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EVIDENCE-BASED CASE STUDY

A Case Study in Treating Chronic Comorbid Obsessive–Compulsive Disorder and Depression With Behavioral Activation and Pharmacotherapy

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Obsessive–compulsive disorder (OCD) is difficult to treat, and more so when comorbid with major depressive disorder (MDD). The aim of the present case study was to examine effects of behavioral activation (BA) and pharmacotherapy with an adult with chronic comorbid OCD and MDD. BA aimed at increasing approach behaviors in life activities and decreasing avoidant and inactive behaviors. After 21 months of treatment at a community mental health clinic, OCD and MDD symptoms, including compulsive checking behaviors, were no longer at clinical levels. Symptom alleviation and psychological health improved in line with increases in activities of living such as self-care, domestic, social, and studying, and decreases in medications from a regimen of mood stabilizers and anxiolytics to a sole antidepressant. The participant was satisfied with treatment procedures and outcome. The results add to growing evidence of effective BA treatments for comorbid disorders that include depression.

Keywords: transdiagnostic behavioral activation, obsessive–compulsive disorder, comorbid anxiety and depression, comorbid obsessive–compulsive disorder, psychopharmacotherapy for comorbid disorders

If obsessive–compulsive disorder (OCD) is left untreated, daily functioning can become severely impaired. Jobs can be lost or difficult to recover, interpersonal and family relationships can dissolve or become dysfunctional, and general health and self-care can deteriorate. Ultimately suicidal thinking can become part of daily experience. Such problems can persist for many years, especially when OCD onset occurs in the first 20 years of life (Skoog & Skoog, 1999).

Fortunately, many persons with OCD can be successfully treated with cognitive–behavioral therapies (CBT; Franklin & Foa, 2011; Steketee & Barlow, 2002). CBT usually includes intensive in-session in vivo or imaginal exposure and response prevention (ERP) that may be accompanied by cognitive processing and restructuring, and conjunctive antidepressant medication (Cottraux, Bouvard, & Milliery, 2005; Eddy, Dutra, Bradley, & Westen, 2004). However, many studies have reported that about 50% of participants refused or dropped out of treatment because of imagined or experienced discomfiture or distress associated with in-session ERP. Furthermore, many participants who completed treatment remained symptomatic (Abramowitz, Taylor, & McKay, 2009; Eddy et al., 2004; Eisen et al., 1999; Fisher & Wells, 2005; Foa et al., 2005).

Treatment is further compounded when OCD presents comorbidly with major depressive disorder (MDD). Although varying widely, about 40% of persons diagnosed with OCD are also diagnosed with MDD (Ledley, Pai, & Franklin, 2007; Overbeek, Schruers, Vermetten, & Griez, 2002; Torres et al., 2006). Studies found that participants with OCD and severe depression showed attenuated treatment effects probably because of depressive features such as low motivation or therapeutic engagement, hopelessness, suicidal thinking, or psychomotor retardation (Abramowitz & Foa, 2000; Abramowitz, Franklin, Street, Kozak, & Foa, 2000; Kohlenberg & Vandenberghe, 2007; Twohig et al., 2010).

Clearly, treating OCD with comorbid depression is difficult and may require strategies or techniques that more effectively address the conditions maintaining depression. At present, there does not appear to be any singular effective strategy. ERP could be combined with a treatment for depression, but risk of treatment withdrawal is high. An alternative may be behavioral activation (BA) treatments, which are increasingly being tested with comorbid disorders.

BA is a cognitive–behavioral approach that emphasizes "doing" while aware and in spite of contrary moods, anxieties, or thoughts. That is, it emphasizes behavior change rather than cognitive processing (Dimidjian, Barrera, Martell, Muñoz, & Lewinsohn, 2011; Hopko, Lejuez, Ruggiero, & Eifert, 2003; Kanter et al., 2010; Turner & Leach, 2012). BA has evolved from the work of Ferster (1973) and Lewinsohn (1974), but in the mid1990s was reconceptualized and revitalized by Jacobson and colleagues (Gortner, Gollan, Dobson, & Jacobson, 1998; Jacobson et al., 1996). Recent reviews have concluded that BA is a complete and efficacious treatment for depression (Cuijpers, van Straten, & Warmerdam, 2007; Ekers, Richards, & Gilbody, 2008; Mazzucchelli, Kane, & Rees, 2009), especially with severe depression, which was more effectively treated with BA than with cognitive therapy or phar-

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macotherapy (Coffman, Martell, Dimidjian, Gallop, & Hollon, 2007; Dimidjian et al., 2006). More recent versions and applications have treated depression with comorbid anxiety disorders. Comorbid symptoms are viewed as collateral experiences of negative affect. Avoidant or inactive behaviors such as staying in bed, not leaving the house, or ritualistic or ruminative behaviors develop over time and function to reduce negative affect (Hopko, Robertson, & Lejuez, 2006). However, if untreated, avoidant or inactive behaviors continue to expose clients to anxiety and depression. BA aims at increasing behaviors that approach and connect with positive reinforcers found in various life activities, such as interpersonal relationships, occupation, recreation, and physical well-being, and decreasing avoidant or inactive behaviors that immediately reduce negative affect (i.e., such behaviors are increased or maintained by negative reinforcement).

Recent BA studies have treated various disorders comorbid with depression such as posttraumatic stress disorder (Mulick & Naugle, 2004; Gros et al., 2012; Jakupcak et al., 2006; Wagner, Zatzick, Ghesquiere, & Jurkovich, 2007), generalized anxiety disorder (Armento & Hopko, 2009; Hopko et al., 2011), and agoraphobic panic disorder (Hopko, Lejuez, & Hopko, 2004). Treatments ranged from 8 to 16 sessions with few follow-up data. Results were mixed, with positive effects associated with mild to moderate levels of depression. Most likely, these studies were limited by the relatively few treatment sessions. Earlier major studies of BA contained at least 20 sessions (Dimidjian et al., 2006; Jacobson et al., 1996). No studies of BA treatment of comorbid OCD and depression were found. Although no longer classified as an anxiety disorder, OCD nevertheless presents with accompanying negative affect and anxiety (American Psychiatric Association, 2013).

The aim of the present case study was to examine an application of BA, in conjunction with pharmacotherapy, with an adult with chronic comorbid OCD and MDD. BA was viewed as a viable alternative to ERP, largely because of the participants' long history of depression and extensive avoidant behaviors.

Method

Participant and Setting

Mr. B., 50 years of age, born in Australia of European heritage, was referred to the recently appointed clinical psychologist (the author) at a community mental health clinic. Mr. B. had commenced medical treatment at the clinic 8 months earlier, at which time he was diagnosed with severe OCD and treatment-resistant MDD with suicidal ideation by at least two of the clinic's psychiatrists. Treatment at the clinic had consisted of regular sessions with psychiatrists and included replacing desvenlafaxine with lithium carbonate and clomipramine. However, after 7 months of treatment, Mr. B.'s mental health had not appreciably improved and hospitalization was recommended, which he declined. At no time prior to or during this study was Mr. B. hospitalized. A month later, the author accepted a referral for conjunctive medical and psychological treatment. The author had many years of experience in practicing BA with comorbid depression and anxiety, but had not applied the approach to OCD and depression.

Mr. B. described his OCD as chronic, intense, intrusive, and exhausting. Compulsions consisted of daily checking that doors were locked (e.g., house, refrigerator), taps turned off (e.g., washing machine, shower, bathroom), stove switched off, house lights off (he checked lights even when in total darkness), and motor vehicle locked. Mr. B. was anxious and obsessed about his home and car being damaged or burgled. Anxieties were so intense and at times close to panic that he coped by avoiding cooking and using the bathroom and laundry, and instead ate, showered, shaved, and brushed his teeth at his parents' home, which he visited daily.

Mr. B. reported a long history of depression, anxiety, and obsessive–compulsive behavior, which began in his early 20s. In the preceding 7 years prior to attending the clinic, he had tried various antidepressants (including desvenlafaxine) and anxiolytics prescribed by general medical practitioners. Also, he had participated in six sessions of psychotherapy, which appeared not to have been cognitive–behavioral or contain ERP. He found the psychotherapy largely unhelpful and withdrew from it.

Mr. B. had separated from his wife 10 years earlier. They had two children under 15 years of age who visited him each alternate weekend. He desired more contact with them, but could not cope with more. Since the separation, Mr. B. had lived alone without subsequent romantic or sexual relationships. He lived on a disability pension in a rented home in an Australian metropolis, and had not worked for 6 months after leaving his job of 5 years as a general hand in a furniture factory. He left school at 15 years of age, and subsequently worked in many casual and manual jobs. Mr. B. consented to publishing his treatment and results provided identifiable details were deleted or disguised.

Measurement

Measures consisted of three self-rated psychometrics and self-recorded direct observations of compulsive behaviors. The following psychometrics were rated during two weeks of pretreatment assessment, and at 16 and 21 months of treatment.

Obsessive–Compulsive Inventory—Revised. The Obsessive–Compulsive Inventory—Revised (OCI-R; Foa, Huppert, et al., 2002) is a reliable and valid 18-item self-report measure of distress associated with obsessive–compulsive behavior over the preceding month. Experience of washing, obsessing, hoarding, ordering, checking, and mental neutralizing are rated using a 5-point scale. Total ratings of ≥21, or ≥4 on the *Obsessing* scale, indicate OCD symptomatology.

Beck Depression Inventory-II. The Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996) is a 21-item self-report measure of depression experienced over the preceding 2 weeks. Each item is rated on a 4-point scale, with ratings of 0–13 indicating *minimal* levels of depression; 14–19, *mild*; 20–28, *moderate*; and 29–63, *severe*. The BDI-II is a well established, reliable, and valid measure of depressive symptomatology.

Depression Anxiety Stress Scales. The Depression Anxiety Stress Scales (DASS; Lovibond & Lovibond, 1995) comprise three self-report scales that measure negative emotional states of depression, anxiety, and stress experienced over the preceding week. Each scale contains 14 items (a total of 42 items); each rated using a 4-point measure. The *Depression* scale (D) measures levels of dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. The *Anxiety* scale (A) measures levels of autonomic arousal, skeletal muscle effects,

situational anxiety, and experience of anxious affect. The *Stress* scale (S) measures levels of chronic nonspecific arousal such as difficulty relaxing, nervous arousal, agitation, irritability, and impatience. The three scales measure *extremely severe* ($D \geq 27$, $A \geq 20$, $S \geq 34$), *severe* ($D \geq 20$, $A \geq 15$, $S \geq 26$), *moderate* ($D \geq 13$, $A \geq 10$, $S \geq 18$), *mild* ($D \geq 10$, $A \geq 7$, $S \geq 14$), or *normal* ($D < 10$, $A < 7$, $S < 14$) levels of symptoms. The DASS are standardized, reliable and valid scales (Brown, Chorpita, Korotitsch, & Barlow, 1997).

Frequencies of compulsive behaviors. Compulsive behaviors occurred on three occasions each day: when leaving the house each morning, returning home and parking the car before entering the house, and finally, before retiring to bed. A ritual was defined as starting and completing specific sequences of behaviors such as checking that bathroom, toilet, and laundry taps were turned off, washing machine, stove and house lights switched off, refrigerator door shut, and front and rear external house doors, and car doors and trunk were locked. During the second week of assessment, Mr. B. recorded number of rituals per day. During the first month of treatment, a more accurate self-recording form was introduced, which recorded 24 separate checking behaviors (9 leaving the house, 5 parking the car, and 10 before going to bed). Each checking behavior was scored immediately after completion (recording forms are available from the author). Typically, a ritual began by engaging in the checks consecutively, and once the ritual was completed, it restarted from the beginning. For the first 9 months of treatment, to avoid recording fatigue or tedium, Mr. B. recorded daily during the second half of each month (viz., from the 16th to the last day of the month). Subsequently, checking behaviors and rituals were periodically recorded at 16 and 21 months of treatment.

Augmentative observations. File-notes which were made during or immediately after each session augmented the preceding measures. Notes included verbatim comments, reports of changes in various life activities, emotions, behaviors, and medications. Also, after 16 months of treatment, Mr. B. completed a questionnaire that rated satisfaction with treatment goals, procedures, and outcomes on a 7-point Likert scale (Wolf, 1978).

Pretreatment Assessment

Pretreatment assessment followed procedures outlined in the first two sessions of the Brief Behavioral Activation Treatment for Depression manual (BATD-R; Lejuez, Hopko, Acierno, Daughters, & Pagoto, 2011) and completed during 3×1 hr sessions over 2 weeks. Session 1 consisted of obtaining information about complaints, problems, history of problems, medications, living arrangements, and social and family activities. The session covered discussions of anxiety and depression, and how BA treatment would proceed.

Session 2 consisted of completing the OCI-R and the DASS, and detailing a behavioral description of the checking rituals. A daily activities form was introduced for recording times Mr. B. got out of bed, left the house, where he went, times and tallies of checking rituals, and other main activities. Session 3 included completing the BDI-II, reviewing self-recordings of activities and checking rituals, and identifying values and potential positive reinforcers using the BATD-R *Life Areas, Values, and Activities Inventory*.

Self-reports corroborated diagnoses of OCD and depression, and self-observations showed daily routines of getting out of bed at about 10 a.m., smoking cigarettes and ruminating, and after completing checking rituals leaving the house at about 11 a.m. to visit his parents for lunch. After lunch he showered, shaved, and watched TV. He returned home with a prepared meal midafternoon, and then remained alone and further ruminated until bedtime at about midnight. Little food was kept in the house. He did not cook, use the bathroom or laundry, or do gardening. By visiting his parents each day he avoided domestic chores, self-care, and other responsibilities. He reported feeling least anxious at his parents' home. He did not socialize with friends.

From a BA perspective, the case was formulated as follows: Mr. B. engaged in a range of avoidant behaviors such as compulsive checking, not using the bathroom, laundry, kitchen, contacting friends, looking for work, or taking steps toward further education or training. Avoidance appeared negatively reinforced by immediate relief of obsessions and anxieties. Depressive symptoms included excessive sleeping, poor eating, excessive time alone in the house engaging in self-defeating and self-deprecating thoughts of social inadequacy and incompetency, ruminating and feeling guilty about marriage breakup and failure as a father, being unemployed and unemployable, and remaining alone and unloved. Depression appeared to be a function of extensive and chronic avoidant behaviors, persistent anxieties, little positive reinforcement from activities of living, and secondary positive reinforcement including parental attention, sympathy, and self-care support. Treatment goals were to decrease compulsive checking, anxiety, stress, and depression; and increase self-care, domestic, social, and occupational activities.

Treatment

The first 9 months of treatment consisted of 18 1-hr sessions with the author, and 13 half-hour sessions with the referring psychiatrist who managed medication only and did not engage in psychotherapy. Changes in medication were decided by the psychiatrist alone.

The first month consisted of four weekly sessions based on Sessions 3 and 4 of BATD-R. OCD and MDD symptomatology were treated concurrently with the following schedule of activities:

(i) Self-recordings of daily activities and checking rituals, which highlighted low levels of enjoyable or positive activities, and high levels of anxiety, stress, and avoidant behaviors were reviewed. These observations were discussed in context of identified values to assist in specifying approach behaviors for increasing positive reinforcement, and decreasing negatively reinforced avoidant or inactive behaviors.

(ii) Specific approach behaviors were (a) contact friends and other family members; (b) resume self-care and domestic activities in the bathroom, laundry, and kitchen, and (c) find a job or course in further education and training.

(iii) Approach behaviors were gradually shaped starting with the bathroom (e.g., first stepping into the bathroom for several minutes several times per day, followed by using the vanity basin, washing face, brushing teeth, shaving, etc.). The procedure was replicated across the kitchen and laundry. It should be noted that this procedure did not evoke checking behaviors probably because it was not associated with leaving the house or going to bed at night.

(iv) A detailed self-recording form for checking behaviors was introduced.

(v) Goals for limiting checking behaviors were set. The initial goal was no more than 4 of each behavior per occasion, with subsequent gradual decreases over time. By limiting checking, anxiety occurred at tolerable levels and never fully alleviated.

(vi) Therapist praised self-recordings and engagement in the above approach behaviors and limiting of checking behaviors. Progress was reviewed and evaluated each session. Activities and behaviors were scheduled collaboratively and paced at levels and rates that Mr. B. could attain. Praise and feedback reinforced Mr. B.'s behavior change and progress toward goals.

The second month consisted of three similar sessions (see Sessions 5 onward of BATD-R), plus in-session management of persistent ruminating and venting (guided by Chapter 7, Martell, Addis, & Jacobson, 2001). To illustrate, Mr. B. talked frequently about how depressed and anxious he remained, that nothing had changed, that his problems were medical over which he had no control, that his life was miserable, and that there was no future ("I know I'm checking less, and that I'm seeing more of my friends, but I feel I'm going backward"). Ruminating and venting became counterproductive. It consumed session-time, and functioned to avoid discussing goals, effort, progress, or unpleasant topics (e.g., improving self-care, looking for a job), and gain the therapist's acknowledgment, consolation, or sympathy. Mr. B. was made aware of the functions of ruminating and venting, and agreed to the following in-session strategy:

(a) The therapist listened to and engaged with Mr. B. while ruminating and venting for up to 10 min at the start of each session.

(b) After 10 min, the therapist redirected ruminating and venting toward discussing and praising goals, activities achieved or attempted, and prompting talk of longer term goals and activities. Also, the therapist alerted Mr. B. to when ruminating and venting occurred and to observe its consequences. This strategy usually led to Mr. B. acknowledging treatment gains.

The third month continued with two similar sessions. However, any one checking behavior was limited to no more than three per occasion. Months 4 to 7 continued with six similar sessions (i.e., one session each 2 or 3 weeks). Clomipramine was ceased and replaced with duloxetine during the fifth month, and buspirone was commenced in the sixth month. Lithium remained unchanged. During the seventh month, checking goal was decreased to no more than 2.

Table 1
Participant's Psychometric Ratings and Frequencies of Rituals During Pretreatment Assessment and Treatment

Measures	Pretreatment assessment	Treatment after	
		16 months	21 months
OCI-R	31 (5[a])	21 (3)	15 (3)
DASS-D	40	14	1
DASS-A	19	4	1
DASS-S	29	6	7
BDI-II	47	28	4
Mean no. of rituals/day	16	1	1

Note. OCI-R = Obsessive–Compulsive Inventory—Revised; DASS-D = Depression Anxiety Stress Scale–Depression; DASS-A = DASS–Anxiety; DASS-S = DASS–Stress; BDI-II = Beck Depression Inventory-II.
[a] Obsessing rating.

The eighth month included one session and the addition of amitriptyline. The ninth month contained two sessions including advice that the author was soon to leave the clinic. A final session was held a month later: Progress was reviewed and a final goal of no more than one checking behavior per occasion was set, with advice that a new clinical psychologist would continue with the BA treatment.

Mr. B. continued treatment for a further 12 months with the new clinical psychologist and the same psychiatrist. The clinical psychologist provided 16 1-hr sessions aimed at achieving and maintaining the specified therapeutic goals. The psychiatrist provided 9 × 30-min sessions that included cessation of buspirone and amitriptyline in the 19th month, and lithium in the 20th month. Duloxetine remained unchanged and the sole prescribed psychoactive medication. During the 16th and 21st months, Mr. B. agreed to resume data collection and meet with the author to review progress.

Results

Tables 1 and 2 show ratings of obsessions, compulsions, depression, anxiety, stress, frequencies of checking rituals, daily activities of living, and psychoactive medications during assessment and treatment. During assessment, ratings were as follows: (a) OCI-R was 31(including 5 for *Obsessing*), (b) BDI-II was 47

Table 2
Changes in Participant's Activities of Living and Psychoactive Medications

Measures	Pretreatment assessment	Treatment after		
		3 months	9 months	21 months
Activities	Did not use bathroom, laundry, kitchen	Brushed teeth daily, shaved regularly, did laundry	Same as @ 3 months, plus showered, cooked meals, washed dishes	Same as @ 9 months, plus completed technical course, applied for 2 jobs, & enrolled in a computer training course
	No contact with friends	Met with friends		
	Unemployed & unoccupied	Unemployed & unoccupied	Started a part-time 1-year technical course	
Medications	Lithium	Lithium	Lithium	Duloxetine
	Clomipramine	Clomipramine	Duloxetine	
			Buspirone	
			Amitryptyline	

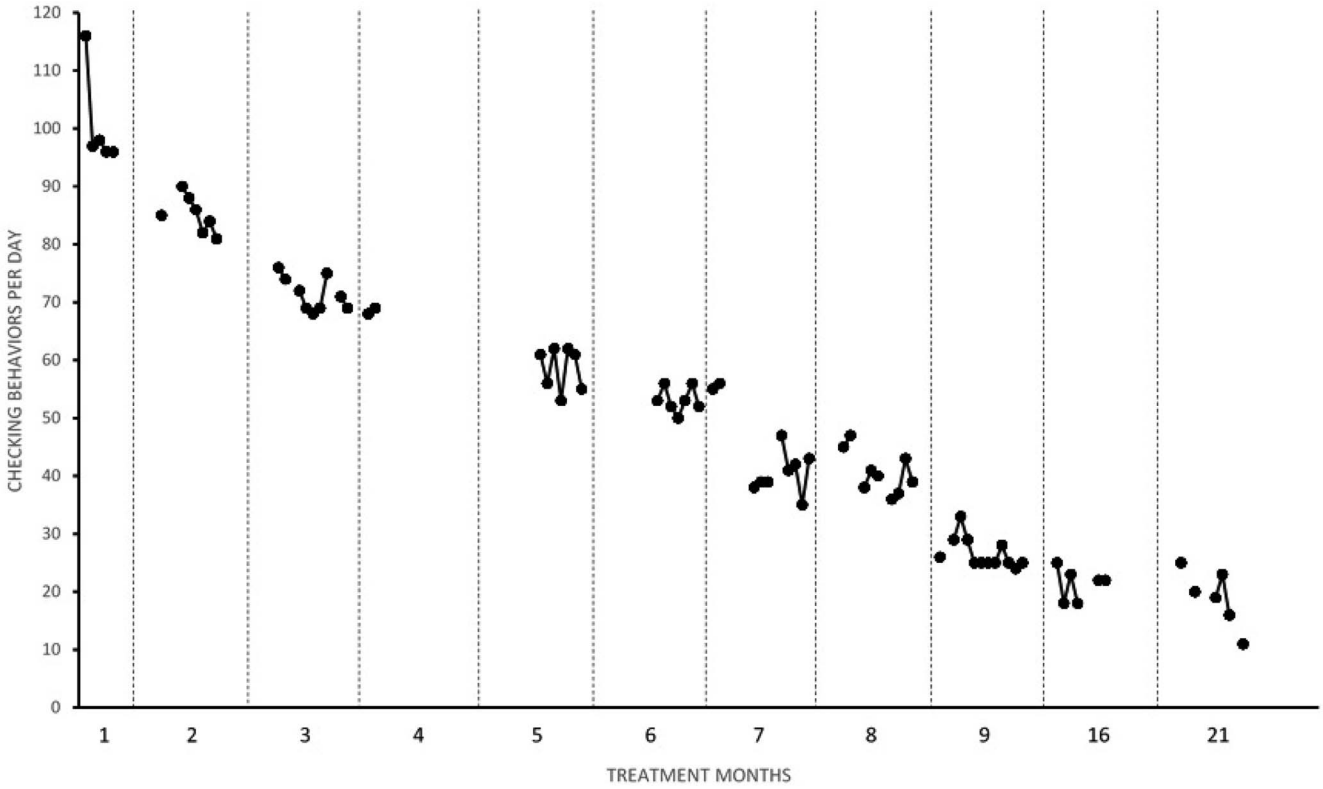

Figure 1. Frequencies of checking behaviors during treatment.

(*severe depressive* symptoms), and (c) DASS were 40 for depression (*extremely severe*), 19 for anxiety (*severe*), and 29 for stress (*severe*). Checking rituals were at an average of 16 per day.

Figure 1 shows frequencies of checking behaviors across 21 months of treatment. During the second half of the first month of treatment, checking behaviors were stable at a mean of 101 per day. As treatment proceeded, checking behaviors gradually and steadily decreased. The last five observations of Month 9 show stable frequencies at a mean of 25 per day.

After 3 months of treatment, Mr. B. showed systematic decreases in checking, had established regular self-care routines at home and resumed contact with friends, and generally appeared engaged in therapy. However, in spite of these positive changes he continued to ruminate and vent about his anxieties, obsessions, and moods not changing, and that he was on the brink of ". . . going backward." Nevertheless, he also made comments such as "Coming to see you gives me courage to face my fears and to keep going."

In the last treatment session with the author, Mr. B. reported he had commenced a part-time 1-year technical course, which comprised 3 × 3 hr classes per week. Mr. B. was out of bed earlier each day and busy with study, doing domestic chores, and self-care. He reported feeling less depressed and anxious, and less pessimistic about his abilities and future. For the first time during treatment, the session was free from ruminating and venting.

After 16 months of treatment, OCI-R rating of 21 was on the cusp of nonclinical levels, depression had decreased to *moderate* levels (DASS-D = 14, BDI-II = 28), while anxiety and stress were no longer symptomatic (DASS-A = 4, DASS-S = 6). Checking rituals had decreased to an average of 1 per day, while checking behaviors decreased further to a mean of 21. During the interview, Mr. B. appeared more confident, smiled frequently, made jokes, and said he was happier, but ". . . not out of the woods." He reported successfully completing first semester of his course (had passed all subjects, completed all assignments and homework) and had started second semester. He enjoyed attending classes and interacting with fellow students. He continued with his ablutions at home, and was pleased that his morning checking ritual took only about 10 min (decreased from over an hour before treatment). Table 3 shows Mr. B.'s satisfaction ratings at that time. He was *satisfied* with treatment goals, procedures, and outcomes, and also with improvements in general psychological health; and *very satisfied* with interpersonal relations.

After 21 months, OCI-R rating of 15, including an *Obsessing* of 3, indicated asymptomatic levels. Depression further alleviated to asymptomatic levels (DASS-D = 1, BDI-II = 4) in line with anxiety and stress (DASS-A = 1; DASS-S = 7). Mean checking rituals and behaviors remained unchanged at 1 and 19, respectively—although a clear decreasing trend in checking behaviors was evident. Table 2 shows major reductions in medications down to duloxetine only. Mr. B. reported feeling more energized following cessation of lithium. He said ". . . my mind is sharper and in more control of my thoughts." He had successfully completed his technical course, had two job applications in hand, and had enrolled in another 6-month course (in computer training). Self-care at home continued. His morning ritual took about 5 min.

Table 3
Participant's Satisfaction Ratings After 16 Months of Treatment

Very dissatisfied	Dissatisfied		Neutral	Satisfied		Very satisfied
1	2	3	4	5	6	7
How satisfied are you with the goals selected for treatment?						6
How satisfied are you with the strategies and procedures used?						6
How satisfied are you with the time and effort required putting procedures into action?						7
How satisfied are you with improvements in the selected psychological problems?						6
How satisfied are you with improvements in your psychological health in general? That is, including problems that were not selected for treatment.						6
How satisfied are you with improvements in interpersonal and family relations and harmony?						7
How satisfied are you with your knowledge and skills in better managing future psychological problems?						5
How satisfied are you with the progress achieved?						6
How satisfied are you with the quality of advice and support you received?						7

Discussion

The present case study combined BA and pharmacotherapy for treating chronic and comorbid OCD and MDD. After 21 months of treatment, OCD and MDD symptoms were no longer at clinical levels. Symptom alleviation and psychological health improved in line with increases in activities of living such as studying, social, domestic, and self-care activities, and decreases in medications from a regimen of mood stabilizers and anxiolytics to a sole antidepressant. The participant was satisfied with treatment procedures and outcome.

The present study corroborates earlier studies that showed BA as an effective treatment for comorbid anxiety and depression (Armento & Hopko, 2009; Hopko et al., 2004, 2011; Mulick & Naugle, 2004), and extends the research by documenting what appeared to be an effective combination of BA (without in-session ERP) and pharmacological treatment for comorbid OCD and MDD. Although compulsive behaviors did not decrease to zero levels, which is a common finding with severe or comorbid diagnoses (Abramowitz & Foa, 2000; Abramowitz et al., 2000; Eisen et al., 1999; Fisher & Wells, 2005; Twohig et al., 2010), the participant nevertheless found residual frequencies as acceptable and not dysfunctional (viz., a single ritual before leaving the house).

The results add support to earlier views and suggestions that severe and comorbid OCD and MDD should be treated comprehensively and concurrently across multiple symptoms and problems (Overbeek et al., 2002). It may be the case that severe MDD aggravates or strengthens OCD, and makes treatment all the more difficult. Brief or standard treatments (e.g., $\leq$25 sessions of BA) are unlikely to produce asymptomatic outcomes or recovery.

Treatment comprised several components that draw comment and implications for clinical practice. First, pharmacotherapy was integral to treatment, but it is not clear how it contributed to the outcome. Although the evidence is tentative, many clinicians recommend psychoactive medications when treating comorbid conditions such as OCD and MDD because psychoactives may facilitate psychological treatments, especially during early phases, by increasing clients' amenability or motivation to engage with clinicians (Eddy et al., 2004; Foa, Franklin, & Moser, 2002; Franklin & Foa, 2011; Kaplan & Hollander, 2003). Nevertheless, to better understand how pharmaceuticals interact with psychological practice, clinical psychologists and medical practitioners should work closer together in evaluating and determining changes in medication. For example, when behaviors and symptoms are stable for extended periods, clinicians could jointly agree to decrease or alter medications. Indeed, future research should endeavor to clarify how psychoactives can effectively combine with CBT to achieve optimal effects.

Second, BA treated OCD and MDD concurrently. Avoidant behaviors such as compulsions, social isolation, and inactivity were systematically limited while increasing approach behaviors that reconnected with positive reinforcement (e.g., socializing, retraining for new jobs). Activation was initiated with less distressful activities, but included graduated behavior change toward difficult albeit potentially more reinforcing activities such as searching for work, enrolling in further education or training, socializing, and decreasing compulsive behaviors.

Clinicians should note and be careful not to simply select approach behaviors that easily attain few or limited positive reinforcers (e.g., increasing physical activities, gardening, going to the movies). Rather, a wider range of activities associated with varying difficulties or anxieties may access more enduring reinforcers such as spending less time checking and securing the home, socializing with fellow students, or entertaining friends at home (e.g., Bailey & Arco, 2010; Bosch & Fuqua, 2001).

BA may be a more advantageous or effective treatment than those that treat OCD and MDD separately. For example, ERP for OCD targets specific symptoms without necessarily targeting other non-OCD anxieties. The ERP modus operandi contrives to increase or intensify exposure to specific obsessions followed by complete response prevention (e.g., Kozak & Foa, 1996, prescribed 15 $\times$ 2 hour daily sessions of in vivo or imaginal ERP). For instance, Mr. B. could have been treated by increasing exposure to obsessions and obsessive–compulsive behaviors to above natural baseline levels and practicing response prevention; but, because depression was severe, the rituals debilitating, and motivation for behavioral change was low such a procedure may have aggravated his symptoms—causing withdrawal from treatment or

requiring additional costly in-home intervention. Furthermore, it is worth noting that in-session ERP does not appear necessary for effective treatment of OCD (Arco, 2008; Twohig, Hayes, & Masuda, 2006).

In contrast, BA gradually decreased compulsive behaviors without increased exposure to obsessions and impulses and without response prevention, and concurrently increased approach behaviors across a range of anxiety-provoking, but potentially reinforcing, activities (e.g., looking for further training, seeing friends)—an approach with goals and procedures that Mr. B. found acceptable and satisfying. BA targets a broader range of behaviors that presumably bring more substantial and long-term positive reinforcement, rather than targeting specific fears associated with compulsive behaviors.

The third component relates to how clinicians respond to ruminating and venting (Lejuez, Hopko, Levine, Gholkar, & Collins, 2005; Martell et al., 2001). For many clients with chronic or severe symptoms, ruminating and venting may persist during treatment because of long and reinforced histories of immediate relief from negative affect, avoidance of difficult problems, or sympathy and attention from others. Indeed, ruminating and venting may persist in spite of emerging positive changes such as increases in social and self-care activities or decreasing frequencies of compulsive behaviors before abating (Arco, 2008).

Although it may be prudent to engage with clients while ruminating and venting for the purpose of establishing or enhancing therapeutic relationships, especially with clients who have few or no social interactions outside sessions, clinicians should nevertheless be mindful of their behavior. If ruminating and venting persist and sessions are disrupted or curtailed, concerns should be raised and a management strategy negotiated with clients. In the present study, a 10-min time limit was set. Afterward, the therapist redirected with discussion and praise of progress toward goals, or reminders of how ruminating and venting functioned. The strategy appeared to work well, and was reflected in the participant's satisfaction with it—saying that it motivated him to maintain his commitment to treatment, and counteracted feelings of not getting better. After 9 months of treatment, ruminating and venting were completely absent. Indeed, reiterating values and goals throughout treatment may increase tolerance of negative affect and inhibit impulsive or avoidant behaviors, and enhance and sustain the therapeutic relationship (Kanter et al., 2010). However, effects of this component remain largely conjectural. How critical is the management of ruminating and venting in treating chronic or comorbid disorders?

Several limitations are noted. First, measures were largely self-reports with some incomplete self-observations (viz., no baseline frequencies of checking behaviors), which although corroborated by the author's direct in-session observations, were nevertheless open to bias. Independent observations by clinicians not involved in the study would have enhanced confidence in the reported outcomes. Second, the quality and consistency of the treatment as per BA guidelines and across the two clinicians (i.e., integrity) was not measured. However, the author had many years of clinical experience in BA. Third, whether changes in compulsive behaviors and activities were efficient or optimal are unknown. For instance, although frequencies of compulsive behaviors decreased by 75% after 9 months of treatment, could change have occurred more rapidly? Such a question is difficult to answer given that comparable case studies were not found. Perhaps, compulsive behaviors could have been decreased more quickly. A future study, for example, could compare BA with a combined ERP and depression treatment. Finally, the study was nonexperimental; hence, it is difficult to know whether the above delineated components were all active (and to what extent) throughout the treatment process. Nevertheless, the study was systematic in ways that permit reasonable confidence in the internal validity of the overall treatment, if not its specific components (Kazdin, 1981; Kratochwill, Mott, & Dodson, 1984). Namely, (a) the study used multiple and repeated measures of symptoms and compulsive behaviors before and during treatment, thus enhancing reliability of progress; (b) immediate changes and a systematic and consistent decreasing trend in checking behaviors corresponded with initiation and duration of treatment; (c) the participant had a chronic history of OCD and MDD that had not responded to earlier treatments, but the present treatment produced enduring beneficial changes; (d) the 21-month treatment contained major reductions in medications, which indicated that psychiatric assessments of progress were positive and corroborated the psychological data; (e) ratings indicated satisfaction with the objectives, procedures, and outcomes after 16 months of treatment; and finally, (f) ratings of alleviated symptoms from clinical to asymptomatic levels were corroborated by a formal graphic analysis that showed compulsive behaviors had clearly decreased to low and nonproblematic levels.

Case studies, such as the present, attempt to demonstrate effective treatment syntheses and in the process raise questions and propositions about operative components, which can subsequently be tested experimentally by observing effects of adding or withdrawing specific treatment components (see single case experimental designs, Blampied, 1999; Morgan & Morgan, 2001). For example, a future study could add or withdraw an in-session intervention on ruminating and venting. Indeed there is growing consensus that case studies that analyze or synthesize treatment components are more likely to delineate principles, strategies, and techniques that are relevant to clinical practice, especially when treating complex or comorbid disorders (Barlow & Nock, 2009; Edwards, Dattilio, & Bromley, 2004; Ruscio & Holohan, 2006).

In conclusion, the present case study shows a successful application of behavioral activation and pharmacotherapy for chronic and comorbid OCD and depression. BA shows promise as a primary psychological treatment for comorbid disorders that include severe depression.

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