Treatment of Severe, Treatment-Refractory Obsessive-Compulsive Disorder: A Study of Inpatient and Community Treatment

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ABSTRACT

Introduction: This research reports on a prospective outcome study of two cohorts of patients with severe, chronic, resistant obsessive-compulsive disorder (OCD).

Methods: One cohort consisted of a total of 52 patients treated in an inpatient setting, while the second group comprised 65 patients treated in a community-outpatient setting. Treatment consisted primarily of intensive graded exposure and self-imposed response prevention augmented with cognitive restructuring.

Results: The groups demonstrated significant improvement over the course of treatment. In the inpatient and community groups, there was significant improvement over the first 12 weeks of treatment, and further improvement between 12 and 24 weeks.

Conclusion: These results suggest that even

FOCUS POINTS

- Obsessive-compulsive disorder (OCD) is a severe, chronic complaint that significant impacts on functioning and quality of life.
- Despite the existence of effective treatments for OCD, there are many for whom treatment is ineffective.
- Some individuals present with OCD that is resistant to treatment with pharmacologic and behavioral therapies.
- Even for the most severe, treatment-resistant cases, inpatient and community treatment with a specialist treatment team can be effective.

for patients who have demonstrated treatment-resistance, there may be benefit in intensive behavioral treatment of OCD. In addition it was found that even for those patients with the most profound refractory OCD and complicating factors inpatient stays of up to 24 weeks were effective in reducing symptoms.

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INTRODUCTION

Obsessive-compulsive disorder (OCD) is a condition characterized by recurrent intrusive ideas, impulses, or urges (obsessions), along with overt or covert behaviors (compulsions) aimed at reducing the distress these obsessions cause.¹ Lifetime prevalence rates for OCD are estimated at 1.6%,² with 1-year prevalence estimated at 0.8%,³ and point-prevalence at ~0.4%.⁴ OCD causes significant distress and impairment in social⁵ and occupational⁶ functioning, as well as reduced quality of life.⁷⁻⁹ Research into OCD has continued to expand over the last 3 decades, attracting more research than any anxiety disorder other than posttraumatic stress disorder.¹⁰ Treatment of OCD is efficacious. In a meta-analysis, Eddy and colleagues¹¹ found that both pharmacotherapy with serotonin reuptake inhibitors (SRIs) and cognitive-behavioral interventions yielded large effect sizes, ranging from 1.18 for pharmacotherapy to 1.72 for combined cognitive-behavioral therapy (CBT) and pharmacotherapy. Despite these results, it is known that ~38% of patients are treatment refractory, not experiencing clinically significant benefit¹² from treatment, and <30% of patients were asymptomatic following treatment.¹³

There is a growing realization of the need to report on the effectiveness of interventions delivered in routine clinical practice, in addition to well-controlled efficacy studies,¹⁴⁻¹⁶ for example, in individuals with comorbid conditions commonly seen in epidemiological studies.¹⁷ Furthermore, there is increasing acceptance of the need to assess outcome using several different methods beyond simple significance tests of pre-post symptom severity. Assessment of each individual for reliable and clinically significant change^{12,18} allows the investigator to gauge information beyond analysis of group means, potentially revealing rich information about the responses of individual patients.

There are few reports of CBT outcome studies in cases of severe OCD, with our literature search finding only two similar investigations. One previous report on the outcome of behavioral treatment of extremely severe, treatment-resistant OCD was published by Drummond.¹⁹ In this cohort of 53 inpatients, the author reported a 40% reduction in OCD symptoms occurring in >60% of those treated. Furthermore, the gains from inpatient treatment were maintained when the cohort was examined at an 18-month follow-up. An inpatient behavioral-therapy unit in which most of

the patients were diagnosed with OCD was also described by Thornicroft and colleagues.²⁰ Though these patients were reported as experiencing high levels of discomfort and handicap from their OCD symptoms, as well as significant improvement from treatment, they were not assessed with a psychometrically validated rating scale, making comparisons with the current cohort difficult. Stuart and colleagues²¹ also reported on intensive residential treatment of severe OCD, although their patients had considerably lower severity than those treated by Drummond and colleagues¹⁹ or patients in the current study.

The current prospective study aims to assess the effectiveness of treatment for severe OCD in clinical practice, using cognitive, behavioral and pharmacologic treatments. It examines the outcome of treatment in both inpatient and community settings, using an assortment of complementary outcome criteria. The outcomes are then benchmarked against the treatment effects reported in previous efficacy studies. It expands on previous research in three important ways. It is the first study to examine outcome treatment, predominantly using CBT, in a cohort of severe, treatment-refractory patients seen in both inpatient and community settings. Second, it reports on routine clinical practice data allowing for examination of the effectiveness (as opposed to the efficacy) of treatment for OCD. Third, it examines the individual outcomes of patients in both treatment settings.

STUDY ONE: INPATIENT TREATMENT—METHODS

Participants

A total of 52 patients were admitted to the residential unit of the National Service for the Treatment of Severe, Chronic Refractory Obsessive-Compulsive and Body Dysmorphic Disorders in the Behavioural and Cognitive Psychotherapy Unit (BCPU) of South West London and St George's Mental Health Trust between April 2006 and December 2007 for treatment of OCD. These were consecutive patients to be admitted to the Unit, who were suffering from OCD as their primary diagnosis. This treatment unit acts as a tertiary (and higher) referral service for patients who have not responded to treatment elsewhere. Patients admitted to the BCPU are required to have a Yale-Brown Obsessive Compulsive Scale (Y-BOCS)^{22,23} score of ≥30 which represents profoundly severe

OCD. In addition they are expected to have undergone psychopharmacologic treatment with at least two SRIs. Furthermore, they were required to have been offered augmentation of their SRIs with either supranormal dosages, by the addition of a dopamine antagonist, or by the use of mood stabilizers (as recommended by Pallanti and colleagues²⁴), with unsatisfactory response or to have been offered this treatment and been unable to tolerate. Each patient is also required to have demonstrated poor response to two trials of CBT in an outpatient setting (generally including one home-based outpatient intensive treatment). Patients who meet these basic severity markers are suitable for treatment in part of the National Consortium of OCD services which has been described elsewhere.^{25,26} To be suitable for inpatient treatment, there needs to be a reason why 24-hour nursing care is necessary. Reasons for the requirement of inpatient treatment include being a danger to themselves (through suicide risk, or self-neglect), being a danger to others (eg, through risk of impulsive acts), taking at least 3 hours in performing compulsions while getting out of bed, delayed sleep-phase shift, or complicating comorbid diagnoses.

Assessment of Psychopathology

All patients were assessed by a qualified psychiatrist with >20 years of experience in OCD prior to entry to the unit to confirm their diagnoses. Outcome was assessed using a set of clinician rated and self-report measures. The primary treatment outcome measure used for all patients was the Y-BOCS,^{22,23} a clinician-rated measure of severity of obsessive-compulsive symptoms, based on a semi-structured clinical interview with the patient. The Y-BOCS is recognized as the gold standard in outcome assessment for OCD, with strong psychometric properties, and is also well suited for use in evaluating individual clinically significant change.¹³ The Padua Inventory (PI)²⁷ was used as a self-report measure of obsessions and compulsions. It has sound reliability, and validity for use in clinical populations. The Beck Depression Inventory (BDI)²⁸ was used as a self-report measure of severity of depressive symptoms. Since its original publication,²⁹ the BDI has seen widespread use as an outcome measure in inpatient and outpatient studies, and has strong psychometric properties.³⁰

Procedure

Treatment is provided at the BCPU inpatient unit by a multidisciplinary team consisting of psy-

chiatrists, cognitive-behavioral psychotherapists, occupational therapists, and psychiatric nurses. Patients are admitted for a maximum of 6 months, during which they receive intensive treatment consisting of both psychopharmacologic and cognitive-behavioral interventions. A strong emphasis is placed on the use of exposure and response prevention (ERP) methods. Each patient is allocated a therapist who collaboratively works with the patient to decide the treatment program. This programme is then overseen by the ward-based nursing staff on a daily basis. Due to the severity of the condition of patients, individual and group occupational-therapy sessions focus on activities of daily living, as well as anxiety management and exposure-therapy groups.

RESULTS

A total of 52 patients were admitted over the study period. Demographic characteristics of the sample are described in Table 1. Following admission, patients had a medication review. In general, the emphasis was on trying to keep their medication regime as simple as possible, and aimed at prescribing the lowest possible dose compatible with health and symptom reduction. Patients were admitted for a mean of 135.51 ± 59.62 days. Missing data was handled by carrying the last observation forward. In cases where there was no earlier data to carry forward, subsequent missing datapoints were allowed to remain missing in the analyses.

Symptom Change During Treatment

The primary treatment outcome measure used was the Y-BOCS. For patients with missing data (including those who dropped out of treatment), the last observation was carried forward for use in the analysis of the statistical significance of the intervention. Analysis of variance revealed significant differences between Y-BOCS scores at admission, 12 weeks, and 24 weeks [$F(2, 90) = 46.62$, $P < .001$]. Follow-up comparisons between consecutive measurements demonstrated significant falls in total Y-BOCS scores from admission to 12 weeks ($M_{Pre}: 35.30$, $M_{12Wks}: 30.28$, 95% $CI_{Diff}: 2.96$ to 7.08 , $t = 4.91$, $df = 45$, $P < .001$) and between the 12-week and 24-week assessments ($M_{24Wks}: 24.37$, 95% $CI_{Diff}: 3.86$ to 7.97 , $t = 5.80$, $df = 45$, $P < .001$ [Figure 1]). Overall, this represented a drop of 31% in Y-BOCS scores for the total group from admission to 24 weeks. A comparison between the length of inpatient admission and the drop in

Y-BOCS scores is provided in Figure 2.

The PI was used as a self-report measure of treatment outcome, with results supporting those gained from the clinician-rated Y-BOCS. Scores on the PI were significantly different across the three assessment timepoints [$F(2, 82)=16.83, P<.001$], with significant drops between admission and 12-week assessment ($M_{Pre}: 88.66, M_{12Wks}: 76.45, 95\% CI_{Diff}: 2.89 \text{ to } 21.54, t=2.65, df=41, P<.05$) and again between 12- and 24-week assessments ($M_{24Wks}: 60.69, 95\% CI_{Diff}: 8.84 \text{ to } 22.69, t=4.60, df=41, P<.001$). Overall, this represented a drop of 32% in PI scores from admission to 24-week assessment.

Treatment was also associated with a significant reduction in depression symptoms, with an overall significant difference between BDI scores at admission, 12 weeks and 24 weeks [$F(2, 86)=15.59, P<.001$]. Post-hoc testing revealed that there were significant drops in total BDI scores between admission and 12-week assessment ($M_{Pre}: 27.89, M_{12Wks}: 24.18, 95\% CI_{Diff}: 0.78 \text{ to } 6.63, t=2.55, df=43, P<.05$), and between 12 week and 24 week assessment ($M_{24Wks}: 19.45, 95\% CI_{Diff}:$

1.93 to 7.52, $t=3.41, df=43, P<.005$). The fall in the Y-BOCS and BDI scores in the inpatient group is shown in Figure 1, while the decline in PI scores is depicted in Figure 3. Overall, this represented a drop of 30% in BDI scores from admission to 24-week assessment.

Evaluation of Individuals' Reliable and Clinically Significant Change

In addition to the evaluation of overall change in group mean symptoms, each individual's scores on the Y-BOCS were assessed according to the criteria of Jacobson and Truax¹² for reliable and clinically significant change. We followed the approach of Fisher and Wells¹³ who suggested that a change ≥ 10 points on the Y-BOCS constituted a reliable change according to the Jacobsen and Truax^{12,18} criteria. To demonstrate clinically significant change according to these criteria, individuals are also required to end treatment with symptom severity closer to the normal than the clinical mean. Again, we adopted the cutoff used by Fisher and Wells,¹³ which stipulates that a score ≤ 14 on the Y-BOCS reflects an individual

TABLE 1.
Sample Characteristics for the Inpatient and Community Cohorts

	<i>Inpatient (Study 1; N=52)</i>	<i>Community (Study 2; N=62)</i>
Sex	29 (56%) male 23 (44%) female	29 (47%) male 33 (53%) female
Age at admission (years), mean	35.17 $\pm$ 11.52	39.12 $\pm$ 11.83
Age of onset of OCD (years), mean	19.43 $\pm$ 11.24	20.52 $\pm$ 8.61
Duration of OCD (years), mean	16.76 $\pm$ 9.76	18.66 $\pm$ 11.18
Marital status	38 (73%) unmarried 10 (19%) married/cohabiting 3 (6%) divorced/separated 1 unrecorded	52 (84%) unmarried 6 (10%) married/cohabiting 4 (7%) divorced/separated
Employment status	28 (82) unemployed 1 (3%) full-time work 3 (9%) part-time/volunteer work 2 (6%) students 18 unrecorded	32 (52%) unemployed 30 (48%) full-time Work
Duration of stay, mean	136 $\pm$ 59 days	
Y-BOCS Total Score, mean	$M_{Pre}: 35.30\pm 4.18$ $M_{12Wks}: 30.28\pm 8.11$ $M_{24Wks}: 24.37\pm 10.62$	$M_{Pre}: 27.81\pm 5.87$ $M_{12Wks}: 21.78\pm 7.28$ $M_{24Wks}: 19.27\pm 7.96$

OCD=obsessive-compulsive disorder; Y-BOCS=Yale-Brown Obsessive-Compulsive Scale.

Boschen MJ, Drummond LM, Pillay A. *CNS Spectr*. Vol 13, No 12. 2008.

being closer to the normal than the clinical population. Fisher and Wells also suggested that a score ≤ 7 on the Y-BOCS is indicative of recovery from OCD.

In our inpatient sample, 46 patients had Y-BOCS scores which were used to evaluate change. Of these, 20 (44%) experienced statistically reliable improvement, and 10 (22%) also experienced a fall to below the cutoff score for clinically significant improvement. No patients demonstrated reliable deterioration. As would be expected in a severe, treatment-refractory sample, the number of individuals experiencing recovery from OCD symptoms was small, with only 2 (4%) dropping to ≤ 7 on the Y-BOCS.

An alternative criterion of a drop $\geq 25\%$ on the Y-BOCS has also been specified as a definition of clinically significant treatment response by Pallanti and colleagues.²⁴ According to this alternative criteria, 27 (52%) of our cohort demonstrated a clinically significant treatment response.

Benchmarking the Inpatient Treatment Program

Previous authors have compared the results of treatments conducted in carefully controlled research studies with those undertaken in routine clinical practice. Such comparisons allow the researcher to examine the effectiveness and as

the efficacy of the intervention. The uncontrolled effect size of the inpatient treatment was 1.35. This is compared to the pre-post treatment effect sizes reported in the meta-analysis of OCD treatments by Eddy and colleagues¹¹ in Figure 4. The number of inpatients who experienced significant improvement in their symptoms, and those who experienced recovery are compared with the results of Fisher and Wells¹³ in Figure 5.

STUDY TWO: COMMUNITY TREATMENT—METHODS

Participants

The Trustwide tertiary referral service of South West London and St George's Mental Health NHS Trust accepted 62 patients for community-based treatment of severe, OCD between April 2006 and December 2007. All patients were required to have experienced unsatisfactory therapeutic response to CBT provided by their local mental health team. In addition, it was expected that the patients had been offered SRI medication. Furthermore, many had already been offered psychopharmacologic augmentation of this regimen according to the recommendations of Pallanti and colleagues.²⁴ All patients were judged by the treating team to have demonstrated no clinically significant improvement from previous treatment regimes. The criteria employed for entry to the service are therefore

FIGURE 1.
Y-BOCS and BDI Total Scores over treatment for inpatient sample*

* Error bars represent standard error of the mean.

Y-BOCS=Yale-Brown Obsessive-Compulsive Scale; BDI=Beck Depression Inventory.

Boschen MJ, Drummond LM, Pillay A. *CNS Spectr*. Vol 13, No 12. 2008.

FIGURE 2.
Scatterplot comparing duration of inpatient stay with fall in Y-BOCS scores for the inpatient cohort

Y-BOCS=Yale-Brown Obsessive-Compulsive Scale.

Boschen MJ, Drummond LM, Pillay A. *CNS Spectr*. Vol 13, No 12. 2008.

not as stringent as for those admitted to the inpatient unit, but individuals are still expected to demonstrate a considerable resistance to improvement from previous treatment. Upon referral, cases were discussed with the treating team and interventions planned. The details of the operation of this service are described elsewhere.³¹ Treatment is provided to individuals from the five London boroughs of Kingston, Merton, Richmond, Sutton, and Wandsworth. These boroughs have a total adult population of ~1 million. Treatment consists of combined behavioral, cognitive, and psychopharmacologic interventions, with a strong emphasis on the use of ERP. Home-based treatment involving ERP is usually offered during therapy. The community treatment differs from other outpatient facilities in that it is staffed by therapists with expertise in CBT for OCD. It also aims to provide input into cases meeting Level 5 of the NICE guidelines for treatment of OCD,³² while also advising other treatment services catering for Levels 1-4.

RESULTS

Demographic details of the 62 successive referrals used in the community sample are reported in Table 1. Change in medication regime occurred in a very small number of patients, with one patient receiving a new prescription for an SRI, and two having a dopamine antagonist added to their existing SRI. Missing data

was handled where possible by carrying the last observation forward to subsequent measurements. Where no earlier data was available this data remained missing for subsequent statistical analyses.

Symptom Change During Treatment

Total scores on the Y-BOCS were significantly different between the three assessment timepoints of pre-treatment, 12 weeks, and 24 weeks [$F(2, 122)=65.32$, $P<.001$]. The community group's Y-BOCS scores declined significantly between pre-treatment and 12-week assessment (M_{Pre} : 27.81, M_{12Wks} : 21.78, 95% CI_{Diff} : 4.63 to 7.42, $t=8.63$, $df=61$, $P<.001$), as well as between 12 and 24-week assessment (M_{24Wks} : 19.27, 95% CI_{Diff} : 1.26 to 3.76, $t=4.01$, $df=61$, $P<.001$). This represents a reduction of 21% in clinician-rated OCD symptoms.

When results of the self-report PI were examined, there was an overall significant difference between the timepoints [$F(2, 114)=16.50$, $P<.001$], and differences between the baseline and 12-week assessment (M_{Pre} : 77.07, M_{12Wks} : 67.66, 95% CI_{Diff} : 3.58 to 15.24, $t=3.23$, $df=57$, $P<.005$), and the 12 and 24-week assessments (M_{24Wks} : 59.97, 95% CI_{Diff} : 1.78 to 12.12, $t=2.69$, $df=58$, $P<.01$). This represents a drop of 12% in self-reported OCD symptoms.

Depression symptoms, as assessed by the BDI were different across the three timepoints [$F(2, 120)=30.66$, $P<.001$], with significant reductions between the baseline and 12-week assessments (M_{Pre} : 24.92, M_{12Wks} : 19.25, 95% CI_{Diff} : 3.56 to 7.79,

FIGURE 3.
Padua Inventory Total Scores over treatment for inpatient sample*

* Error bars represent standard error of the mean.

Boschen MJ, Drummond LM, Pillay A. *CNS Spectr*. Vol 13, No 12. 2008.

FIGURE 4.
Comparison of uncontrolled effect sizes with Eddy and colleagues¹¹ meta-analyses of OCD treatments

OCD=obsessive-compulsive disorder.

Boschen MJ, Drummond LM, Pillay A. *CNS Spectr*. Vol 13, No 12. 2008.

$t=5.37$, $df=60$, $P<.001$), and a further fall between 12 and 24 weeks (M_{24Wks} : 17.26, 95% CI_{Diff} : 0.46 to 3.57, $t=2.59$, $df=61$, $P<.05$). This represents a reduction of 23% in self-reported depression symptoms. Mean scores on the three outcome measures are shown in Figures 6 and 7.

Evaluation of Individuals' Reliable and Clinically Significant Change

Using the same criteria as in Study One, Y-BOCS total scores for each community patient were examined individually to assess for reliable and clinically significant change, as well as whether decline in symptoms left the patient asymptomatic following treatment. In the community sample, 62 patients had initial Y-BOCS scores that allowed for assessment of reliable and clinically significant change. Of these, 25 (40%) experienced a decline ≥ 10 points on the Y-BOCS, while 12 (19%) met both the required criteria of a fall of 10 points and a final score ≤ 14 on the Y-BOCS. No patients reliably deteriorated. Only three patients (5%) were asymptomatic ("recovered"), with Y-BOCS scores ≤ 7 , by the end of treatment. According to the alternative Pallanti and colleagues²⁴ criterion for significant clinical change, 24 (39%) of patients demonstrated a significant treatment response.

Benchmarking the Community Treatment Program

In an effort to compare the results gained from the outpatient treatment program, the uncontrolled pre-post effect size measurement from the Y-BOCS was compared with results reported

by Eddy and colleagues¹¹ in their meta-analysis of OCD treatment studies. The uncontrolled effect size of the community treatment program was 1.22, which is contrasted with the results of Eddy and colleagues¹¹ in Figure 4. The number of community patients who experienced significant improvement in their symptoms, and those who experienced recovery are compared with the results of Fisher and Wells¹³ in Figure 5.

DISCUSSION

This is the first clinical practice research to examine outcomes, including individual responses to treatment, in a group of individuals with severe, treatment-resistant OCD across inpatient and outpatient settings. We believe our results give considerable cause for hope and optimism for both clinicians and patients dealing with severe, treatment-resistant OCD. Treatment of both the inpatient and community samples showed a statistically significant treatment effect, as well as large effect sizes. Treatment effects were significant regardless of whether they were measured using self-report or clinician-rated instruments. Reductions in OCD symptoms were also accompanied by a reduction in depressive symptoms. As would be expected in a treatment-refractory group, relatively few patients experienced a fall in symptom severity that would

FIGURE 5.
Comparison of improved and recovered individuals with Fisher and Wells¹³ analysis

CT=cognitive therapy; ERP=exposure and response prevention.

Boschen MJ, Drummond LM, Pillay A. *CNS Spectr*. Vol 13, No 12. 2008.

FIGURE 6.
Y-BOCS and BDI Total Scores over treatment for the community sample*

* Error bars represent standard error of the mean.

BY-BOCS=Yale-Brown Obsessive-Compulsive Scale; BDI=Beck Depression Inventory.

Boschen MJ, Drummond LM, Pillay A. *CNS Spectr*. Vol 13, No 12. 2008.

classify them as clinically improved or asymptomatic.

Comparisons between the effect sizes of our inpatient and community treatments and those of the meta-analysis conducted by Eddy and colleagues¹¹ provide further support for the use of an intensive treatment regimen. For the inpatient group, the effect size was large, and of a similar magnitude to that reported by previous authors. The reader should, of course, be mindful that effect sizes are often larger when reporting on those with more severe symptoms at the initial assessment.³³ The effect size for the community cohort also compares favorably with earlier research when one takes into account the nature of the cases treated in our two cohorts. These effect sizes are particularly impressive when one considers that the previously calculated effect sizes from meta-analyses¹¹ are derived from efficacy studies using participants with strict inclusion and exclusion criteria. Our participants had already been trialled using several previous interventions, and failed to experience significant improvement. Because of this, our effect size measures can tentatively be viewed as the size of the treatment effect in addition to those from previous therapy.

As would be expected in a severe, treatment-resistant group, comparatively few individuals experienced a degree of change in OCD symptoms that would classify them as clini-

cally improved or asymptomatic. Comparisons between recovery rates in our two samples and those of previous treatment studies demonstrated poorer results for our inpatient and community samples, particularly when looking at the percentage of individuals who were recovered/asymptomatic. Complete recovery from OCD in a previously refractory group of patients is likely to be difficult to attain, even by a specialist, intensive, inpatient treatment service. Despite this, however, the change seen in a notable percentage of those treated gives cause for cautious optimism in this challenging group. For individuals with severe OCD that have not been responsive to several previous treatment attempts, a drop ≥ 10 points (as occurred in 44% of our inpatient sample, and 40% of our community sample) is welcome, even if it does not mean a complete remission of their disorder.

Although the use of different outcome measures makes direct comparisons with the cohort treated by Drummond¹⁹ or Thornicroft and colleagues²⁰ difficult, our results seem to accord with those found in these earlier studies. All studies examined a group of the most challenging treatment cases, and both found that inpatient, intensive behavioral interventions can be successful when previous treatment has failed.

One broad implication of our results is that for individuals who have not responded to previous psychological and psychiatric intervention, there may still be benefit in considering more intensive treatment options, including inpatient admission for several months. All of our patients had previously been unresponsive or noncompliant with previous treatment regimes, yet many experienced improvement when provided with a more intensive treatment focusing on ERP. For a core group of individuals with the most severe and refractory symptoms, outpatient treatment in non-specialist services may be inadequate.

Treatment gains can also be seen in treatment-resistant cases of OCD when treated by specialist services in the community. The cohort treated in the community show statistically significant improvement after 12 weeks of outpatient treatment, as well as a further significant decline in OCD symptoms after an additional 12 weeks of treatment. Where hospitalization is unnecessary, it appears that severe, chronic OCD can be effectively treated in the community.

Our results also provide support for persistence with treatment strategies, such as ERP,

FIGURE 7.
Padua Inventory Total Scores over treatment for the community sample*

* Error bars represent standard error of the mean.

Boschen MJ, Drummond LM, Pillay A. *CNS Spectr*. Vol 13, No 12. 2008.

even when previous treatment in less intensive modes, have not been effective. Few patients had their previous medication regimes changed, with the emphasis being on intensive use of behavioural treatment strategies in both the community and inpatient groups. Our results suggest that rather than changing to less well-supported interventions, clinicians may be advised to increase the intensity of those strategies with demonstrated efficacy, such as ERP.

It is noteworthy that both the current treatment cohorts are drawn from routine clinical practice, rather than carefully controlled, exclusive treatment settings. Our data provides support for the effectiveness as well as the efficacy of behavioral interventions for OCD. We believe it assists in addressing previous critics of efficacy research by demonstrating that research-based efficacy studies do generalize to the clinical practice setting, even for severe, treatment-refractory cohorts.

Despite the optimism that may arise out of the current findings, the reader should be aware of limitations in the current research. Our study was conducted without the typical methodological rigor seen in research settings. We did not employ the use of a control group, and the treatment protocol was allowed to vary in a way that was deemed by the treating clinical team to best suit the idiosyncratic needs of each individual patient. Furthermore, there is not yet data supporting the long-term impact of the inpatient and community interventions, although collection of this information is currently underway. Despite this, we believe our results provide a valuable insight into the effectiveness of intensive treatment of difficult cases of OCD.

The reader should also be mindful of the costs of intensive inpatient or community treatment by specialist treatment teams. Inpatient admission, in particular, is comparatively expensive, and we have not undertaken an analysis of the cost-effectiveness of our treatment. Even so, the intensive treatment methods reported here are reserved for the most severe, chronic, treatment-resistant cases of OCD, where all previous treatments have failed. We suggest that such treatment represents the final step of a stepped-care model described in the NICE guidelines for OCD treatment.³² Reserving intensive treatments, such as those described here, to the most severe cases ensures that cost of treatment services is kept to a minimum.

CONCLUSION

We believe that the results of our community and inpatient intervention programs at the BCPU are a source of optimism for clinicians and patients dealing with severe, treatment-resistant OCD. Even in those who have not responded to earlier interventions with either psychological or psychopharmacologic treatments, there may still be benefit in more intensive, specialist treatment regimes. **CNS**

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