

Outcome of Cognitive-Behavioural Treatment for Health Anxiety (Hypochondriasis) in a Routine Clinical Setting

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Abstract. It has now been established in several randomized controlled trials that specialist cognitive-behavioural therapy (CBT) is an effective treatment for severe and persistent health anxiety (diagnostically, “Hypochondriasis”). It has not yet been established whether or not such results will generalize from academic research centres to routine clinical settings. The present study was designed to address the issue of generalization by evaluating the outcome of a consecutive series of patients meeting diagnostic criteria for hypochondriasis, treated using CBT in a non-academic clinic in Copenhagen, Denmark. The delivery of the treatment was

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adapted to fit with the practice of the clinic, so that the later components of therapy were delivered in a group therapy setting. Therapists participated in a brief training course, which was subsequently supplemented by expert clinical and peer supervision. Patients received the same amount of treatment used in previous clinical trials. Results indicate that the degree of improvement obtained in this study was significant and compared well with those obtained in the previous trials. These results support the use of dissemination of new treatments using a specialist training model.

Keywords: Health anxiety, hypochondriasis, cognitive behaviour therapy, dissemination study, effect study.

Introduction

Severe and persistent health anxiety (hypochondriasis) not only causes great suffering for the patient and those around them but is also costly in terms of health care provision. Patients frequently seek reassurance from doctors and undergo many unnecessary and expensive medical investigations (Barsky and Klerman, 1983; Barsky, Wyshak and Klerman, 1986). Although the incidence and prevalence of diagnostically-defined hypochondriasis is not known, it is clear that it is common in general medical (Barsky, Wyshak, Klerman and Latham, 1990) and general practice clinics (Gureje, Ustun and Simon, 1997). Until the development of cognitive-behavioural approaches, there was little evidence that any treatment helped patients suffering from severe and persistent health anxiety (Warwick and Salkovskis, 1990).

Cognitive-behavioural theories of health anxiety developed from the observation that, for some patients, medical investigation and reassurance had the effect of increasing health anxiety and the need for yet further reassurance (Salkovskis and Warwick, 1986). This work developed not only into a cognitive behavioural theory of health anxiety derived from the principles of Beck's cognitive theory of anxiety (Beck, 1976, 1985), but also a focused treatment approach (Salkovskis, Warwick and Deale, 2003).

The cognitive-behavioural theory described by Warwick and Salkovskis (1990) proposes that health anxiety arises from the misinterpretation of a range of stimuli that patients believe to indicate that they are seriously ill (or more seriously ill than they actually are). The focus of misinterpretations includes bodily variations (including but not confined to bodily sensations), information from health professionals, and information that patients obtain from the media, Internet and related sources. The misinterpretations persist as a result of psychological maintaining factors. These include selective attention (which results in a "confirmatory bias" with respect to stimuli perceived as being relevant to health); safety seeking behaviours (including, but not confined to, checking and reassurance seeking); changes in mood (including both anxiety and depression); and the magnification of feared bodily sensations by the anxiety arising from their misinterpretation in ways similar to that seen in panic disorder (Clark, 1986). The similarities between health anxiety and both panic (e.g. Noyes et al., 1990) and obsessional problems (Warwick, Clark, Cobb and Salkovskis, 1996) have been noted. The main difference between panic and hypochondriasis appears to relate to the time course of misinterpretations. Panic patients usually regard the occurrence of bodily sensations as indicating that the catastrophe they fear is actually happening or about to happen, whilst hypochondriacal patients are more likely to believe that their illness is gradually developing, and will become serious over a longer period of time (Salkovskis and Clark, 1993). This delayed time course of the feared catastrophe beliefs is also characteristic of obsessive-compulsive

disorder, and has crucial implications for treatment (Salkovskis, 1996). In particular, it means that treatment strategies involving disconfirmation of the person's negative interpretations are unlikely to be successful. Treatment instead requires the individualized development of a credible account of how health anxiety and related maintaining processes can generate the problems the patient is experiencing, followed by explicit tests of this alternative, less threatening account of the person's problems.

This theoretical approach and the somatosensory amplification theory of Barsky have thus led to the development of well-defined cognitive-behavioural treatments for health anxiety. This type of treatment has now been shown to be effective in several randomized control trials. Cognitive-behavioural treatment has been found to be superior not only to treatment as usual and waiting list comparisons (Warwick et al., 1996) but also to an equally credible psychological treatment with the same amount of therapist input (Clark et al., 1998). This latter finding indicates that the effect of cognitive-behavioural therapy is unlikely to be due to non-specific factors.

As with many recently developed evidence-based treatments, evidence for efficacy has been obtained in research centres. The extent to which these treatments generalize to routine clinical settings is a crucial issue if they are to be disseminated more widely. The last few years have seen a growing recognition of the importance of generalization and dissemination studies (Barlow, Levitt and Bufka, 1999). There are different ways in which effective dissemination could be achieved. Traditionally, it has been suggested that there is a need to increase the number of trained psychotherapists, which is not only expensive but also slow and likely to achieve only minimal extra therapy capacity. The alternative (as investigated here) is both more rapid and cost effective, and involves a focused, specialist training approach in which the *specifics* of treatment for a particular problem are the subject of brief training and supervision.

Recently, good evidence has been found for this approach to dissemination of brief cognitive behavioural treatment for PTSD (Gillespie et al., 2002). In that study, brief training and subsequent supervision was offered to therapists working in the context of the British National Health Service. Treatment effects were comparable to those previously obtained in treatment trials. The study reported here seeks to establish the effectiveness of CBT for the treatment of severe and persistent health anxiety in a non-academic clinic setting.

Method

Overview

Patients who met the diagnostic criteria for hypochondriasis were recruited and offered treatment in a non-research treatment centre. They were treated by six therapists (all qualified as clinical psychologists, three with more than 10 years practice), none of whom had previously specialized in the treatment of hypochondriasis. Following training, these therapists saw patients as part of their normal busy caseload, receiving regular normal supervision within the clinic and specific specialist supervision every 3 months. Outcome measures and timings corresponded with those used in previous research trials.

Participants

The research group distributed a leaflet describing the project to General Practitioners in the greater Copenhagen area; this was intended to be offered to potential participants. Meetings

were held to inform GPs about the project. In addition, the trial was publicized in major newspapers. Forty-five referrals were received, and those that appeared to be suitable were assessed and diagnosed by experienced psychiatrists using ICD 10 criteria.

The selection criteria applied to referrals were: ICD 10 diagnosis of hypochondriasis (F45.2); in the age range 18–65; Danish as mother tongue and a score of more than 17 on the Danish translation of the short Health anxiety Inventory (main section). Patients were excluded if a medical illness explained their condition, if they had previously received CBT treatment, had a history of a psychotic disorder, or currently had a diagnosis of substance dependence. Patients were included if they participated in more than one treatment session; later dropout resulted in inclusion in “intention to treat” analyses.

Eighteen consecutive referrals meeting these criteria were recruited; one completed only one session of treatment and a second was withdrawn from the study when a psychotic condition was detected during therapy, giving a final study sample size of 16. Nine participants were referred through their GP, one through a psychiatric department in a general hospital, two from psychological clinics, and four self-referred. Eight had previous psychiatric treatment.

The median age was 34, with a range of 21–52 years. Four of the clients were male and 12 were female. All were Danish citizens, of Caucasian origin. Fourteen were living with a long-term partner, two were single. Seven had children, nine did not. Four participants had university education, eight had attended further education course (e.g. teacher training), and three were university students. One had left school after primary school. Nine participants were in employment, one was self employed, one had a sheltered job, three were currently students, one was on maternity leave, and one was a homemaker.

One patient was on a low dose of amitriptyline, one patient received paroxetine, whilst a third patient received chlorprothixene at a low dose (as a tranquilizer rather than as an antipsychotic). Neither patient changed their medication during the period of treatment. Five participants had worries about having or developing cancer. Five had worries about degenerative illnesses of the nervous system and one participant was afraid of having a stroke. Five patients' worries tended to change focus across different serious illnesses. Fifteen of the participants were not diagnosed with any known physical illness, while one was diabetic. One patient had a grandfather who was diagnosed with Huntington's Chorea, but had not herself been tested because of her worries.

According to the baseline diagnostic interview (WHO, 1994), six participants had comorbid panic disorder (F41.0), three had OCD (F42.2), three had moderate depression (F32.1), and four had no comorbid psychiatric conditions. Six of the participants gave a history of health anxiety of greater than 15 years; in six participants it had been present for more than 2 years and four had had worries for more than 6 months and less than 2 years. Nine of the participants were not able to describe a clearly defined triggering event, two referred to stressful period of life leading up to the onset, and five participants were able to give a clear precipitating event that triggered the current episode: a stillborn child, a severe allergic reaction, the sudden death of a close family member, the sudden death of a relative to a close friend, and having had appendicitis.

Measures

The main outcome measures were Danish translations of standardized scales. These were the Short Health Anxiety Inventory (Salkovskis, Rimes, Warwick and Clark, 2002) and the Beck

Anxiety and Depression Inventories (Beck, Epstein, Brown and Steer, 1988; Beck, Ward, Mendelsohn, Mock and Erbaugh, 1961).

Treatment

Setting and therapists. The treatment took place at the Cognitive Psychology Centre (KPC), a private clinic that provides CBT based psychotherapy on an outpatient basis mainly for anxiety disorders. Six certified clinical psychologists were involved in delivering treatment; therapists' experience ranged from 2–25 years. All had previous training in CBT, although none had previously specialized in the treatment of hypochondriasis or worked as research therapists.

Developing an integrated individualized and group treatment. It was intended to offer treatment of the type developed by Salkovskis and colleagues (Salkovskis and Warwick, 2001). However, the clinic usually offers group treatment programs for anxiety disorders such as panic disorder, agoraphobia, social phobia and OCD. On the basis of this experience, it was therefore assumed that the treatment of health anxiety would be of a similar nature and the treatment was to be modified so it could be implemented on a group basis.

Training in cognitive treatment of severe and persistent health anxiety was given in workshop format by PS, with follow-up supervision groups on a peer basis and from PS. This process was used to modify the main treatment strategies for the group format. However, it rapidly became apparent that there were problems with implementing treatment in a group format. Group work with health anxiety patients seemed to differ from the treatment of other anxiety disorders in terms of the extent to which anxiety was increased by interactions within the group. The atmosphere in the initial group sessions was characterized by high levels of arousal and fear related to the cross comparison of symptoms and discussion about their causes. For example, a group member mentioned that she was afraid of having multiple sclerosis, whereupon another group member promptly reacted to this statement by telling the therapist that by permitting a group member to mention multiple sclerosis, she was exposing the other group members to grave danger. The therapists found that much of their time was taken up with trying to deal with sensitivities and anxiety aroused by the discussion between patients. The therapists found that they were continually attempting to control and reduce the level of anxiety and found it difficult to focus on treatment strategies.

In CBT group treatment of other anxiety disorders in this clinic, the specific cognitive model (involving key vicious circles) is initially presented as part of the psychoeducational process, so that therapist and patients can jointly refer to this as therapy proceeds. The worries of the group members make up the foundation upon which the basic conceptualization is elaborated and validated, and the interrelationship between symptoms, their meaning and emotional and behavioural reactions of the patients is then clarified. Usually this aspect of treatment is reassuring and de-arousing, as the patients are involved in clarifying the way their worries work. However, in the health anxiety group it appears that the other group members' worries become the focus of mutually increased misinterpretation, worry and fear. These interactions also result in spiralling counter-productive attempts to be reassured, which actually appeared to increase anxiety and the need for further reassurance.

The idea of initial group treatment was therefore abandoned in the third group, and the therapy instead started with individual sessions, during which the patient was helped to reach

an individualized formulation of their problems and begin to test this out through discussion and behavioural experiments. It rapidly became clear that the individual therapy gave the therapists a much better chance of pacing the therapeutic progress and need of the individual participant.

An element of “Mindfulness” (Segal, Williams and Teasdale, 2002) was also included in the program as part of the group treatment, adapted for use with these patients. It was the experience of the participants that when they had come to accept the fact that a major part of their health anxiety was tied to their worries, thoughts, ideas as well as experience of their noticing physical changes in their bodies and they had abandoned their usual safety-seeking behaviour, they needed concrete strategies to be able to direct and control their attention and thereby control the direction of their thoughts. The main focus in the final stages of therapy was therefore directed at this and mindfulness proved to be a useful supplement to other commonly used CBT strategies directed towards attention control.

Content of treatment. Treatment was closely modelled on that used in the previous randomized controlled trial of cognitive-behavioural therapy (Clark et al., 1998), with the modifications described above to allow delivery of part of the treatment in a group format (see also Salkovskis, Warwick and Deale, 2003). Three booklets were integrated into the therapy process; these were given as homework between sessions at sessions 1–3. The booklets explain the nature of health anxiety in a gradual way, and suggest ways in which the person can apply the cognitive-behavioural strategies learned in the course of therapy. (These booklets were translated from the texts by Warwick and Salkovskis.)

Cognitive behavioural treatment involves helping the patient to develop and evaluate a personalized version of the cognitive model of health anxiety as an alternative, less threatening explanation of their problems (Salkovskis 1989, 1996). For example, the patient is helped to consider the possibility that their problems are better accounted for by the fear of cancer and their self-sustaining reactions to this fear rather than actually having cancer. This psychological explanation, which attempts to account for the patient’s concerns, must appear valid and credible. It should not diverge from the patient’s previous experience and, with time, should survive their future experiences, including behavioural experiments conducted as part of therapy. The patient is encouraged to discuss aspects of their problems that do not fit with the formulation. A crucial part of this re-attribution process is helping the patient to devise and carry out “behavioural experiments”, in which they test out the alternative, cognitively based explanation in order to decide whether or not it is helpful to them. Overall, the health anxiety based explanation should lead the patient to re-interpret their innocuous symptoms and attribute them to a less threatening cause. It will also demonstrate that behaviours such as bodily checking and other maintaining factors serve to make their problems worse and should be terminated. Where appropriate, the patient is helped to re-engage in neglected areas of their life in order to help them disengage from their fears about health (for more detailed explanation of treatment, see Salkovskis, 1989, 1992; Salkovskis and Warwick, 1986, 2001; Salkovskis, Warwick and Deale, 2003).

Procedure. Recruitment and assessment of patients was co-ordinated through the Liaison Psychiatry Unit at Bispebjerg University Hospital, Copenhagen. Patients referred were offered assessment appointments at that centre, and suitability for inclusion determined at that point. Patients were then offered appointments at KPC; all patients offered appointments attended. Questionnaires (HAI, BDI, BAI) were administered to the participants at the initial session

and at end of treatment. Follow-up for group 1 was at 12 months post-treatment; for groups 2 and 3 this was done at 6 months post-treatment.

Participation in both group and individual treatment sessions was better than 80%. Group 1 had one leader and one observer present. Groups 2 and 3 had one leader. For reasons described above, the CBT treatment was offered in two different ways. Group 1 and 2 had similar treatment procedure. Group 3's procedure differed from these. Group 1 and 2 had 15 group sessions each, with a duration of 3 hours, including breaks of 15 minutes per hour, that is 45 sessions of 45 minutes duration. In addition, Groups 1 and 2 had eight individual therapy sessions of one hour each. Groups 1 and 2 initially received four group sessions over a period of 2 weeks. The remaining sessions followed on a weekly basis. After the first 2 weeks of group treatment, the individual treatment was started and continued parallel to each other. Groups 3 had 6 individual sessions. The first two sessions were 1½ hours and the remaining individual sessions lasted one hour. After the six sessions, the CBT group treatment was initiated with 10 group sessions on a weekly basis. The CBT group treatment had two foci: the first six sessions dealt exclusively with health anxiety, and the remaining four sessions had focus on mindfulness training.

Results

Overview

Sixteen patients were treated in the study. On the main dependent variable (Health Anxiety Inventory), a significant reduction was found, and this reduction was sustained at follow-up. Significant and sustained reductions were also noted in measures of clinical anxiety and depression.

Outcome measures

Health Anxiety Inventory. Repeated measures analysis of variance (treatment, post-treatment and follow-up) corrected for serial dependence using the Greenhouse-Geisser procedure was carried out; this analysis indicated a significant overall effect of repeats ($F_{[2,18.1]} = 74.0$, $p < .0001$). Bonferroni corrected paired t -tests indicated that this effect was accounted for by a difference between pre-treatment and post-treatment scores ($t_p = 9.5$, $p < .0001$), with the post-treatment to follow-up difference not being significant ($t_p = 1.1$, $p > .3$). Results are shown in Figure 1. The range of changes observed are shown in Figure 2, with the change expressed as a percentage of the initial score. This indicates that 9 out of 16 patients reduced health anxiety by more than 50%, and that the minimum decrease in health anxiety was 30%.

Beck Depression and Anxiety Inventories. There were significant effects of repeats for both anxiety ($F_{[2,18.1]} = 74.0$, $p < .0001$) and depression ($F_{[2,27]} = 9.9$, $p < .001$). Bonferroni corrected paired t -tests indicated that this effect was accounted for by a difference between pre-treatment and post-treatment scores (for the BAI: $t_p = 2.9$, $p < .01$; for the BDI: $t_p = 2.8$, $p < .01$); for the BAI there was a significant change from post-treatment to follow up ($t_p = 2.6$, $p < .02$); this comparison was not significant for the BDI when Bonferroni corrected ($t_p = 2.2$, $p = .045$). These results are shown in Figure 3.

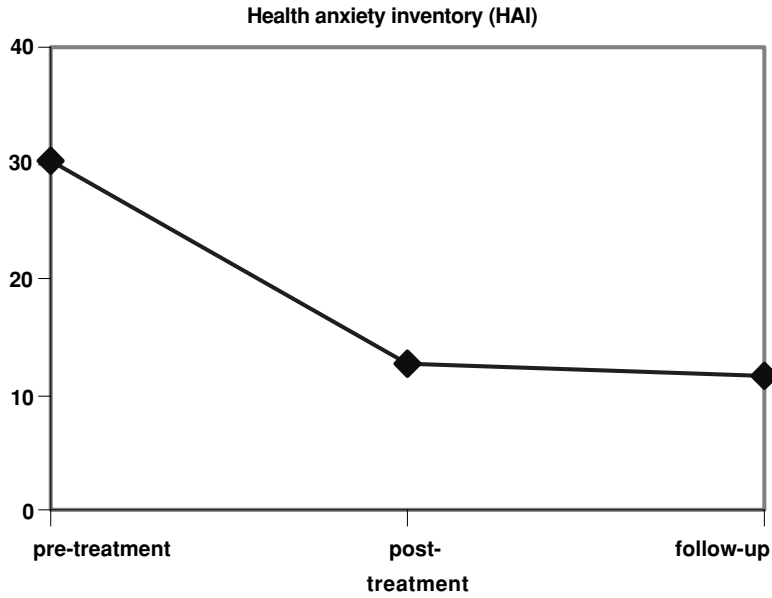


Figure 1. Changes on the Health Anxiety Inventory from pre-treatment to follow-up

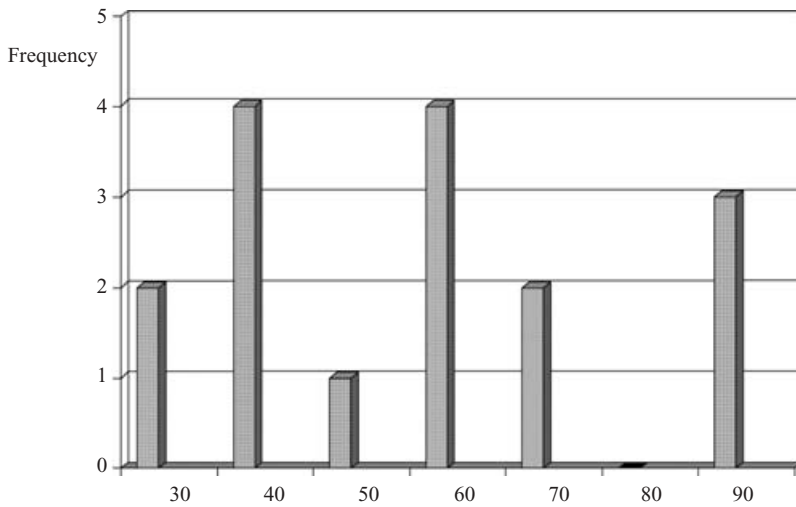


Figure 2. Percentage change in the Health Anxiety Inventory at end of treatment

Discussion

This study provided preliminary evidence that cognitive-behavioural treatment can be delivered effectively in a normal clinical setting on the basis of relatively small amounts of specific training and supervision. The size of changes observed at the end of treatment was substantial

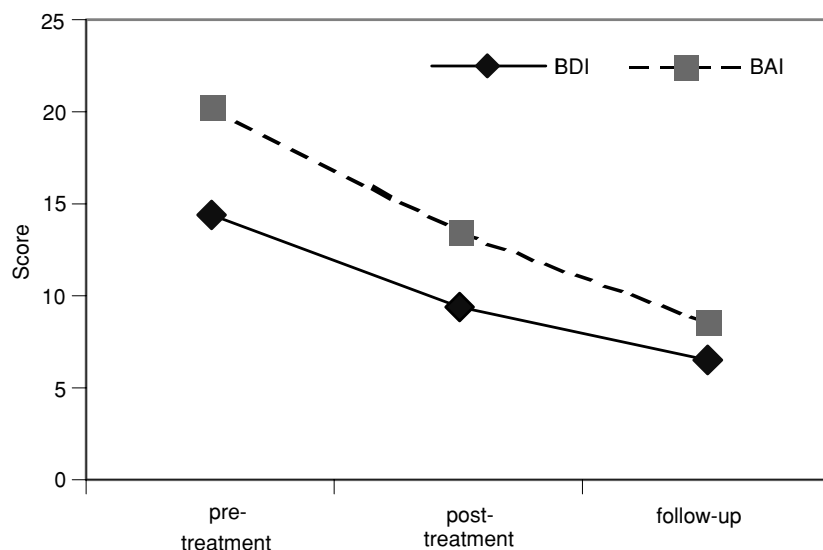


Figure 3. Mean scores on Beck Depression and Anxiety Inventories, pre- and post-treatment and at follow-up (6 or 12 month)

and likely to be clinically significant (in the range 30–90% improvement). The changes were also fully maintained at follow-up. Improvement was also seen in more generic measures of depression and anxiety, and there was some evidence that further improvement in anxiety occurred during the follow-up period.

This study is important because it is the first to show the apparently successful transfer of CBT for severe and persistent health anxiety from an academic research clinic to a routine clinical setting. There are, however, some factors that limit the conclusions that can be drawn. By definition, this generalization study was carried out in a centre that did not previously specialize in the treatment of hypochondriasis, which meant that patients had to be actively recruited from other sources, including the Liaison Psychiatry Unit of the Hospital and direct advertisement. This may have resulted in recruitment of an atypical sample; the demographic variables are consistent with this. For example, the sample includes an unusually high proportion of patients with high educational attainment and in employment. However, there was evidence of considerable comorbidity, and the clinical impression was that there was a relatively high proportion of “complex cases”. Future dissemination research in this field needs to focus primarily on a setting in which patients with severe and persistent hypochondriasis are already being routinely referred. An important feature of this study was the need to adapt treatment strategies to fit the normal working practice of the clinic; that is, the use of group treatment format. The present study indicated that this adaptation is not necessarily a straightforward enterprise. Clearly, the shift in strategy used between groups complicates the interpretation of the results.

The outcome of the present study is similar to that obtained in previous treatment trials of health anxiety (Avia et al., 1996; Clark et al., 1998; Warwick, Clark, Cobb and Salkovskis, 1996), and the degree of change in the main outcome measure is very similar to that previously noted (Salkovskis et al., 2002).

There is now evidence that cognitive-behavioural treatments developed in academic research settings generalize well to “normal” clinical settings; this has previously been shown in CBT for Post Traumatic Stress Disorder (Gillespie et al., 2002). The present finding is the latest demonstration of generalization of specific CBT treatments from the settings in which they were developed; having demonstrated this, there are a range of further questions that need to be addressed. For example, we do not know how the pre-existing levels of expertise of therapists trained in the specific treatment affect results. The optimum amount (and modality) of training and supervision is not known. If CBT is to be effectively disseminated, then it is important that effective training be carried out on a “snowball” basis, where those trained in effective treatment then go on to train others, and so on. Subsequent studies need to evaluate the effectiveness of second and third generation trainers. In dissemination studies conducted so far, including the present one, training and supervision have been provided by clinicians who have been closely involved with the initial development of the treatment itself.

The study described here has been used to develop a more comprehensive randomized controlled trial of CBT compared to generic counselling and waitlist. The results of that larger study will allow firmer conclusions to be drawn, not only about the effectiveness of the treatment, but also the extent to which the treatment effects are due to specific and non-specific factors. It has previously been shown (Clark et al., 1998) that CBT for health anxiety is more effective than a stress-management based package; however, that treatment included the engagement components of CBT delivered by expert CBT trained therapists. The RCT presently under way has avoided this problem.

Acknowledgements

This work was supported by a grant from the Danish Ministry of Social Affairs.

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