



CORRECTION OF INFLATED RESPONSIBILITY IN THE TREATMENT OF OBSESSIVE–COMPULSIVE DISORDER

ROBERT LADOUCEUR*, ELIANE LÉGER, JOSÉE RHÉAUME
and DOMINIQUE DUBÉ

Ecole de Psychologie, Université Laval, Québec, Canada G1K 7P4

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Summary—This study evaluates the efficacy of a cognitive treatment for obsessive–compulsive disorder (OCD). Four patients with OCD whose major complaints were checking rituals were treated in a multiple baseline across subjects design. Cognitive correction targeted inflated responsibility, without any exposure or response prevention. All subjects reported a clinically significant decrease in interference caused by rituals, a 52–100% reduction in Y-BOCS scores, and a decrease in perceived responsibility. Therapeutic gains were maintained at follow-up (6 and 12 months) for three patients. Results suggest that cognitive therapy targeting inflated responsibility is a promising alternative to exposure-based treatment. Copyright © 1996 Elsevier Science Ltd

INTRODUCTION

Until the seventies obsessive–compulsive disorder (OCD) was considered very resistant to psychological treatment. Over the last 20 years, several models have specified key components of OCD and have stimulated the development of effective behavioral interventions (Foa, Steketee & Ozarow, 1985; Steketee, 1993). Despite the existence of cognitive models of OCD (Carr, 1974; McFall & Wollersheim, 1979; Salkovskis, 1985a; Salkovskis, 1989), treatment strategies are still based on behavioral interventions, mainly exposure and response prevention. This is surprising considering that OCD is characterized by important cognitive components. Obsessions are, by definition, a cognitive phenomena, and play a crucial role in triggering compulsions.

According to Carr (1974), OCD results from an overestimation of the probability of negative consequences and associated costs. These errors in appraisal lead to a heightened perception of threat. McFall and Wollersheim (1979) proposed four types of irrational thoughts related to the model proposed by Carr. The first two are related to perfectionism whereas the third corresponds to an exaggerated sense of responsibility. The final type of thought concerns the fusion between thought and action.

Inspired by Beck's cognitive therapy for depression, Salkovskis (1985b, 1989) developed a cognitive model of OCD based on dysfunctional responsibility schemata. The obsessional patient would appraise intrusive thoughts, for example "Did I turn off the stove" as a function of possible harm to himself or to others. An excessive sense of responsibility would produce automatic negative thoughts, as such "I might cause a fire", and thus would trigger discomfort. Evaluation of intrusions biased by inflated responsibility would cause the individual to reduce the perceived responsibility and the accompanying anxiety by behavioral and/or cognitive rituals.

Responsibility associated with OCD has been defined as the belief that one possesses pivotal power to provoke or prevent crucial negative outcomes (see Salkovskis, Rachman, Ladouceur & Freeston, 1992 cited in Ladouceur, Freeston, Gagnon, Thibodeau & Dumont, 1995a; Ladouceur, Rhéaume, Freeston, Aublet, Jean, Lachance, Langlois & De Pokomandy-Morin, 1995b; and in Salkovskis, Richards & Forrester, 1995). The outcomes may be manifest (e.g. a car accident) or moral (e.g. "having these unacceptable thoughts means that I'm a bad person"). The hypothesis

*Author for correspondence.

of inflated responsibility has received support from several authors. Rachman observed that compulsive checkers displayed no OC symptoms when first admitted to a hospital (Rachman, 1993). However, after a few days in the new environment, checking rituals resumed. Rachman interpreted this phenomenon as the manifestation of an inflated sense of responsibility. Once OC patients develop feelings of belonging towards a new environment, they begin to feel more responsible towards their surroundings and thus check more often.

Recently, two studies have focused on the manipulation of responsibility. Lopatka and Rachman (1995) successfully manipulated perceived responsibility for feared consequences among 30 compulsive checkers. As predicted, decreased responsibility was associated with a significant decline in discomfort and in the urge to check. Among healthy volunteers, Ladouceur *et al.* (1995b) experimentally manipulated perceived responsibility in a laboratory setting. Results showed that checking behaviors were more frequent in the group receiving high responsibility instructions as compared with control group. Further, Freeston, Ladouceur, Thibodeau and Gagnon (1992) have studied the relationships between cognitive intrusions and anxious, compulsive, and depressive symptoms among a normal population. Their results indicated that the only significant predictors of compulsions were responsibility, disapproval and guilt. The results of these studies support Salkovskis' hypothesis that responsibility plays a central or pivotal role in OCD. He recently asserted: "However, without the specific appraisal of *responsibility*, an obsessional episode would not result" (Salkovskis *et al.*, 1995, p. 15).

Until now, four studies have evaluated the effectiveness of cognitive therapy with OCD patients. The first three were conducted by Emmelkamp's team investigating the role of cognitive techniques such as Self-instructional Training and Rational-Emotive Therapy. Results showed that in no case were these techniques superior to Exposure plus response prevention or enhanced the outcome of standard behavioral interventions (Emmelkamp & Beens, 1991; Emmelkamp, van der Helm, van Zanten & Plochg, 1980; Emmelkamp, Visser & Hoekstra, 1988). The fourth study conducted by van Oppen *et al.* (1995) compared the relative efficacy of cognitive therapy, based on the Beck/Salkovskis model, to self-exposure *in vivo* response prevention. The overall results showed that both treatments produced statistically significant changes (van Oppen, de Haan, van Balkom, Spinhoven, Hoogduin & van Dyck, 1995), and that significantly more patients were rated as 'recovered' in the cognitive therapy. Van Oppen and her colleagues (1995) pointed out that responsibility must be targeted directly in order to evaluate its role in the maintenance of OCD. Until now, no controlled study has targeted responsibility alone in the treatment of OCD. If inflated responsibility is pivotal in the development and maintenance of OCD, its correction should produce clinically significant change. The present treatment study addresses this issue directly by targeting inflated responsibility with cognitive therapy.

METHOD

Subjects

Four patients suffering from checking rituals and meeting DSM-III-R criteria for OCD participated in this study. They were assessed by an experienced clinician using the ADIS, (Anxiety Disorders Interview Schedule; Di Nardo, Barlow, Cerny, Vermilyea, Vermilyea, Himadi & Waddell, 1985). The recorded interview was listened to by a second clinician who confirmed the diagnosis.

Subject 1 was a 33 yr old woman, with OCD for 6 yr. Checking rituals appeared mainly when applying for jobs, completing documents (e.g. tax form), and borrowing objects. She had been taking medication for 2 months before starting treatment (Prozac, 40 mg per day, and Rivotril, 0.5 mg per day).

Subject 2, a 25 yr old man, suffered from OCD for 5 yr. His rituals were focused around turning lights and electric appliances on and off. Personal care routines were repeated several times or were conducted with exaggerated slowness. Checking rituals also appeared when he had to write.

Subject 3 was a 43 yr old man, with OCD for 28 yr. Mental checking (concerning fear of getting AIDS or choking someone) and overt checking rituals (doors, fireplace, electric appliances) were present. The patient was under medication for 1 yr (Prozac, 20 mg per day) prior to treatment.

Subject 4 was a 24 yr old man, with OCD for 6 yr. His only compulsion was a checking ritual that took place each time a woman went to the bathroom to urinate. The sight of a woman needing to go to the toilet triggered an obsession. Not knowing whether the woman had in fact urinated provoked an urge to check. Checking was carried out only when the obsession was triggered by the patient's spouse.

Dependant variables

Daily self-monitoring of *interference* caused by the main rituals was completed by each *S*. Patients used an adaptation of the self-rating scale 'the four target rituals' developed by Marks, Stern, Mawson, Cobb and McDonald (1980). The rating forms were presented in 11 × 14 cm notebooks, with one page for each day. We have previously used similar scales in our treatment trials (Ladouceur, Freeston, Gagnon, Thibodeau & Dumont, 1994; Ladouceur *et al.*, 1995a).

Two instruments assessed OC symptoms and perceived responsibility:

1. The *Yale-Brown Obsessive-Compulsive Scale* (Y-BOCS; Goodman, Price, Rasmussen, Mazure, Fleischmann, Hill, Heniger & Charney, 1989; French Translation by Mollard, Cottraux & Bouvard, 1989). The French translation of this structured interview has good internal consistency (Cronbach's $\alpha = 0.89$) and good reliability (correlations between total score and each of 10 items vary between 0.80 and 0.98).

2. The *Responsibility Questionnaire* (RQ; Rhéaume, Ladouceur, Freeston & Letarte, 1995a; Rhéaume, Ladouceur, Freeston & Letarte, 1995b) proposes 14 ambiguous situations and asks the *Ss* to generate a possible negative outcome. The *S* then assesses the consequence along dimensions such as severity, probability, personal influence, and responsibility. Homogeneity of the responsibility scores across the 14 situations is good ($\alpha = 0.81$). Construct validity as well as convergent and discriminant validity are good, and stability is satisfactory.

On an exploratory basis, other questionnaires were administered but will not be reported here.

Experimental design

A multiple baseline across *Ss* design was used. Treatment was introduced at 5, 10, 15, and 17 days, respectively for the four *Ss*.

Therapists

The second author, a graduate-level intern with one year of clinical experience, treated three *Ss*. The fourth author, a registered clinical psychologist, treated one *S*. Treatment was given under the supervision of the first author, a clinical psychologist with 20 years experience, and the third author.

Treatment

During baseline, a detailed behavioral analysis was conducted for each patient to assess time of onset and evolution of OC symptoms, family and social history, and work activity. A rationale explaining the occurrence of obsessions and compulsions was given according to the model developed by Salkovskis (1985b) and Freeston and Ladouceur (1996) as depicted in Fig. 1. The treatment was tailored to correct specific and idiosyncratic difficulties of each patient. No behavioral intervention, such as exposure and response prevention, was used. Homework related to cognitive correction was included such as "Try to notice if discomfort is accompanied by feelings of responsibility; Pay attention to your internal monologues when experiencing an intrusion; Evaluate your own share of responsibility in situations".

Treatment sessions were conducted twice a week (1 hr each) for a maximum of 32 sessions. Criteria used to decide whether to terminate treatment before the 32nd session was a 2-week period of zero ratings on the daily interference scale. The therapeutic strategies used were: (1) *Targeting inflated responsibility*: the therapist and patient identified situations where checking rituals were performed; (2) *Awareness of automatic thoughts*: the patient was asked to identify and monitor the anticipated negative consequences associated with checking rituals. Automatic thoughts or unreasonable beliefs such as "If something bad happens, it will be my fault" were then discussed

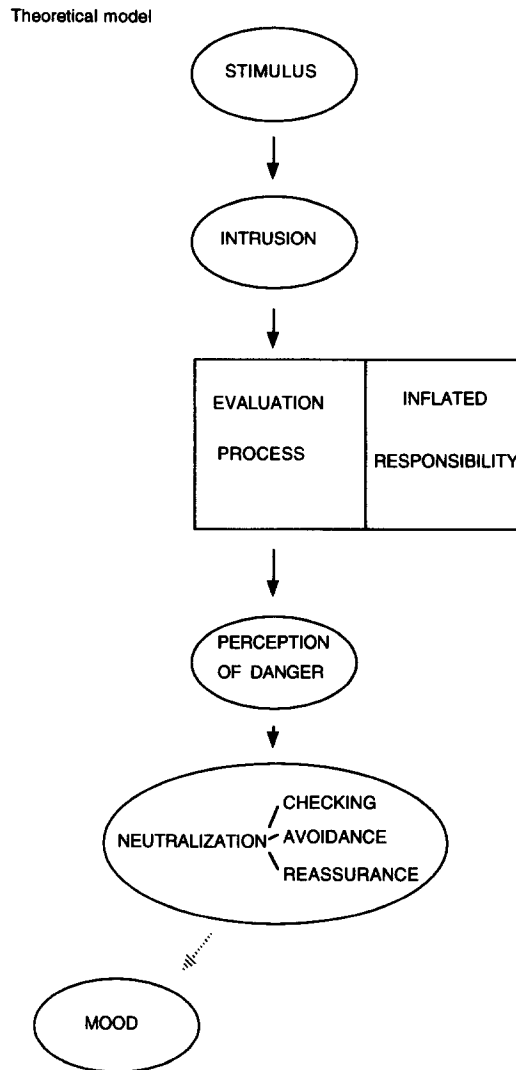


Fig. 1. Model used to explain the rationale of the treatment to patients.

with the therapist; (3) *Correction of negative automatic thoughts*: using Socratic dialogue, the therapist challenged the patients' negative automatic thoughts, until they recognized their irrational basis. Reevaluation of perceived responsibility was systematically conducted using different means such as the Pie chart technique, playing the role of the devil's advocate, etc.; (4) *Development of adequate perceptions of personal responsibility*: patients were invited to generate adequate explanations for their anxious reactions in relation to their sense of responsibility.

Treatment integrity

All sessions were recorded and 25% were checked at random by an independent evaluator in order to make sure that no direct or indirect instructions related to exposure or response prevention was given by the therapist. No exposure interventions nor response prevention were detected. The application of cognitive strategies targeting inflated responsibility was also checked.

Follow-up

Maintenance of therapeutic gains was assessed at 1, 2, 4, 6, and 12 months after the end of treatment. Patients brought in their self-monitoring for the week preceding the meeting, allowing the therapist to assess the presence of rituals. At 6 and 12-month follow-ups, patients completed the Responsibility Questionnaire and the Y-BOCS was administered.

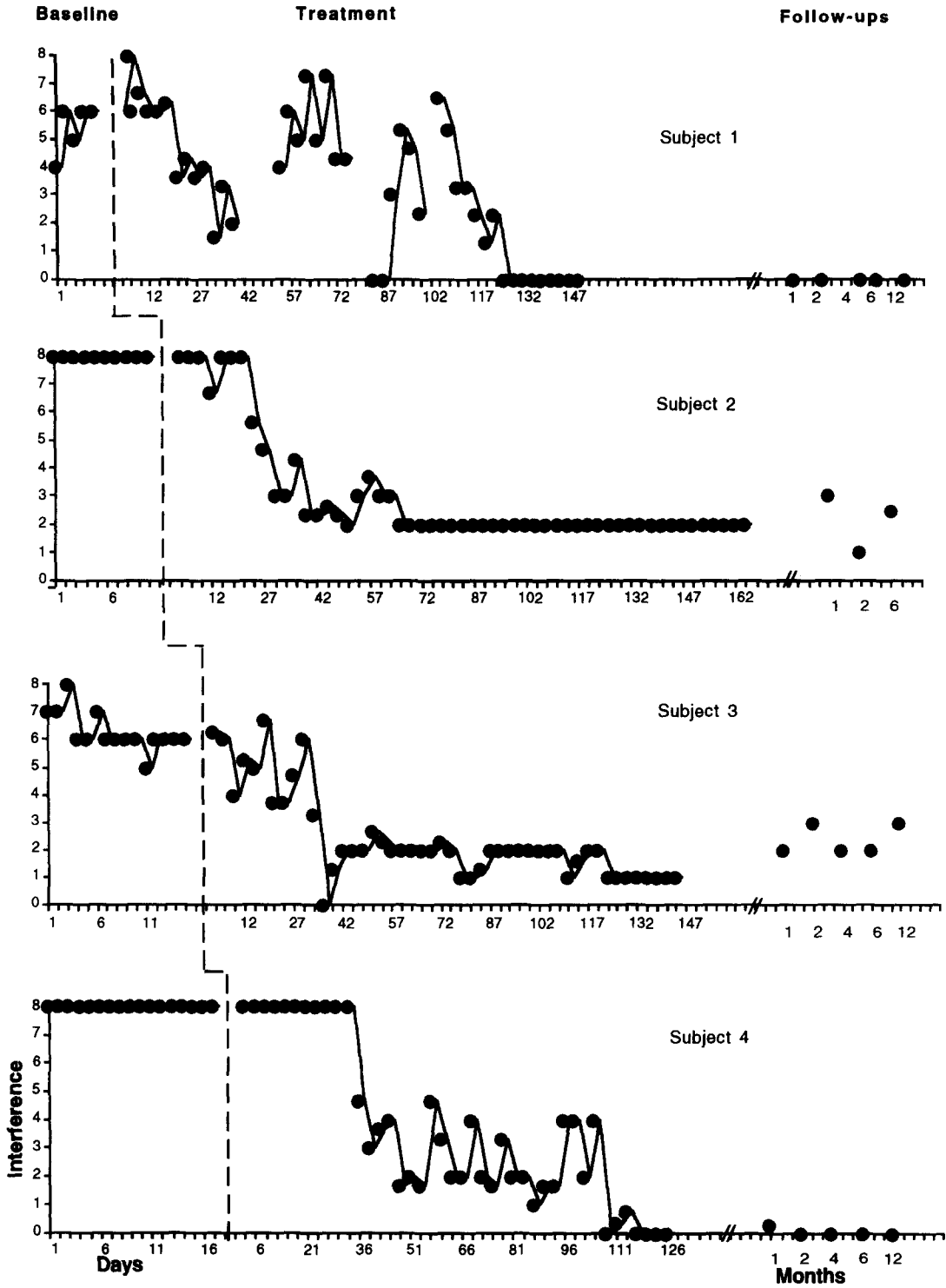


Fig. 2. Interference caused by rituals reported by each patient during baseline, treatment and follow-up periods.

RESULTS AND DISCUSSION

Post-test assessment revealed that all four patients showed a clinically significant decrease on the interference caused by rituals, the Y-BOCS, and the Responsibility Questionnaire (see Figs 2-4). Subject 1 found a job and terminated medication during treatment. She was symptom

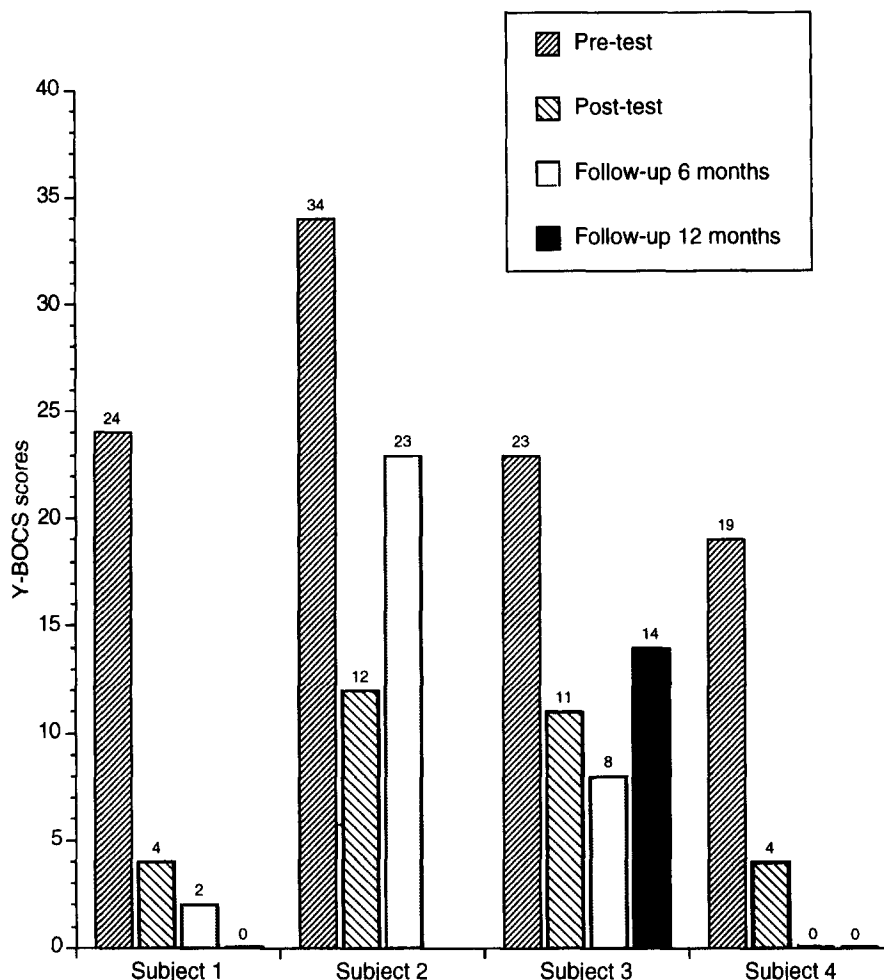


Fig. 3. Scores reported on the Y-BOCS for each patient at pre-test, post-test and follow-up periods.

free at the end of treatment (100% improvement). Subject 2 was clinically improved showing 65% reduction according to the Y-BOCS despite a slight level of interference which remained until the end of treatment. Subject 3 also benefitted from treatment, with 52% improvement according to the Y-BOCS. Subject 4 terminated treatment after 27 sessions, symptom free (100% improvement). These post-test scores seem typical of those generally obtained in OCD treatment studies.

At 6 and 12-month follow-ups, subjects 1 and 4 remained symptom free and fully functional. Subject 3 maintained gains at 6-month follow-up but showed a slight increase in symptoms at 12-month follow-up (Y-BOCS score of 14 compared with 11 at post-test). He remained functional, adapted to his environment, and was successfully holding a new job. At 6-month follow-up, subject 2 was still improved compared with pre-test but had lost nearly half of the post-treatment gains (Y-BOCS score going from 12 to 23). The S reported a renewal of rituals and a need for additional therapy sessions. Behavioral interventions (exposure and response prevention) were added to the previous cognitive strategies.

These results support the efficacy of cognitive therapy based on the modification of inflated responsibility for OC patients. All the Ss treated were clinically improved at post-test, even if symptom elimination may not be obtained in all cases and the considerable improvement observed was not always maintained at follow-up. This is by no means unique to the type of intervention used here: similar results are obtained with exposure and response prevention (Foa *et al.*, 1985; Steketee, 1993). However, these results clearly indicate that cognitive intervention alone is now an alternative to exposure and response prevention and may become the treatment of choice

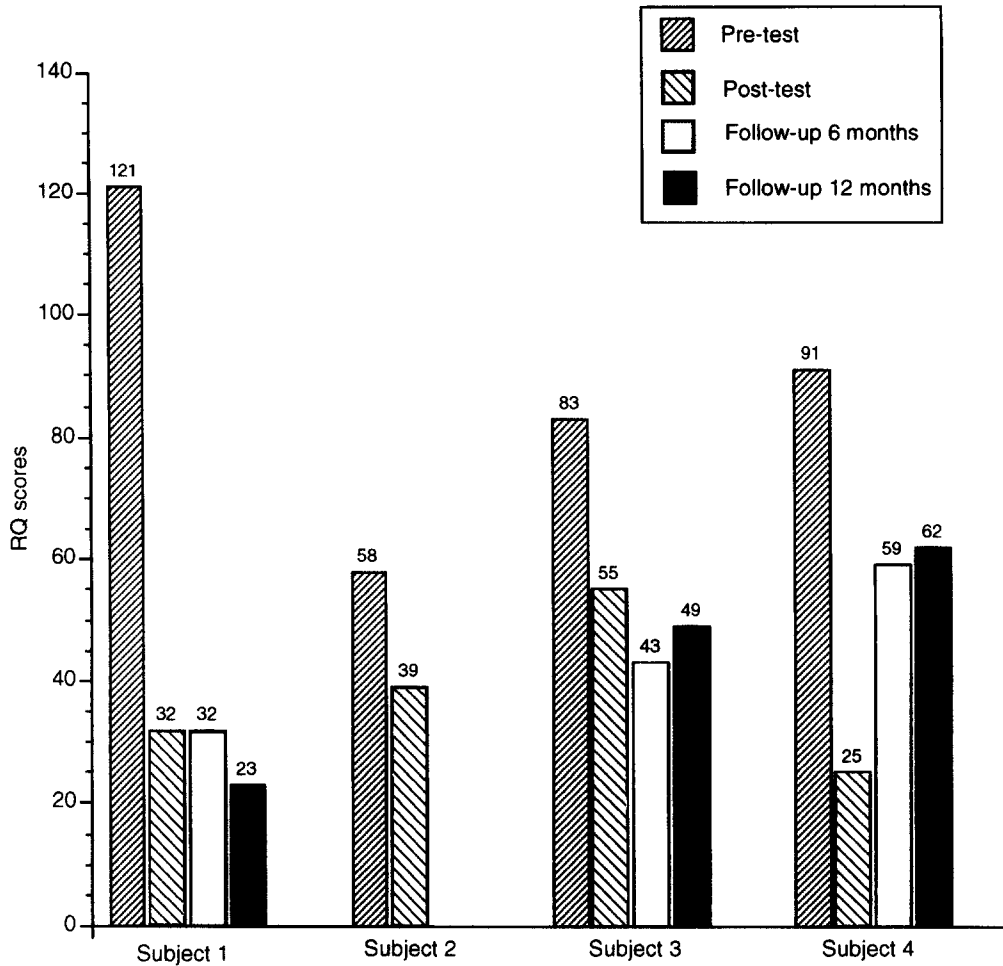


Fig. 4. Scores reported on the Responsibility Questionnaire for each patient at pre-test, post-test and follow-up periods.

for many patients, especially those who refuse or drop out from conventional exposure-based treatments.

These results have both theoretical and clinical implications. The theoretical implications are clear: changing cognitions about inflated responsibility produces clinically significant changes in checking symptoms. The definition of responsibility used here embodies two components that guided the intervention: “The *pivotal power* that one possesses to provoke or prevent...”, and “*crucial negatives outcomes*”. Directly challenging these two narrowly defined aspects of exaggerated responsibility resulted in reduced OC symptoms. This is fully coherent with the position previously stated by Salkovskis (1985b, p. 579): “if the automatic neutralising thoughts arising from the intrusion do not include the possibility of being in some way responsible, . . . then neutralising is very unlikely to take place”.

Variations in individual results provide further understanding of the role of responsibility in OCD. For example, the variations observed for subject 1 support Rachman’s (1993) observations and explanations of links between changes in levels of responsibility and OC symptoms. At the beginning of a new job, checking rituals did not increase drastically, but did so after a few weeks in the new environment. Once the *S* was familiar with the new environment, she felt more responsible for all that could happen in the store, resulting in more frequent checking. Following this period, the two subsequent increases in interference were associated with the addition of new duties for which she had to assume sole responsibility. As stated by Rachman (1993), inheriting new responsibilities without the possibility of transferring or sharing with another person, leads to increased anxiety and checking rituals. In addition, during treatment, we noticed that for two patients discomfort induced by unacceptable intrusions was at least as important as

inflated responsibility for negative outcomes. Responsibility for the thoughts rather than for the outcomes was targeted for these patients (see also Salkovskis *et al.*, 1995).

In conclusion, this is the first study showing that targeting inflated responsibility only is an effective treatment for OC patients. Other schema such as perfectionism may contribute to the development and maintenance of OCD, and thus development of treatment strategies based on cognitive correction of these schemata should continue. Methodological innovation will also be required to empirically demonstrate the role of cognitive change in the reduction of OC symptoms.

Furthermore, forms of cognitive therapy should also be developed and tested for the treatment of washers, ruminators and other subgroups of OC patients.

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REFERENCES

- Carr, A. T. (1974). Compulsive neurosis: A review of the literature. *Psychological Bulletin*, *81*, 311–318.
- Di Nardo, P. A., Barlow, D. H., Cerny, J. A., Vermilyea, J. A., Vermilyea, D. D., Himadi, W., & Waddell, M. T. (1985). *The Anxiety Disorders Interview Schedule-Revised (ADIS-R)*. Albany, NY: Phobia and Anxiety Disorder Clinic, State University of New York at Albany.
- Emmelkamp, P. M. G. & Beens, H. (1991). Cognitive therapy with obsessive-compulsive patients: A comparative evaluation. *Behavior Research and Therapy*, *29*, 293–300.
- Emmelkamp, P. M. G., Visser, S. & Hoekstra, R. J. (1988). Cognitive therapy vs exposure *in vivo* in the treatment of obsessive-compulsives. *Cognitive Therapy and Research*, *12*, 103–114.
- Emmelkamp, P. M. G., van der Helm, M., van Zanten, B. & Plochg, I. (1980). Contribution of self-instructional training to the effectiveness of exposure *in vivo*: A comparison with obsessive-compulsive patients. *Behavior Research and Therapy*, *18*, 61–66.
- Foa, E. B., Steketee, G. S., & Ozarow, B. J. (1985). Behavior therapy with obsessive compulsives. In M. Mavissakalian, S. M. Turner & L. Michelson (Eds.), *Obsessive-Compulsive Disorder* (pp. 49–129). New York: Plenum.
- Freeston, M. H., & Ladouceur, R. (1996). A cognitive model of obsessive-compulsive disorder: New evidence, in preparation.
- Freeston, M. H., Ladouceur, R., Thibodeau, N. & Gagnon, F. (1992). Cognitive intrusions in a non-clinical population. II. Association with depressive, anxious and compulsive symptoms. *Behavior Research and Therapy*, *30*, 263–271.
- Goodman, W. K., Price, L. H., Rasmussen, S. A., Mazure, C., Fleischmann, R. L., Hill, C. L., Heniger, G. R. & Charney, D. S. (1989). The Yale-Brown Obsessive Compulsive Scale. I. Development, use and reliability. *Archives of General Psychiatry*, *46*, 1006–1011.
- Ladouceur, R., Freeston, M. H., Gagnon, F., Thibodeau, N. & Dumont, J. (1994). Ideographic considerations in the cognitive-behavioral treatment of obsessional thoughts. *Journal of Behavior Therapy and Experimental Psychiatry*, *24*, 301–310.
- Ladouceur, R., Freeston, M. H., Gagnon, F., Thibodeau, N., & Dumont, J. (1995a). Cognitive-behavioral treatment of obsessions. *Behavior Modification*, *19*, 247–257.
- Ladouceur, R., Rhéaume, J., Freeston, M. H., Aublet, F., Jean, K., Lachance, S., Langlois, F., & De Pokomandy-Morin, K. (1995b). Experimental manipulations of responsibility: An analogue test for models of obsessive-compulsive disorder. *Behavior Research and Therapy*, *33*, 937–946.
- Lopatka, C. & Rachman, S. (1995). Perceived responsibility and compulsive checking: An experimental analysis. *Behavior Research and Therapy*, *33*, 673–684.
- Marks, I. M., Stern, R. S., Mawson, D., Cobb, J. & McDonald, R. (1980). Clomipramine and exposure to obsessive-compulsive rituals: I. *British Journal of Psychiatry*, *136*, 1–25.
- McFall, M. E. & Wollersheim, J. P. (1979). Obsessive-compulsive neurosis: A cognitive-behavioral formulation and approach to treatment. *Cognitive Therapy and Research*, *3*, 333–348.
- Mollard, E., Cottraux, J., & Bouvard, M. (1989). Version française de l'échelle d'obsession-compulsion de Yale-Brown. *L'Encéphale*, *XV*, 335–341.
- Rachman, S. (1993). Obsessions, responsibility and guilt. *Behaviour Research and Therapy*, *31*, 149–154.
- Rhéaume, J., Ladouceur, R., Freeston, M. H., & Letarte, H. (1995a). Inflated responsibility in OCD: Validation of an operational definition. *Behaviour Research and Therapy*, *33*, 159–169.
- Rhéaume, J., Ladouceur, R., Freeston, M. H., & Letarte, H. (1995b). Inflated responsibility in OCD: Psychometric studies of a semi-ideographic measure. *Journal of Psychopathology and Behavioral Assessment*, *16*, 265–276.
- Salkovskis, P. M. (1985a). Cognitive and behavioural approach to the understanding of obsessional problems. Unpublished manuscript, Oxford University, U.K.
- Salkovskis, P. M. (1985b). Obsessional-compulsive problems: A cognitive-behavioural analysis. *Behaviour Research and Therapy*, *23*, 571–583.
- Salkovskis, P. M. (1989). Obsessions and compulsions. In J. Scott, J. M. G. Williams & A. T. Beck (Eds.), *Cognitive Therapy: A Clinical Casebook* (pp. 50–77). London: Croom Helm.
- Salkovskis, P. M., Richards, H. C. & Forrester, E. (1995). The relationship between obsessional problems and intrusive thoughts. *Behavioural and Cognitive Psychotherapy*, *23*, 281–299.
- Steketee, G. (1993). *Treatment of Obsessive-Compulsive Disorder*. New York: Guilford.
- van Oppen, P., de Haan, E., van Balkom, A. J. L. M., 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.