible. All three treatments, for example, asked Caroline to deliberately do things that she found distressing and tended to avoid due to her OCD. The ERP and CT therapists both encouraged her to shake hands with someone (thereby risking contagion), and the ACT therapist asked her to deliberately repeat her unwanted thoughts over and over. Their reasons for doing so certainly differ: the ERP therapist does this primarily to elicit extinction (or habituation); the CT therapist does so as a behavioral experiment to test and refute maladaptive beliefs, and the ACT therapist does so in the service of "cognitive defusion." But are the actual *behaviors* of the

**Table 1**  
Therapist/Patient Behaviors in Exposure and Response Prevention (ERP), Cognitive Therapy (CT), and Acceptance and Commitment Therapy (ACT) for Obsessive-Compulsive Disorder

	ERP	CT	ACT
Psychoeducation	+	+	+
Self-monitoring	+	+	+
Instruction to decrease avoidant and compulsive behavior	++	-	++
Instruction to stop attempting to control internal events	+	+	++
Deliberately doing things that are scary and avoided	++	+	+
Encourage new ways of thinking about external stimuli and situations	+	++	-
Encourage new ways of thinking about internal stimuli	+	+	++

-=Not present. +=Present but not strongly emphasized. ++ =Strongly emphasized.

therapist and patient different enough that they should be considered completely different interventions, rather than minor variations on the same theme? One potential difference across treatments is the duration of the activity. ERP therapists commonly encourage patients to confront avoided stimuli for 60 minutes or more in order to allow sufficient time for the hypothesized extinction or habituation effect (Foa & Kozak, 1997); CT therapists have less of a time constraint but the activities are typically briefer than in ERP (Wilhelm & Steketee, 2006); and ACT confrontation exercises such as the “Soldiers in the Parade” exercise, in which patients are instructed to observe their thoughts without attempting to control them, have been described as lasting 1 to 3 minutes (Hayes et al., 1999).

Do these varying durations mean that exposure, behavioral experiments, and defusion exercises are different interventions? Early analogue research on exposure suggested that brief exposures (e.g., 15 to 25 minutes) are less effective than are longer exposures (e.g., 45 to 50 minutes), and have the potential to paradoxically increase fear reactions (Chaplin & Levine, 1981; Stone & Borkovec, 1975), which Eysenck (1968) termed “incubation.” Longer confrontations are presumed to be more effective due to their greater potential for within-session habituation (Foa & Chambless, 1978), a condition previously thought to be necessary for durable fear reduction (Foa & Kozak, 1986). Clinical research, however, raises questions about the necessity of long exposures and within-session habituation for fear reduction (see Craske et al., 2008, for a review). On one hand, long (2-hour) exposures proved superior (measured subjectively and physiologically) to briefer (four 30-minute sessions interspersed with 30-minute breaks) for patients with agoraphobia (Stern & Marks, 1973), and longer *in vivo* exposure sessions (80 minutes) proved more effective (measured subjectively and by interview) than did shorter sessions (eight 10-minute sessions interspersed with 5-minute breaks) for patients with OCD, although no differences were evident between short vs. long sessions of exposure in imagination (Rabavilas, Boulougouris, & Stefanis, 1976). On the

other hand, other research suggests that exposure therapy might be just as effective when exposures are short and there is not sufficient time for within-session habituation. A series of short (5 seconds to 2 minutes) exposure exercises interspersed with 45-second breaks was effective (measured subjectively and behaviorally) for a small sample of spider and snake phobic patients, with treatment gains maintained at follow-up (Seim & Spates, 2008). Agoraphobic patients who were allowed to terminate exposures when their subjective fear levels reached a set point (70 on a 0–100 scale) benefited as much (measured subjectively) as did those who were instructed to remain in the exposure until subjective fear ratings had decreased by 50% (Rachman, Craske, Tallman, & Solyom, 1986), the typical instruction in exposure-based therapy. In a similar study of spider phobic volunteers, participants instructed to continue exposure until fears were completely eliminated actually fared *poorer* in the long run than did participants who were allowed to terminate the exposure after subjective fear levels had decreased by 50% (Rachman, Robinson, & Lopatka, 1987). Although posttraumatic stress disorder patients receiving 30 minutes of exposure in imagination showed less within-session habituation (measured subjectively) than did those receiving 60 minutes of exposure in imagination, patients in both groups showed equivalent overall clinical improvement (measured subjectively) across sessions (van Minnen & Foa, 2006). Similarly, the degree of between-session habituation, but not the degree of within-session habituation (measured subjectively and physiologically), predicted outcome of treatment for OCD (Kozak, Foa, & Steketee, 1998). If within-session habituation is not necessary for clinical improvement, it is difficult to justify the assertion that short vs. long exposures are truly distinct interventions.

Generally speaking, ERP and ACT appear more similar than dissimilar in terms of therapist/patient behaviors. Although the two treatments differ significantly in terms of their purported mechanisms (the therapist's reasons for doing things), behavioral differences between these two interventions appears to be more a matter of

emphasis and style. CT, on the other hand, shows more substantial differences from ERP and ACT, primarily in terms of the therapist's direct efforts to target antecedent cognitions rather than the meta-cognitive targets of ACT.

### What Are the Active Ingredients of Each Treatment?

Having identified similarities and differences of therapist/patient behaviors across ERP, CT, and ACT, the next question is to determine the extent to which these behaviors actually have an effect on the patient's OCD symptoms.

*Chicken hypnosis: A cautionary tale.* The "hypnosis" of animals has long been a source of amusement and fascination (Völgyesi, 1966), and farmers are well acquainted with the phenomenon of "hypnotizing" chickens, causing them to lie still for several minutes (see Fig. 1). The *Old Farmer's Almanac* (Riggins, 1985, cited in *The Old Farmer's Almanac*, 1999, n.p.) describes multiple procedures for accomplishing this:

*The Oscillating Finger Method: Place the bird on its side with a wing under its body and hold it down gently. Make sure its head is flat on the table. To hypnotize the bird, use one finger of the free hand, moving the finger back and forth in front of the bird's beak from its tip (without touching it) to a point that is about four inches from the beak. Keep the finger in a line parallel to the beak.*

*The Sternum Stroke Method: Gently put the bird on its back. It may be necessary to use a book, purse, or other item to keep the bird from rolling onto its side. Hold the bird down. Lightly massage the bird's sternum, using the slightly spread thumb and index finger of one hand to do the stroking.*



Characteristic (but inert)  
feature

Incidental (but active)  
feature

**Figure 1.** Chicken hypnosis. (Reprinted with permission from Tri DeSa).

*The Chalk Line Method: Draw a straight chalk mark about a foot long. Hold the chicken with its beak on one end of the line, staring straight out at the chalk mark. In a few seconds, the chicken will be hypnotized.*

Although these three techniques seem quite varied (oscillating fingers vs. sternum massage vs. chalk line), they all appear to accomplish the same thing. Because they are emphasized in the overall technique, we will refer to them as *characteristic features* of the intervention (e.g., the characteristic feature of the oscillating finger method is moving one's finger back and forth in front of the chicken's beak).

Are there really three different mechanisms by which chickens become hypnotized? Research has shown that the "hypnosis" behavior exhibited by the chicken is actually tonic immobility, a defensive mechanism used to feign death (Maser & Gallup, 1974). All three chicken "hypnosis" techniques are based on incorrect assumptions about the true mechanism of action, and their characteristic features are mostly inert. However, all three techniques share the *incidental feature* of holding the chicken down. In this case, it turns out that the shared incidental feature, rather than the different characteristic features, causes the tonic immobility.

*Intentional vs. inadvertent treatment.* Following Grübaum's (1985) concepts of intentional and inadvertent placebo, we (Lohr, Lilienfeld, Tolin, & Herbert, 1999) suggested a distinction between *intentional treatment* and *inadvertent treatment*. A treatment is considered *intentional* when the following conditions are met:

1. The treatment is remedial for the target disorder.
2. Some or all of the treatment's characteristic features may be remedial for the target disorder.
3. Some or all of the treatment's incidental features may be remedial for the target disorder.
4. The clinician believes that the treatment is remedial for the target disorder by virtue of some or all of the treatment's characteristic features.
5. The clinician causes or allows the patient to believe that the treatment is remedial for the target disorder by virtue of the treatment's characteristic features.

A treatment is considered *incidental* when the following conditions are met:

1. The treatment is remedial for the target disorder.
2. None of the treatment's characteristic features are remedial for the target disorder.
3. The clinician believes that some or all of the treatment's characteristic features are remedial for the target disorder.

4. The clinician does not believe that the treatment is remedial for the target disorder by virtue of only the treatment's incidental features.
5. The clinician causes or allows the patient to believe that the treatment is remedial for the target disorder by virtue of the treatment's characteristic features rather than the treatment's incidental features.

Note that intentional and inadvertent treatment might both be effective (they may even be indistinguishable from each other in many respects). The major distinction is that in intentional treatment the therapist and patient know what the active ingredients are, whereas in inadvertent treatment the patient's success is misattributed to the inert ingredients.

To what extent are ERP, CT, and ACT intentional treatments? Returning to Table 1, how much of the patient's success is due to those treatment ingredients that are strongly emphasized (or characteristic features), designated by “++”, vs. the ingredients that are present but not strongly emphasized (or incidental features), designated by “+”? Ideally, this question would be answered via dismantling research, in which a full treatment protocol is compared to a version of the protocol that lacks one or more characteristic features. In an early ERP dismantling study (Foa, Steketee, & Milby, 1980), exposure and response prevention were shown to differentially affect time spent performing compulsive behavior and subjective anxiety during an exposure test, respectively; further symptom improvement was noted when both strategies were used (although it is not clear from the available data whether symptoms would have reduced further had the strategies not been combined and patients continued to receive only one strategy).

Dismantling studies from other disorders (see Longmore & Worrell, 2007, for a review) suggest that restructuring of antecedent cognitions does not add to the effects of behavioral activation in major depressive disorder (Dimidjian et al., 2006; Jacobson et al., 1996), and does not add to the effects of exposure treatment (self control desensitization) for generalized anxiety disorder (Borkovec, Newman, Pincus, & Lytle, 2002). Mixed results have been found in studies of social phobia, with antecedent cognitive restructuring yielding results equivalent to (Emmelkamp, Mersch, Vissia, & van der Helm, 1985; Mattick, Peters, & Clarke, 1989) or less than (Hope, Heimberg, & Bruch, 1995) those of exposure therapy. Research in agoraphobia also yields a mixed picture, with exposure and exposure+CT yielding equivalent results that were superior to those of CT alone at posttreatment, but minimal differences between the groups were evident at follow-up (Emmelkamp & Mersch, 1982). Two studies of posttraumatic

stress disorder found no significant difference between exposure-based and cognitive treatments (Lovell, Marks, Noshirvani, Thrasher, & Livanou, 2001; Tarrier, Sommerfield, Pilgrim, & Humphreys, 1999). In one of these (Lovell et al., 2001), combined CT+exposure was not superior to exposure alone, although another study found that cognitive restructuring did add to exposure in imagination (Resick et al., 2008). In studies of OCD patients, CT has typically involved either rational-emotive therapy (RET; Ellis & Dryden, 1997) or CT along the lines of Beck and colleagues (1985), which is more consistent with Chosak et al.'s case description. Comparatively, early studies found no difference between ERP and RET (Emmelkamp, Visser, & Hoekstra, 1988) or between ERP and CT (Cottraux et al., 2001; van Balkom et al., 1998; van Oppen et al., 1995). In a group therapy study, ERP appeared superior to CT (McLean et al., 2001), although results were not significantly different in a study of individual therapy by the same investigators (Whittal, Thordarson, & McLean, 2005). Interestingly, OCD-related cognitions, as measured by the Obsessional Beliefs Questionnaire (Obsessive Compulsive Cognitions Working Group, 2005), decreased slightly (although not significantly) more in the ERP group than in the CT group, raising significant questions about the extent to which direct efforts to alter beliefs are an active ingredient of treatment. Regarding the question of whether CT augments the effects of ERP, an early study of RET (Emmelkamp & Beens, 1991) found that RET did not enhance treatment results. A more recent study found that ERP+CT was not more effective than ERP+placebo (relaxation training) (Vogel, Stiles, & Göttestam, 2004).

In summary, therefore, dismantling research suggests that the main active ingredients of treatment for anxiety and depressive disorders are those that encourage direct behavioral change (a characteristic feature of ERP and an incidental feature of CT); evidence for the importance of altering antecedent cognitions (a characteristic feature of CT and an incidental feature of ERP) is less clear. Dismantling studies have not yet been conducted on the characteristic features of ACT, although it is possible that instructions to stop attempting to suppress or control internal experiences (a characteristic feature of ACT and an incidental feature of ERP and CT) is an active ingredient (with or without instructions for direct behavioral change).

### Conclusions and Future Directions

Although ERP, CT, and ACT have different theoretical mechanisms of change therapist and patient behaviors are similar in many respects, and therefore all three are reasonably subsumed under the general label of “cognitive-behavioral therapy.” In addition to

psychoeducation and self-monitoring, all three of these treatments involve asking patients to confront feared and avoided stimuli, situations and internal events (although the three treatments have different names and rationales for this procedure). Stylistic differences in how these confrontations are conducted are noted, although as discussed above, there is little evidence that such differences impact the overall outcome of treatment. At least in the treatment of OCD, ERP and ACT appear most similar, perhaps to the extent that they should be considered the same intervention (see Hannan & Tolin, 2005, for additional discussion). CT differs more substantively from both ERP and ACT in terms of its emphasis on encouraging patients to challenge antecedent cognitions. However, it is not clear whether it is this activity, rather than asking patients to confront feared and avoided stimuli, that is responsible for therapeutic efficacy. Indeed, across OCD treatment studies, CT using “behavioral experiments” yields significantly better results than does CT without “behavioral experiments” (Abramowitz, Franklin, & Foa, 2002).

From these case reports, as well as the empirical studies described in this article, some general recommendations for OCD treatment (and perhaps the treatment of other disorders) might be derived:

1. *Patients must be given a way of understanding their disorder that makes sense.* The models of psychopathology presented in ERP (“avoidance and compulsions are the problem”), CT (“dysfunctional beliefs are the problem”), and ACT (“experiential avoidance and belief in one’s thoughts is the problem”) are all probably correct (at different levels of analysis). What they have in common is that they provide a coherent, internally consistent model of how psychopathology is maintained. Unlike psychodynamic or biological models of the illness, they emphasize a focus not on uncontrollable etiological factors, but on active (and maladaptive) processes that maintain the disorder, and suggest that by changing the current pattern of mental and/or behavioral processes, the severity of the disorder can be reduced. Thus, effective treatment begins by empowering the patient to take control of the problem by doing less of what is unhelpful, and more of what is helpful.
2. *Treatment should include a structured, daily monitoring of the primary treatment target.* Whether the target is compulsive behavior (ERP), maladaptive thoughts (CT), or attempts to control internal events (ACT), once a primary target has been identified, the patient is engaged in a systematic effort to track the target over time. In addition to providing real-time

data about the efficacy of the intervention, self-monitoring also has the benefit of measurement reactivity in which sustained attention to the target serves as a constant reminder of the patient’s daily objectives.

3. *Treatment should involve direct prescriptions for behavioral change.* Specifically, OCD patients should be instructed to reverse the pattern of avoidant behavior (whether such behavior is characterized by passive avoidance of feared situations, compulsive behavior to reduce discomfort, or mental avoidance of disturbing thoughts). As described above, there is little reason from the available evidence to assume that this exercise must be long or intense, or that within-session habituation must be observed.
4. *Patients should be helped to think differently.* All three treatments discussed in this series do this, although in different ways and with different levels of emphasis. This is done most formally in CT, where antecedent cognitions are a primary target of treatment and the patient is directly engaged in monitoring and disputing irrational beliefs, as well as rehearsing more adaptive ones. There is little empirical reason, however, to believe that this is the only way to accomplish cognitive change. The exposure exercises in ERP, as well as the defusion exercises in ACT, may accomplish the same thing indirectly by encouraging the patient to confront feared external or internal stimuli and thus providing corrective information (Foa & Kozak, 1986). When a contamination-fearful patient is encouraged to touch something dirty and nothing bad happens, the patient is likely to reconsider his/her beliefs about the probability of contamination-related illness, whether this is discussed in great length formally (CT), briefly and informally (ERP), or not at all (ACT). The metacognitive interventions emphasized in ACT (but also present in CT and ERP) are conceptualized here as a variant of the same kind of intervention: When a patient with repugnant obsessions deliberately brings the obsession to mind, and notices that not only does nothing bad happen but that over time he/she begins to feel less discomfort, the patient’s expectations about the results of experiencing obsessions are likely to change.
5. *Metaphors and experiential exercises can be a highly effective form of psychoeducation.* I suspect that all of the authors in this series would agree that thought suppression (or the antiquated technique of “thought stopping”) is a bad idea. Although it remains one of the most commonly used interventions for OCD (Goisman et al., 1993), interventions

aimed at teaching the patient to suppress obsessive thoughts have been demonstrated to be unhelpful (Emmelkamp & Kwee, 1977; Salkovskis & Westbrook, 1989). Therefore, all three of the treatments discussed in this series involve teaching the patient about this fact. ACT goes a step further by *showing* the patient via an experiential exercise, and this may prove more effective than a didactic discussion. Similarly, Hayes et al. (1999) provide several metaphors to convey key points that are useful for all CBT. For example, as described previously, psychoeducation in all treatment includes teaching the patient that his/her reactions (be they overt or covert) are contributing to the maintenance of the problem. ACT's "Man in the Hole" metaphor (and Twohig's "Basketball Game" metaphor) provide a novel and potentially more persuasive way of conveying this point.

In a wry commentary, Evans (2007) wondered, "Without our acronyms, how can we claim to be unique?" The three case reports described in this series show outstanding cognitive-behavioral therapy in the hands of masterful clinician-researchers. The labels used to describe the various interventions may obscure, rather than clarify, their similarities and differences. To place this issue in a broader context, recall that much of the scientific and clinical community remains unconvinced that there is any meaningful distinction between CBT and other forms of psychotherapy, let alone among various kinds of CBT (e.g., Wampold, 2001). Ultimately, controlled research will be needed not only to compare one intervention package against another, but also to identify which aspects of treatment are truly efficacious for OCD and other disorders.

## References

- Abramowitz, J. S., Franklin, M. E., & Foa, E. B. (2002). Empirical status of cognitive-behavioral therapy for obsessive-compulsive disorder: A meta-analytic review. *Romanian Journal of Cognitive and Behavioral Psychotherapies*, 2, 89–104.
- Barlow, D. H., & Allen, L. B. (2004). Scientific basis of psychological treatments for anxiety disorders: Past, present, and future. In J. M. Gorman (Ed.), *Fear and anxiety: The benefits of translational research* (pp. 171–191). Washington, DC: American Psychiatric Publishing.
- Beck, A. T., Emery, G., & Greenberg, R. L. (1985). *Anxiety disorders and phobias: A cognitive perspective*. New York: Basic Books.
- Borkovec, T. D., Newman, M. G., Pincus, A. L., & Lytle, R. (2002). A component analysis of cognitive-behavioral therapy for generalized anxiety disorder and the role of interpersonal problems. *Journal of Consulting and Clinical Psychology*, 70, 288–298.
- Chaplin, E. W., & Levine, B. A. (1981). The effects of total exposure duration and interrupted versus continuous exposure in flooding therapy. *Behavior Therapy*, 12, 360–368.
- Chosak, A., Marques, L., Fama, J., Renaud, S., & Wilhelm, S. (2009-this issue). Cognitive therapy for obsessive compulsive disorder: A case illustration. *Cognitive and Behavioral Practice*, 16, xx-xx.
- Cottraux, J., Note, I., Yao, S. N., Lafont, S., Note, B., Mollard, E., et al. (2001). A randomized controlled trial of cognitive therapy versus intensive behavior therapy in obsessive compulsive disorder. *Psychotherapy and Psychosomatics*, 70, 288–297.
- Craske, M. G., Kircanski, K., Zelikowsky, M., Mystkowski, J., Chowdhury, N., & Baker, A. (2008). Optimizing inhibitory learning during exposure therapy. *Behaviour Research and Therapy*, 46, 5–27.
- Dimidjian, S., Hollon, S. D., Dobson, K. S., Schmalzing, K. B., Kohlenberg, R. J., Addis, M. E., et al. (2006). Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. *Journal of Consulting and Clinical Psychology*, 74, 658–670.
- Ellis, A., & Dryden, W. (1997). *The practice of rational emotive behavior therapy*, 2nd ed. New York: Springer.
- Emmelkamp, P. M., & Beens, H. (1991). Cognitive therapy with obsessive-compulsive disorder: a comparative evaluation. *Behaviour Research and Therapy*, 29, 293–300.
- Emmelkamp, P. M., & Kwee, K. G. (1977). Obsessional ruminations: a comparison between thought-stopping and prolonged exposure in imagination. *Behaviour Research and Therapy*, 15, 441–444.
- Emmelkamp, P. M., & Mersch, P. P. (1982). Cognition and exposure in vivo in the treatment of agoraphobia: Short-term and delayed effects. *Cognitive Therapy and Research*, 6, 77–88.
- Emmelkamp, P. M., Mersch, P. P., Vissia, E., & van der Helm, M. (1985). Social phobia: a comparative evaluation of cognitive and behavioral interventions. *Behaviour Research and Therapy*, 23, 365–369.
- Emmelkamp, P. M., Visser, S., & Hoekstra, R. J. (1988). Cognitive therapy vs exposure in vivo in the treatment of obsessive-compulsives. *Cognitive Therapy and Research*, 12, 103–144.
- Evans, I. M. (2007). Getting to the South Pole: A fable for excrement-free treatment outcome research. *the Behavior Therapist*, 30, 132–137.
- Eysenck, H. J. (1968). A theory of the incubation of anxiety-fear responses. *Behaviour Research and Therapy*, 6, 309–321.
- Foa, E. B., & Chambless, D. L. (1978). Habituation of subjective anxiety during flooding in imagery. *Behaviour Research and Therapy*, 16, 391–399.
- Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: Exposure to corrective information. *Psychological Bulletin*, 99, 20–35.
- Foa, E. B., & Kozak, M. J. (1997). *Mastery of obsessive-compulsive disorder: A cognitive-behavioral approach (therapist guide)*. New York: Oxford University Press.
- Foa, E. B., Steketee, G., & Milby, J. B. (1980). Differential effects of exposure and response prevention in obsessive-compulsive washers. *Journal of Consulting and Clinical Psychology*, 48, 71–79.
- Goisman, R. M., Rogers, M. P., Steketee, G. S., Warshaw, M. G., Cuneo, P., & Keller, M. B. (1993). Utilization of behavioral methods in a multicenter anxiety disorders study. *Journal of Clinical Psychiatry*, 54, 213–218.
- Grübaum, A. (1985). Explication and implications of the placebo concept. In L. White, B. Tursky, & G. E. Schwartz (Eds.), *Placebo: Theory, research, and mechanisms* (pp. 9–36). New York: Guilford Press.
- Hannan, S. E., & Tolin, D. F. (2005). Mindfulness and acceptance based behavior therapy for obsessive-compulsive disorder. In S. M. Orsillo, & L. Roemer (Eds.), *Acceptance and mindfulness-based approaches to anxiety: conceptualization and treatment* (pp. 271–299). New York: Springer.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*. New York: Guilford Press.
- Himle, M. B., & Franklin, M. E. (2009-this issue). The more you do it, the easier it gets: Exposure and response prevention for OCD. *Cognitive and Behavioral Practice*, 16, xx-xx.
- Hofmann, S. G., & Asmundson, G. J. (2008). Acceptance and mindfulness-based therapy: New wave or old hat? *Clinical Psychology Review*, 28, 1–16.
- Hope, D. A., Heimberg, R. G., & Bruch, M. A. (1995). Dismantling cognitive-behavioral group therapy for social phobia. *Behaviour Research and Therapy*, 33, 637–650.
- Jacobson, N. S., Dobson, K. S., Truax, P. A., Addis, M. E., Koerner, K., Gollan, J. K., et al. (1996). A component analysis of cognitive-behavioral treatment for depression. *Journal of Consulting and Clinical Psychology*, 64, 295–304.

- Kozak, M. J., Foa, E. B., & Steketee, G. (1998). Process and outcome of exposure treatment with obsessive-compulsives: Psychophysiological indicators of emotional processing. *Behavior Therapy, 19*, 157–169.
- Lohr, J. M., Lilienfeld, S. O., Tolin, D. F., & Herbert, J. D. (1999). Eye Movement Desensitization and Reprocessing: An analysis of specific versus nonspecific treatment factors. *Journal of Anxiety Disorders, 13*, 185–207.
- Longmore, R. J., & Worrell, M. (2007). Do we need to challenge thoughts in cognitive behavior therapy? *Clinical Psychology Review, 27*, 173–187.
- Lovell, K., Marks, I. M., Noshirvani, H., Thrasher, S., & Livanou, M. (2001). Do cognitive and exposure treatments improve various PTSD symptoms differently? A randomized controlled trial. *Behavioural and Cognitive Psychotherapy, 29*, 107–112.
- Maser, J. D., & Gallup, G. G., Jr. (1974). Tonic immobility in the chicken: catalepsy potentiation by uncontrollable shock and alleviation by imipramine. *Psychosomatic Medicine, 36*, 199–205.
- Mattick, R. P., Peters, L., & Clarke, J. C. (1989). Exposure and cognitive restructuring for social phobia: A controlled study. *Behavior Therapy, 20*, 3–23.
- McLean, P. D., Whittal, M. L., Thordarson, D. S., Taylor, S., Sochting, I., Koch, W. J., et al. (2001). Cognitive versus behavior therapy in the group treatment of obsessive-compulsive disorder. *Journal of Consulting and Clinical Psychology, 69*, 205–214.
- Obsessive Compulsive Cognitions Working Group. (1997). Cognitive assessment of obsessive-compulsive disorder. *Behaviour Research and Therapy, 35*, 667–681.
- Obsessive Compulsive Cognitions Working Group. (2005). Psychometric validation of the Obsessive Beliefs Questionnaire and the Interpretation of Intrusions Inventory: Part 2, factor analyses and testing of a brief version. *Behaviour Research and Therapy, 43*, 1527–1542.
- Rabavilas, A. D., Boulougouris, J. C., & Stefanis, C. (1976). Duration of flooding sessions in the treatment of obsessive-compulsive patients. *Behaviour Research and Therapy, 14*, 349–355.
- Rachman, S., Craske, M., Tallman, K., & Solyom, C. (1986). Does escape behavior strengthen agoraphobic avoidance? A replication. *Behavior Therapy, 17*, 366–384.
- Rachman, S., Robinson, S., & Lopatka, C. (1987). Is incomplete fear-reduction followed by a return of fear? *Behaviour Research and Therapy, 25*, 67–69.
- Resick, P. A., Galovski, T. E., O'Brien Uhlmansiek, M., Scher, C. D., Clum, G. A., & Young-Xu, Y. (2008). A randomized clinical trial to dismantle components of cognitive processing therapy for posttraumatic stress disorder in female victims of interpersonal violence. *Journal of Consulting and Clinical Psychology, 76*, 243–258.
- Salkovskis, P. M., & Westbrook, D. (1989). Behaviour therapy and obsessional ruminations: can failure be turned into success? *Behaviour Research and Therapy, 27*, 149–160.
- Seim, R. W., & Spates, R. (2008, May). The efficacy of dosed exposure therapy in the treatment of small animal phobias. *Paper presented at the Annual Meeting of the Association for Psychological Science, Chicago.*
- Stern, R., & Marks, I. (1973). Brief and prolonged flooding. A comparison in agoraphobic patients. *Archives of General Psychiatry, 28*, 270–276.
- Stone, M., & Borkovec, T. D. (1975). The paradoxical effect of brief CS exposure on analogue phobic subjects. *Behaviour Research and Therapy, 13*, 51–54.
- Tarrier, N., Sommerfield, C., Pilgrim, H., & Humphreys, L. (1999). Cognitive therapy or imaginal exposure in the treatment of post-traumatic stress disorder. Twelve-month follow-up. *British Journal of Psychiatry, 175*, 571–575.
- The Old Farmer's Almanac. (1999). *Three ways to hypnotize a chicken*. Yankee Publishing Inc. Retrieved May 23, 2008, from the World Wide Web: <http://www.almanac.com/preview2000/hypnotize.html>
- Twohig, M. P. (2009-this issue). The application of acceptance and commitment therapy to obsessive-compulsive disorder. *Cognitive and Behavioral Practice, 16*, xx-xx.
- van Balkom, A. J., de Haan, E., van Oppen, P., Spinhoven, P., Hoogduin, K. A., & van Dyck, R. (1998). Cognitive and behavioral therapies alone versus in combination with fluvoxamine in the treatment of obsessive compulsive disorder. *Journal of Nervous and Mental Disease, 186*, 492–499.
- van Minnen, A., & Foa, E. B. (2006). The effect of imaginal exposure length on outcome of treatment for PTSD. *Journal of Traumatic Stress, 19*, 427–438.
- van Oppen, P., de Haan, E., van Balkom, A. J., Spinhoven, P., Hoogduin, K., & van Dyck, R. (1995). Cognitive therapy and exposure in vivo in the treatment of obsessive compulsive disorder. *Behaviour Research and Therapy, 33*, 379–390.
- Vogel, P. A., Stiles, T. C., & Götestam, K. G. (2004). Adding cognitive therapy elements to exposure therapy for obsessive compulsive disorder: A controlled study. *Behavioural and Cognitive Psychotherapy, 32*, 275–290.
- Völgyesi, F. A. (1966). *Hypnosis of man and animals*. London. Billing & Sons Ltd.
- Wampold, B. E. (2001). *The great psychotherapy debate: Models, methods and findings*. Mahwah, NJ. Lawrence Erlbaum Associates.
- Wells, A. (1995). Meta-cognition and worry: A cognitive model of generalized anxiety disorder. *Behavioural and Cognitive Psychotherapy, 23*, 301–320.
- Whittal, M. L., Thordarson, D. S., & McLean, P. D. (2005). Treatment of obsessive-compulsive disorder: cognitive behavior therapy vs. exposure and response prevention. *Behaviour Research and Therapy, 43*, 1559–1576.
- Wilhelm, S., & Steketee, G. (2006). *Cognitive therapy for obsessive-compulsive disorder: A guide for professionals*. Oakland, CA. New Harbinger.

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