British Journal of Psychiatry (1990), **156**, 55–60

Marital Adjustment and Obsessive–Compulsive Disorder

P. M. G. EMMELKAMP, E. de HAAN and C. A. L. HOOGDUIN

Fifty obsessive–compulsives were treated by behavioural therapy (self-exposure *in vivo* and response prevention) either with their partner directly involved in all aspects of treatment or without their partner. The two treatment formats were equally effective. Although a substantial number of obsessive–compulsives were found to have marital problems, behavioural treatment directed at the obsessive–compulsive disorder resulted in improvement irrespective of marital quality and partner involvement in the therapy. The effects of treatment led neither to a deterioration of the marriage nor to adjustment problems in the partner.

Behavioural therapy in the form of exposure *in vivo* and response prevention has improved treatment prospects for patients with obsessive–compulsive disorder (Emmelkamp, 1982; Foa *et al*, 1985; Marks, 1987). Emphasis has shifted from treatment in the hospital to treatment in the natural environment (Emmelkamp, 1982; Hoogduin & Duivenvoorden, 1988; van den Hout *et al*, 1988). Usually, treatment involves exposure to distressing stimuli in the company of the therapist. However, several studies found self-exposure by means of homework assignments to be equally effective (Emmelkamp & Kraanen, 1977; Emmelkamp *et al*, 1989).

A number of studies have investigated the influence of marital adjustment on treatment outcome with agoraphobics, but results are inconclusive (Emmelkamp, 1988). Several studies investigated whether the involvement of the spouse as cotherapist could enhance treatment effectiveness with agoraphobics. Cobb *et al* (1984) found that spouse-aided exposure therapy was no more effective than when exposure was conducted with the patient alone. In contrast, Barlow *et al* (1984) found spouse-aided exposure to be clearly better than a non-spouse group on measures of agoraphobia.

Systematic research into the influence of marital quality on treatment outcome and into the effects of spouse-aided therapy with obsessive–compulsives is almost non-existent. A few controlled studies suggest that involvement of the partner in the treatment may have beneficial effects (e.g. Stern & Marks, 1973; Hand *et al*, 1977; Hand & Tichatzky, 1977; Hafner, 1982). Emmelkamp & de Lange (1983) found spouse-aided therapy more effective than self-exposure, but this effect had disappeared at one-month follow-up. Given the small number of patients ($n = 12$) involved in that study, there was a clear need to study this issue further.

The aim of the present study was to investigate whether the involvement of the partner would enhance the effectiveness of treatment by self-exposure *in vivo*. A second research question was whether outcome of treatment was influenced by the quality of the marriage. Finally, the effects of treatment were evaluated on the marital relationship and on the psychological problems of the partner.

Method

After an intake interview, patients were randomly assigned to two treatments: (a) self-exposure; and (b) partner-assisted exposure. After an information session with the therapist and an assessment (I), a five-week waiting period followed. After a second assessment (II) eight treatment sessions in five weeks followed. In both types of treatment, patients received homework assignments between sessions. After eight treatment sessions a third assessment (III) followed, and a follow-up interview took place one month later. No treatment was provided during this period.

Patients were instructed not to take antidepressant drugs during the trial. The first treatment session was devoted to collecting information. An inventory was drawn up for each patient of the stimuli which might trigger passive and active (e.g. compulsive rituals) avoidance behaviour. Next, a hierarchy was constructed with the help of a 'fear thermometer'. The degree of exposure and the degree of response prevention were together structured into one hierarchy (see Emmelkamp, 1982).

Self-exposure *in vivo*

Patients were treated as out-patients at the Reinier de Graaf Hospital. Each treatment session lasted 45–60 minutes. At each session the patient was given a number of tasks (items from the hierarchy) which he had to perform by himself at home. These tasks were described clearly, written down, and discussed with the patient at length. At the beginning of each new session, the patient's performance on the tasks of the previous session was discussed. All the items in the hierarchy had to be practised *in vivo*, starting with the easiest. More difficult tasks were given only if tasks lower in the hierarchy had been performed successfully. The speed at which the patient worked through the hierarchy was

https://doi.org/10.1192/bjp.156.1.55 Published online by Cambridge University Press

determined by the patient himself. However, if a patient tried to avoid a new item for practice, some pressure was exerted on him.

Treatment consisted of two components: self-exposure *in vivo* and self-imposed response prevention. During the treatment sessions these tasks were *not* practised. Patients were instructed to exercise these tasks twice for two hours continuously between treatment sessions. An example might illustrate this procedure. Patients could be instructed to touch the ground, to touch other people, to touch the toilet, or to 'contaminate' their houses without washing their hands or other cleaning rituals afterwards. Or, in the case of checking rituals, patients might be instructed to leave the house without checking lights and gas taps etc. For clinical guidelines the reader is referred to Emmelkamp (1982).

The patient's partner was neither involved in the discussions with the therapist, nor in the performance of the homework assignments. Family members were instructed to be absent during the practice hours.

Partner-assisted exposure

In this treatment the partner had to accompany the patient to each treatment session. After the rationale was explained to the couple, they received instructions for exposure; the patient had to carry on his homework assignments with his partner present. The task of the partner was to encourage the patient and to have him confront the distressing stimuli until the patient got used to them. In addition, the partner was instructed to withhold reassurance if the patient asked for it. Again, the patient was not allowed to perform his rituals. Exposure tasks were not practised during treatment sessions at the hospital.

Patients

Obsessive–compulsive patients who were referred to the psychiatry department by mental-health agencies and general practitioners were considered for this study. The acceptance criteria were that patients had:

(a) a DSM–III diagnosis of obsessive–compulsive disorder (American Psychiatric Association, 1980). The obsessive–compulsive behaviour (rituals) had to be the main problem, to have lasted at least one year, and to be severe enough to warrant intensive treatment
(b) to have been married or living together for at least one year
(c) to be willing to attend all sessions as a couple
(d) to have received no previous behavioural treatment.

Only one partner refused to co-operate in the experiment. Over two and half years 61 patients met these criteria. Seven patients who fulfilled all criteria did not accept the treatment offer for a variety of reasons (too far to travel to the treatment agency; no babysitter available; unwilling to wait five weeks; two patients requested admission; and two patients did not accept the treatment rationale). Only four patients dropped out in the course of treatment: one patient was admitted and three other patients were unable to carry on the homework assignments. Thus, 50 patients completed the project.

Therapists

There were six clinical psychologists, two psychiatry residents, and one social worker. All had received training in behavioural therapy. Group sessions were held twice a week, in which problems arising in the treatments were discussed. The therapists were supervised by the second author.

Assessment

Assessments were carried out by patient, partner, and therapist. In addition, an independent assessor, a clinical psychologist, rated the patient before and after the treatment.

Obssessive–compulsive problems

On the Anxiety-Discomfort Scale, patient, therapist, and assessor rated five situations on a scale of 0–8 for anxiety/discomfort. Reliability and concurrent validity are satisfactory (Emmelkamp, 1982).

The 30-item Maudsley Obsessional–Compulsive Inventory (MOCI; Rachman & Hodgson, 1980) differentiated obsessional from non-obsessional neurotic patients. This measure exhibits strong convergent and discriminant validity but is less sensitive as a measure of change than the Anxiety-Discomfort Scale (Kraaijkamp *et al*, 1989).

Marital relationship

The Maudsley Marital Questionnaire (MMQ) is a 20-item questionnaire relating to marital (M), sexual (S) and general life (GL) adjustment. Only the marital scale was used in the data analysis. Reliability and validity are given by Arrindell *et al* (1983*a*,*b*). The MMQ exhibits strong convergent and discriminant validity.

The Interactional Problem-Solving Questionnaire (IPOV) has been developed, validated, and standardised in the Netherlands and consists of 17 items. The correlation of the IPOV with the Dyadic Adjustment Scale (Spanier, 1976) and Miller's (1976) Satisfaction Questionnaire appears to be substantial (Lange, 1984).

Mood scales

Additional rating scales were included to assess possible generalised effects of treatment on mood. The measures were the Self-rating Depression Scale (SDS; Zung, 1965) and the State-Trait Personality Inventory (STPI; Spielberger, 1980), to assess anger, and the State-Trait Anxiety Inventory (STAI; Spielberger *et al*, 1970).

Assessment of partners

The partner also completed the MMQ, IPOV, and STPI. In addition, the partner completed the Symptom Check-List (SCL-90; Derogatis, 1977) in order to assess general psychopathology.

https://doi.org/10.1192/bjp.156.1.55 Published online by Cambridge University Press

Results

To assess the impact of marital distress on the effect of treatment, patients in both groups were divided into those who did and those who did not report marital distress. A cut-off score of 20 on the MMQ marital scale was used (Arrindell *et al*, 1986). The data were analysed in a two (treatment condition) by two (marital distress) by four (time) factorial design using multivariate analyses of variance (MANOVA) (O'Brien & Kaiser, 1985). This analysis revealed that in the self-exposure group 11 patients scored in the maritally distressed range and 12 patients in the non-distressed range. In the partner-assisted exposure group, 15 patients scored in the maritally distressed range and 12 patients in the non-distressed range.

Patients' data

Results of these analyses are presented in Table I. All measures changed significantly over the course of the study. Subsequent univariate analyses of variance revealed a highly significant time effect on the obsessive-compulsive measures between assessments II and III. On the Anxiety-Discomfort Scale a small but significant effect was found between assessments I and II. Treatment led also to improvement in marital satisfaction as evidenced by the significant changes between assessments II and III on the MMQ and IPOV, but at follow-up patients' marital satisfaction was found to decrease on the MMQ. Improvement on the mood measures was also due to the treatment received: there were no significant changes over the waiting period but significant changes on SDS, state and trait anger (STPI), and state anxiety (STAI) between assessments II and III. On trait anxiety (STAI), patients improved both in the waiting period and between assessments II and III. Only the improvements in state anxiety were not maintained at follow-up.

As shown in Table I, the treatments were equally effective. A significant marital distress main effect was found on the MMQ and IPOV only, not surprisingly, since patients were categorised under marital distress and non-distress according to their MMQ scores before treatment. The interaction between treatment group and marital distress was significant on none of the variables, indicating that the treatment formats were equally effective irrespective of marital distress of the couple.

Partners' data

Results of the MANOVA on the partners' data are presented in Table II. These analyses revealed a significant time effect on all measures except one (STPI state).

Subsequent univariate analyses of variance were conducted on the time factor. Results are presented in Table II. Marital distress as measured by the MMQ increased during the waiting period before treatment and decreased between assessments II and III. There was also a significant improvement on the IPOV, but this was not maintained at follow-up. On the SCL-90 partners were found to improve between assessments II and III. The change on the STAI trait measure was only significant between assessments I and II.

Only on the STPI trait was a treatment effect found. However, the time by treatment interaction was non-significant ($F(3,41) = 0.491$). A marital distress effect was found on the MMQ and IPOV only. On none of the variables was a significant interaction found between treatment group and marital distress.

Discussion

The present study is the first to study the impact of the quality of marital relationship on the outcome of behavioural therapy with a large number of obsessive-compulsives. Marital distress was unrelated to treatment outcome: neither on the measures for obsessive-compulsive behaviour, nor on the patients' mood measures (depression, trait and state anxiety and anger) was there a marital distress effect. The present results add to the findings of four studies with agoraphobics (Emmelkamp, 1980; Cobb *et al*, 1984; Arrindell *et al*, 1986; Himadi *et al*, 1986), but are at odds with the results of Bland & Hallam (1981), Milton & Hafner (1979), and Monteiro *et al* (1985). While most previous studies in the area of agoraphobia could be criticised for using an arbitrary criterion for classifying couples as maritally distressed, in the present study an externally validated cut-off score was used, with which 85% of maritally distressed couples are correctly classified (Arrindell *et al*, 1983*a,b*). Contrary to a study with agoraphobics (Arrindell *et al*, 1986) in which only a few patients (20%) were maritally distressed according to this criterion, in the present study nearly half of the sample of obsessive-compulsives scored in the distressed range. Nevertheless, treatment proved to be as effective for maritally distressed couples as for maritally non-distressed couples. The present findings that obsessive-compulsives are often maritally distressed corroborates findings from a study by Hoogduin *et al* (1989), who found that at least 80% of the Dutch population had a better interactional problem-solving capacity, as measured by the IPOV, than obsessive-compulsives.

Partner-assisted treatment was no more effective than treatment of the patient alone. This is at odds with our pilot study (Emmelkamp & de Lange, 1983), which had only 12 patients. In that study the partner-assisted treatment resulted in significantly more improvement than the patient-alone treatment on obsessive-compulsive targets, depression, and general life adjustment at the end of treatment. At one-month follow-up, however, the difference between treatments had disappeared.

The effects of treatment in the present study led neither to a deterioration of marriage nor to adjustment problems in the partner. Contrary to

https://doi.org/10.1192/bjp.156.1.55 Published online by Cambridge University Press

https://doi.org/10.1192/bjp.156.1.55 Published online by Cambridge University Press

TABLE I

Means, standard deviations (in parentheses), and results of MANOVA on patients' data

					MANOVA effects (F ratios)			
	Assessment I	*Assessment II*	*Assessment III*	*Follow-up*	*Time*	*Condition*	*Marital distress*	*Interaction condition by marital distress*
Obsessive-compulsive problems								
MOCI	16.22 (5.26)	15.69 (5.46)***	13.24 (6.39)	12.98 (6.20)	8.21***	1.22	<1	<1
Anxiety-discomfort								
patient	5.67 (1.42)**	5.11 (1.63)***	3.70 (2.20)	3.59 (2.20)	19.75***	1.32	<1	1.84
therapist	6.78 (0.92)***	6.15 (1.18)***	4.05 (1.98)*	3.75 (1.98)	40.13***	<1	1.09	2.19
assessor	6.65 (0.97)**	6.26 (1.31)***	4.19 (2.04)	3.99 (2.08)	31.45***	<1	1.75	2.66
Marital relationship								
MMQ	22.54 (12.79)	23.82 (14.78)*	20.92 (12.68)**	24.06 (14.12)	3.91*	<1	60.59***	<1
IPOV	58.22 (12.73)	58.68 (13.76)*	61.56 (11.79)	60.42 (12.61)	3.40*	<1	23.73***	2.10
Mood measures								
SDS	51.00 (7.87)	49.73 (7.78)***	46.14 (8.79)	47.27 (9.18)	4.80***	<1	<1	<1
STPI state	11.84 (3.70)	12.24 (4.52)**	10.57 (0.96)	11.53 (3.69)	3.73*	<1	2.03	<1
STPI trait	21.45 (6.13)	21.43 (5.72)**	19.94 (5.53)	19.79 (5.57)	3.78*	1.57	2.61	<1
STAI state	51.55 (10.11)	52.69 (13.06)***	45.65 (12.59)**	48.61 (12.56)	8.15***	<1	<1	<1
STAI trait	59.96 (8.91)**	57.16 (9.96)**	54.02 (10.99)	53.76 (10.06)	7.08***	<1	<1	<1

*** $P<0.001$, ** $P<0.01$, * $P<0.05$: results of univariate analyses of variance on the time factor for changes between assessments.

TABLE II

Means, standard deviations (in parantheses), and results of MANOVA on partners' data

					MANOVA effects (F ratios)			
	Assessment I	*Assessment II*	*Assessment III*	*Follow-up*	*Time*	*Condition*	*Marital distress*	*Interaction condition by marital distress*
Marital relationship								
MMQ	23.52 (14.50)**	27.83 (16.26)*	25.10 (14.18)	24.56 (14.14)	4.99**	<1	8.17**	<1
IPOV	59.11 (15.06)	59.32 (15.04)*	62.72 (13.28)*	60.57 (14.36)	2.73**	2.07	11.88***	<1
Mood measures								
STPI state	10.79 (1.93)	10.96 (3.05)	10.63 (2.90)	10.63 (2.20)	1.44	<1	2.05	<1
STPI trait	15.51 (3.53)*	14.57 (3.42)	13.98 (3.39)	14.28 (3.36)	4.35**	7.33**	<1	<1
SCL-90	113.77 (24.32)	115.52 (26.85)*	108.79 (25.24)	108.52 (22.19)	3.02	<1	1.10	<1

*** $P<0.001$, ** $P<0.01$, * $P<0.05$: results of univariate analyses of variance on the time factor for changes between assessments.

expectations from theoretically orientated therapists (e.g. Hafner, 1982), partners improved on most measures, including SCL-90, anxiety, anger, and marital satisfaction, irrespective of whether they were involved in the treatment. Living with an obsessive-compulsive patient is a burden for most partners; presumably, improvement of the patient led to less marital friction and so less distress in the partner.

Although the present results show that involvement of the spouse does not enhance the effects of exposure therapy, this does not necessarily mean that therapy focusing on the marital relationship of obsessive-compulsives is superfluous. Given the substantial number of obsessive-compulsives who scored in the maritally distressed range in the present study, there is a clear need for studies investigating the effects of marital therapy, communication training, and problem solving on the obsessive-compulsive problems and marital relationships of these patients. Although there are no basic objections against including the spouse, there appears to be no justification for trying to coerce a partner into being involved.

References

AMERICAN PSYCHIATRIC ASSOCIATION (1980) *Diagnostic and Statistical Manual of Mental Disorders* (3rd edn) (DSM-III). Washington, DC: APA.

ARRINDELL, W. A., BOELENS, W. & LAMBERTS, H. (1983*a*) On the psychometric properties of the Maudsley Marital Questionnaire. *Personality and Individual Differences*, **4**, 293–306.

——, EMMELKAMP, P. M. G. & BAST, S. (1983*b*) The Maudsley Marital Questionnaire (MMQ): a further step toward its validation. *Personality and Individual Differences*, **4**, 457–464.

——, —— & SANDERMAN, R. (1986) Marital quality and general life adjustment in relation to treatment outcome in agoraphobia. *Advances in Behaviour Therapy*, **19**, 335–338.

BARLOW, D. H., O'BRIEN, G. T. & LAST, C. G. (1984) Couples treatment of agoraphobia. *Behaviour Therapy*, **15**, 41–58.

BLAND, K. & HALLAM, R. S. (1981) Relationship between response to graded exposure and marital satisfaction in agoraphobics. *Behaviour Research and Therapy*, **19**, 335–338.

COBB, J. P., MATHEWS, A. M., CHILDS-CLARKE, A., *et al* (1984) The spouse as co-therapist in the treatment of agoraphobia. *British Journal of Psychiatry*, **144**, 282–287.

DEROGATIS, L. R. (1977) *Symptom Checklist-90: Administration, Scoring and Procedures Manual for the Revised Version*. Baltimore: Johns Hopkins University, School of Medicine.

EMMELKAMP, P. M. G. (1980) Agoraphobics' interpersonal problems. *Archives of General Psychiatry*, **37**, 1303–1306.

—— (1982) *Phobic and Obsessive-Compulsive Disorders: Theory, Research and Practice*. New York: Plenum.

—— (1988) Marital quality and treatment outcome in anxiety disorders. In *Panic and Phobias II* (eds I. Hand & H. V. Wittchen). New York: Springer.

—— & KRAANEN, J. (1977) Therapist controlled exposure in vivo versus self-controlled exposure in vivo: a comparison with obsessive-compulsive patients. *Behaviour Research and Therapy*, **15**, 491–495.

—— & de LANGE, I. (1983) Spouse involvement in the treatment of obsessive-compulsive patients. *Behaviour Research and Therapy*, **21**, 341–346.

——, VAN LINDEN VAN DEN HEUVELL, C., RÜPHAN, M., *et al* (1989) Home-based treatment of obsessive-compulsive patients: intersession interval and therapist involvement. *Behaviour Research and Therapy*, **27**, 89–93.

FOA, E. B., STEKETEE, G. & OZAROW, B. J. (1985) Behavior therapy with obsessive-compulsives: from theory to treatment. In *Obsessive-compulsive Disorders* (eds M. Mavisakalian, S. M. Turner & L. Michelson). New York: Plenum.

HAFNER, R. J. (1982) Marital interaction in persisting obsessive-compulsive disorders. *Australian and New Zealand Journal of Psychiatry*, **16**, 171–178.

HAND, I., SPOEHRING, B. & STANIK, E. (1977) Treatment of obsessions, compulsions and phobias as hidden couple-counseling. In *The Treatment of Phobic and Obsessive-Compulsive Disorders* (eds J. C. Boulougouris & A. D. Rabavilas). New York: Pergamon Press.

—— & TICHATZKY, M. (1977) Behavioral group therapy for obsessions and compulsions. In *Trends in Behavior Therapy*. (eds P. O. Sjöden, S. Bates & S. W. Dockens). New York: Academic Press.

HIMADI, W. G., CERNY, J. A., BARLOW, D. H., *et al* (1986) The relationship of marital adjustment to agoraphobia treatment outcome. *Behaviour Research and Therapy*, **24**, 107–115.

HOOGDUIN, C. A. L. & DUIVENVOORDEN, H. (1988) A decision model in the treatment of obsessive-compulsive neurosis. *British Journal of Psychiatry*, **152**, 516–521.

HOOGDUIN, C. A. L., DUIVENVOORDEN, H., SCHAAP, C., *et al* (1989) On the outpatient treatment of obsessive-compulsives: outcome, prediction of outcome and follow-up. In *Annual Series of European Research in Behavior Therapy, Vol. IV. Fresh Perspectives on Anxiety Disorders* (eds P. M. G. Emmelkamp *et al*). Amsterdam: Swets.

LANGE, A. (1984) *Interactionele Probleem Oplossings Vragenlijst (IPOV)*. Deventer: Van Loghum Slaterus.

MARKS, I. M. (1987) *Fears, Phobias, and Rituals*. Oxford: Oxford University Press.

MILLER, B. C. (1976) A multivariate developmental model of marital satisfaction. *Journal of Marriage and the Family*, **38**, 643–657.

MILTON, F. & HAFNER, J. (1979) The outcome of behavior therapy for agoraphobia in relation to marital adjustment. *Archives of General Psychiatry*, **36**, 581–595.

MONTEIRO, W., MARKS, I. M. & RAMM, E. (1985) Marital adjustment and treatment outcome in agoraphobia. *British Journal of Psychiatry*, **149**, 383–390.

O'BRIEN, R. G. & KAISER, M. K. (1985) MANOVA method for analyzing repeated measures designs: an extensive primer. *Psychological Bulletin*, **97**, 316–333.

RACHMAN, S. J. & HODGSON, R. J. (1980) *Obsessions and Compulsions*. Englewood Cliffs, NJ: Prentice-Hall.

SPANIER, G. B. (1976) Measuring dyadic adjustment: new scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family*, **38**, 15–28.

SPIELBERGER, C. D. (1980) *Preliminary Manual for the State-Trait Personality Inventory (STPI)*. Unpublished manuscript, Tampa University of South Florida.

——, GORSUCH, R. L. & LUSHENE, R. E. (1970) *Manual for the State-Trait Anxiety Inventory*. Palo Alto: Consulting Psychologists Press.

STERN, R. S. & MARKS, I. M. (1973) Contract therapy in obsessive-compulsive neurosis with marital discord. *British Journal of Psychiatry*, **123**, 681–684.

VAN DEN HOUT, M., EMMELKAMP, P. M. G. & KRAAYKAMP, H. J. M. (1988) Behavioural treatment of obsessive-compulsives: inpatient versus outpatient. *Behaviour Research and Therapy*, **26**, 331–332.

ZUNG, W. W. K. (1965) A self-rating depression scale. *Archives of General Psychiatry*, **12**, 63–70.

https://doi.org/10.1192/bjp.156.1.55 Published online by Cambridge University Press

*P. M. G. Emmelkamp, PhD, *Professor of Clinical Psychology and Psychotherapy and Head of the Department of Clinical Psychology, University of Groningen;* E. de Haan, *Clinical Psychologist, Department of Psychiatry, Reinier de Graaf Hospital and Centre Sint Joris;* C. A. L. Hoogduin, MD, PhD, *Professor of Psychopathology, K. U. Nijmegen, and Head of Department of Psychiatry, Reinier de Graaf Hospital and Centre Sint Joris, The Netherlands*

*Correspondence: *Academic Hospital, Department of Clinical Psychology, Oostersingel 59, 9713 EZ Groningen, The Netherlands*

https://doi.org/10.1192/bjp.156.1.55 Published online by Cambridge University Press