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Chapter 6

Cognitive-Behavioural Bibliotherapy for Hypochondriasis

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Abstract

The present study aims to determine whether cognitive behavioural minimal-contact bibliotherapy is acceptable to participants suffering from DSM-IV-TR hypochondriasis, and whether this intervention is able to reduce hypochondriacal complaints, as well as comorbid depressive complaints and trait anxiety.

Participants ($N = 40$, 7 of whom dropped out), were randomised into either an immediate treatment condition or a waiting list condition. The waiting list period consisted of six weeks, as did the experimental period. Participants were sent a book called 'Doctor, I hope it's nothing serious?', containing cognitive behavioural theory and exercises. Measures of hypochondriacal complaints, depressive complaints, and trait anxiety, were taken pre, post and at follow-up (after 3 months). Those in the waiting list group received a second pre-assessment after 6 weeks, and were then enrolled in the bibliotherapy.

Results showed that participants were accepting of the cognitive-behavioural theory described in the book, and found both the theory and exercises very useful, but generally performed the exercises only once. Furthermore, results showed beneficial effects of the intervention: all effect measures decreased significantly over time, with the largest effect at post-assessment.

It is concluded that bibliotherapy can be an efficient aid in reducing hypochondriacal and comorbid complaints, preferably as part of a stepped care programme.

Introduction

Hypochondriacal patients suffer from the fear or conviction of having a serious physical disease, based on the misinterpretation of bodily symptoms (APA, 2000). Recent studies suggest the effectiveness of individual cognitive-behavioural interventions for this disorder (Barsky & Ahern, 2004; Visser & Bouman, 2001; Warwick, Clark, Cobb, & Salkovskis, 1996), and also of short-term psychoeducational courses (Avia, Ruiz, Olivares, Crespo, Guisado, Sánchez, & Varela, 1996; Barsky, Geringer, & Wool, 1988; Bouman, 2002; Buwalda, Bouman, & Van Duijn, 2006).

It has been hypothesised (Gould, Clum, & Shapiro, 1993) that the didactic and self-directed treatment strategies used in psychoeducation, could also very well be imparted by bibliotherapy. This is an intervention in which patients are being supplied with written self-help material, which they can work through independently, with minimal or no contact with a therapist. Bibliotherapy has become popular as a part of a stepped-care treatment program, in which it might be used as a first level of treatment before initiating more costly therapy (Fritzler, Hecker, & Losee, 1997). Advantages of this form of treatment are ease of use, cost-effectiveness, and the potential to provide services to people who are unwilling or unable to be engaged in a more traditional form of therapy (Cuijpers, 1997; Scogin, Hamblin, & Beutler, 1987; Williams, 2001), while it still can contain those non-specific elements in therapies that are thought to cause therapeutic effect, such as providing a clear rationale, a structured approach and training of skills (Zeiss, Lewinsohn, & Muñoz, 1979).

Bibliotherapy can be administered in several ways: as a part of regular psychotherapy, as an independent form of intervention combined with a few sessions with a therapist, and as an independent intervention without therapy sessions. Many studies have centered on bibliotherapy as an independent treatment form, in which it has proven to be effective in the treatment of depression (Cuijpers, 1997; Floyd, Scogin, McKendree-Smith, Floyd, & Rokke, 2004; Gregory, Schwer Canning, Lee, & Wise, 2004; McKendree-Smith, Floyd, & Scogin, 2003; Scogin et al., 1987), sexual dysfunctioning (Van Lankveld, 1998), panic disorder and other anxiety disorders (Lidren, Watkins, Gould, Clum, Asterino, & Tulloch, 1994; Newman, Erickson, Przeworski, & Dzus, 2003; White, 1995; Wright, Clum, Roodman, & Febbraro, 2000), insomnia (Mimeault & Morin, 1999), and alcohol problems (Apodaca & Miller, 2003).

Several meta-analyses have been undertaken, showing favourable effect sizes: Cuijpers (1997) reported a mean effect size of 0.82 for six studies that compared cognitive bibliotherapy participants, suffering from depression, with waiting list control participants. Gregory and others (2004) found an effect size of 0.77 for 17 between groups studies into bibliotherapy for depression, and state that this effect size compares favourably with data from studies of individual therapies. In a meta analysis reviewing bibliotherapy for a large variety of problems, Marrs (1995) analyzed 70 samples and found a mean effect size of 0.56. He states that bibliotherapy appeared more effective for certain problem types, such as assertion training, anxiety, and sexual dysfunctioning, than for others, such as weight loss, impulse control, and studying problems.

Furthermore, he found that the extent of therapist contact during bibliotherapy did not seem to relate to effectiveness as a whole.

Favourable effects of bibliotherapy have not only been found at post-treatment: maintained effects were reported at 8 years follow-up for alcohol problems (Apodaca et al., 2003), at 3 years follow-up for depression (Smith, Floyd, Scogin, & Jamison, 1997), and at 3 and 6 months follow-up for panic disorder (Lidren et al., 1994). These beneficial effects are comparable to therapist delivered interventions (Cuijpers, 1997; Gould & Clum, 1993).

In their state-of-the-art review of treatments known to have been used for hypochondriasis, Taylor and Asmundson (2004) state that hypochondriasis, or health anxiety, has never been treated with bibliotherapy. However, to the best of our knowledge, one study investigated bibliotherapy for health anxiety (Jones, 2002). A total of 40 participants, suffering from health anxiety, as identified by their GPs, was randomised into two conditions: one receiving cognitive bibliotherapy and the other not. Results of this study showed a significant reduction in health anxiety after they had received bibliotherapy (Cohen's $d = 1.12$). This study did suffer from some methodological flaws. Firstly, half of the 40 participants described in this study suffered both from health anxiety, and from identifiable physical diseases, but it was not reported whether participants feared the disease they suffered from. Secondly, it was not stated clearly whether the participants could be diagnosed as suffering from hypochondriasis, they were only identified by their GPs as demonstrating a variety of symptoms of health anxiety. Furthermore, when viewing scores on the Health Anxiety Questionnaire, used in the study to measure health anxiety complaints, substantial differences emerged between the control group and the experimental group (the control group had a mean score of 56.3 at pre-assessment, whereas the experimental group had a mean score of 75.1). Nevertheless, the results provide us with a first indication that bibliotherapy might be beneficial for hypochondriacal complaints.

The first aim of the present study is to find out whether cognitive-behavioural bibliotherapy is an acceptable treatment for people suffering from DSM-IV-TR hypochondriasis. We expect this question to be answered affirmatively, because the psychoeducational approach, be it in group format, has earlier shown to be acceptable to hypochondriacal participants, who were willing to see themselves as students rather than patients.

A second aim is to find out whether cognitive-behavioural bibliotherapy is an effective treatment for hypochondriasis. This question is also expected to be answered affirmatively, because in the recent past, treatments that employed instruction and self-directed practice of coping strategies (i.e. several cognitive-behavioural approaches) seemed most efficacious in the treatment of several disorders (Gould et al., 1993).

Method
Recruitment, screening, and randomisation

By notifying the Dutch national press, acquisition of participants took place over a period of 3 years (2003-2005). Participants were they who expressed their interest in taking part in a psychoeducational course for hypochondriasis

(Bouman, 2002), but who lived too far away from the northern part of the Netherlands, where the course was being taught. They were offered bibliotherapy instead, by means of receiving a book called 'Doctor, I hope it's nothing serious'? (Bouman & Visser, 1993). The intervention was introduced as being similar in theory to the psychoeducational course. Participants were informed that the experimental period would last for six weeks, during which a therapist (the first author) would be available to answer questions the participants might have about the book and/or the exercises. This type of intervention is considered minimal-contact bibliotherapy. Interestingly, none of the participants made use of the possibility to ask questions. Participants were charged 10 euros for the book.

By using a condensed version of the Anxiety Disorders Interview Schedule (ADIS: DiNardio, Brown, & Barlow, 1994), 49 self-referred aspiring participants were screened by telephone for DSM-IV-TR (APA, 2000) somatoform, anxiety, and mood disorders, and asked about previous psychological treatment and somatic illness. The interview led to an evaluation of the presence of any of the disorders mentioned above. During the 30-minute interview, participants were informed about the bibliotherapeutic procedure, and were asked for their informed consent to participate in the study. None of the aspiring participants declined to participate in the study.

Inclusion criteria were: (1) the presence of a DSM-IV-TR diagnosis of hypochondriasis, (2) being over 18 years old, (3) being Dutch speaking, and (4) being willing to participate actively in the course. Exclusion criteria were: (1) the presence of other DSM-IV-TR Axis I disorders more prominent than hypochondriasis, (2) the presence of a serious somatic disease being the focus of the hypochondriacal concern, and (3) a previous or concurrent cognitive-behavioural treatment for hypochondriasis.

After the telephone intake interview, a total of 40 participants were randomly assigned to either the immediate treatment group, or the waiting list control group. The other nine people did not participate for the following reasons: three of them had already been treated elsewhere with cognitive-behavioural treatment, one felt that her complaints were not severe enough to require help, three of them suffered primarily from other disorders (two from panic disorder and one from depression), one candidate was impossible to contact, and one candidate lost interest.

Because the authors were not sure how many participants could finally be included in the study, the first 21 participants started in the immediate treatment condition. When more people aspired to take part in the study, they were assigned to the waiting list control group, ultimately resulting in a group of 19 participants. They waited for six weeks, and then started with six weeks of bibliotherapy.

A total of 8 participants in the immediate treatment group used various types of psychotropic medication (antidepressants, tranquillizers and sleep medication), and 6 participants in the waiting list group did so. They were asked to keep their dosage constant for the sake of the study.

Participants

Two participants in the immediate treatment condition dropped out of the treatment, as did five participants in the waiting list control condition. Reasons for drop-out in the immediate treatment condition were a) changing the dosage of medication, and b) a worsening of hypochondriacal problems, causing the participant to stop the bibliotherapy and seek formal treatment. Reasons for dropout in the waiting list condition were a) already having read the book, b) changing the dosage of medication during the experimental period (reason for dropout of two participants), c) finding the book and assessments too confronting, and d) seeking more formal treatment. ANOVAs showed that dropouts and completers did not differ significantly on any of the variables measured at the first assessment.

Of the participants, 31 (78.1%) were female, and the mean age was 43.8 (*SD* = 13.4). A total of 32 participants (79.7%) were cohabiting or married. Seventeen (42.7%) of the participants had a high educational level, 14 (34.9%) of the participants had a medium level of education, and 7 (17.9%) had a low educational level. Mean duration of hypochondriacal complaints was 14.2 years (*SD* = 15.9). *T*-tests showed that no significant differences were found between the immediate treatment group and the waiting list controlled group regarding these demographic variables.

With regard to comorbidity, a total of 16 participants in both groups reported suffering to some extent from comorbid panic attacks, and 10 from comorbid generalised anxiety complaints. Ten participants had agoraphobic complaints. Furthermore, 20 participants had some form of specific phobic complaint, whereas 10 suffered from social phobic complaints (in varying degrees). One participant suffered from obsessive compulsive complaints. A total of 26 participants had suffered from depressive complaints, either at time of intake or previously. A substantial number of participants suffered from more than one anxiety or depressive complaint. As all of these participants stated that their primary complaint was hypochondriasis, they were included in this study after being informed that hypochondriacal complaints would be the sole focus of the bibliotherapy. There was one significant difference in social phobic comorbid complaints ($p < 0.05$) between the immediate treatment and the waiting list condition. However, after correcting this value by use of the Bonferroni correction, this difference is no longer significant.

Procedure

After returning the first pre-assessment (the immediate treatment group), or the second pre-assessment (the waiting list group) participants were sent a book called: 'Doctor, I hope it's nothing serious?' (Bouman & Visser, 1993). This book is based on cognitive-behavioural theory of hypochondriasis with accompanying exercises. It consists of 100 pages and has been available in bookstores over the last 13 years.

The first chapter of the book, *'Sickness and health'*, is concerned with health and disease, and provides some examples of patients who have hypochondriasis. Furthermore, illness worries are discussed. Chapter 2, *'What are people afraid of?'*, is concerned with different subjects one can be afraid of, such as physical sensations, and medical situations. Chapter 3, *'The origin and consequences of*

health anxiety', discusses how health anxiety can begin and touches on the consequences of being afraid of disease, with also a focus on comorbidity between health anxiety and depression. Chapter 4, *'Why do you remain afraid of illness?'*, discusses negative automatic thoughts and their effect on anxiety, attention to physical symptoms, and behaviour (checking and avoidance), all in terms of the vicious cognitive circle of hypochondriasis (Bouman & Visser, 1998b; Warwick & Salkovskis, 1990). Chapter 5, *'Health anxiety and the environment'*, discusses how one's environment, such as partners, general practitioners and the media can influence and possibly maintain hypochondriacal complaints. Finally, in chapter 6, *'How to help yourself'*, a summary of the previous chapters is provided to the reader, with practical tips derived from the exercises described at the end of each chapter.

Measurements

Evaluation

To determine whether participants found the bibliotherapy acceptable, an evaluation questionnaire was administered at post-assessment. Questions were asked about each chapter of the book: a) how attentively they had read the theoretical part of the chapter (the answering categories being: very attentively / casually / not at all), and b) how useful they thought the chapter was (on a scale from 1 = useless, to 7 = extremely useful). Furthermore, questions were asked about the exercises people were asked to do: a) how many times they had performed the exercises (the answering categories being more than once / once / partly / not at all), and b) how useful they thought the exercises were (on a scale from 1 = useless, to 7 = extremely useful).

To answer the question of effect of the treatment, repeated measures of several complaints were taken at pre-treatment, at post-treatment and at 3 months follow-up.

Primary outcome measures

To answer the question of effect of the bibliotherapy, repeated measures of several complaints were taken at pre-treatment, at post-treatment and at 3 months follow-up.

Hypochondriasis. The Groningen Illness Attitude Scale (GIAS; Visser, 2000) is a self-report instrument consisting of 42 statements, measuring 4 aspects of hypochondriasis. The questionnaire is based on the Illness Attitude Scales (Kellner, 1986) and the Whitely Index (Pilowsky, 1967). Applicability of items is scored on a 5-point scale (ranging from 'never' to 'always'), with a reference period of 7 days. The GIAS consists of four subscales: a) Disease conviction (15 items, e.g. 'I have the symptoms of a serious disease'; $\alpha = 0.92$), b) Bodily symptoms and complaining (12 items, e.g. 'When I feel something in my body, I worry about it'; $\alpha = 0.88$), c) Health anxiety (8 items, e.g. 'I am more afraid of diseases than others'; $\alpha = 0.85$), and d) Checking and avoidance behaviour (7 items, e.g. 'I avoid eating unhealthy foods'; $\alpha = 0.71$). Psychometric evaluation (Visser, 2000) has shown that this questionnaire has satisfactory construct validity and can discriminate between hypochondriacal patients and members of the community.

Trait anxiety. The Dutch authorised version of the trait scale of Spielberger's State Trait Anxiety Questionnaire (STAI) (Van der Ploeg, Defares, & Spielberger, 1980) measures inter-individual differences in anxiety and consists of 20 items.

Depressive complaints. Beck's Depression Inventory (BDI) (Beck, Rush, Shaw, & Emery, 1979; Bouman, Luteijn, Albersnagel, & Van der Ploeg, 1985) measures the severity of depressive symptoms and consists of 21 items.

Results

Analytic plan

Firstly, to address the question of acceptability of the treatment, means and standard deviations of the evaluation questionnaire were computed, and *t*-tests were performed.

Secondly, to establish effect of treatment on hypochondriasis, depressive complaints, and trait anxiety, multilevel analysis was used. Multilevel models were estimated for the three outcome measures. The first step in the modelling process was to find an adequate representation of the variance structure of the repeated assessments, using dummy variables for the first assessment (which is the first pre-test filled out by the participants in the waiting list group), second assessment (the second pre-test for the waiting list group, and the pre-test for the immediate treatment group), the third assessment (post-test), and fourth assessment (follow-up at 3 months). Point of reference in the multilevel model is the second pre-assessment.

In multilevel analysis, the statistical significance of single fixed effects is tested by approximate *t*-tests (Snijders & Bosker, 2000), of which two-sided *p*-values are reported. The significance of multiple fixed effects and of random effects is tested using a likelihood ratio test, based on the deviance, defined as –2 times the log likelihood value. The difference in deviance of two nested models (i.e. models that only differ with respect to the variable(s) to be tested) follows a chi-square distribution, with as many degrees of freedom as the number of parameters to be tested.

Clinical significance was computed by means of reliable change scores, by making use of the formula shown in Figure 6.1, through which a reliable change score (> 1.96) would be unlikely to occur (*p* < 0.05) without actual change (Jacobson & Truax, 1991).

$$RC = (x_2 - x_1) / S_{diff.}$$
$$S_{diff.} = \sqrt{2(S_E)^2}$$

Figure 6.1. The Reliable Change Index.
Note. RC = reliable change; x_1 = a participant's pre-test score; x_2 = the same participant's post-test score; $S_{diff.}$ = the spread of the distribution of change scores that would be expected if no actual change had occurred; S_E = the standard error of measurement.

Furthermore, because of the twofold criterion for clinically significant change (Jacobson, Roberts, Berns, & McGlinchey, 1999), it was determined whether participants after the bibliotherapy ended up in a range that renders them indistinguishable from well-functioning people. For that purpose, GIAS-scores of participants in this study were compared to GIAS-scores of an unselected group from the community (Visser, 2000), by means of t-tests.

Missing data

A substantial number of measurements was not returned by the participants. Of the 33 completers, 14 in the immediate treatment group and 9 in the waiting list group returned the post-assessments, and 11 completers of the immediate treatment group and 8 completers of the waiting list group returned their 3 month follow-up assessments. This is one of the reasons the data were analysed with multilevel analyses. This analysis deals with missing data in the sense that it makes use of all observations, not just complete cases. However, all results described in this section should be viewed with caution.

Acceptability

On the evaluation form, when asked how useful the book was as a whole, the participants rated it with a mean score of 6.1 ($SD = 0.7$, range = 5-7) on a scale of 1 = useless, to 7 = extremely useful. Furthermore, participants were asked to rate the usefulness of both the theoretical part and the exercises of all individual chapters, on the same scale.

The answers regarding usefulness of the theoretical parts of the different chapters ranged from 5.4 to 6.1 ($M = 5.6$, $SD = 1.0$), and the answers regarding usefulness of the exercises ranged from 4.3 to 5.6 ($M = 4.7$, $SD = 1.5$), indicating that participants regarded the theory as significantly ($t = 2.6$, $p = 0.02$) more useful than the exercises. When asked how attentively (the answering possibilities being very attentively, casually, or not at all) participants had read the chapters, almost all participants indicated they had read all chapters very attentively. When asked how many times they had done the exercises (the answering possibilities being more than once, once, partly, or not at all) about half of the participants had done the exercises once, and about a third had done them partly. This varied slightly across chapters, with the exercises accompanying later chapters being performed less often than those accompanying earlier chapters. Analyses by means of t-tests showed no differences between the immediate treatment- and the waiting list condition on any of the questions on the evaluation questionnaire.

Effect of the bibliotherapy: multilevel analysis

Results of the multilevel analyses are shown in Table 6.1. Condition was inserted in the model at first, but was taken out of it because the immediate treatment condition and the waiting list condition did not differ significantly at any of the times of assessment.

Hypochondriacal complaints

With regard to the waiting list period, Table 1 shows that scores did not decrease significantly ($t = 0.2$). At post-assessment, a decrease in hypochondriacal complaints was apparent ($t = -4.3$, $p < 0.00$). At the follow-up after 3 months, scores remained stable.

The between-individual variance of the random effects (488.7, $S.E. = 154.3$) demonstrated the differences in mean scores between all participants, which was substantial. The measurement variance (indicating differences over time within participants) was smaller (301.5, $S.E. = 56.8$), but also considerable.

Depressive complaints

Table 1 indicates that the scores on the BDI did not decrease at all during the waiting list period ($t = 0.0$). Between pre- and post-assessment, the mean score of the BDI did decrease significantly ($t = -2.3$, $p < 0.02$). At 3 months follow-up the scores remained stable.

Again, the between-individual variance was larger (39.0, $S.E. = 11.4$) than the measurement variance (14.9, $S.E. = 2.9$).

Trait anxiety

Scores did not show a significant decrease after the waiting list period ($t = 0.3$) but did so at post-test ($t = -2.4$, $p < 0.02$) for trait anxiety. Scores remained stable at follow-up. Also for this questionnaire, the between-individual variance was larger (69.0, $S.E. = 21.2$) than the measurement variance (36.3, $S.E. = 6.9$).

Effect sizes

At post-test, the effect size was large for the GIAS: 0.86. The effect size found for both the BDI (0.42), and the STAI (0.51) were medium.

Table 1: Multilevel Models of the GIAS, the BDI, and the STAI over Time.

	GIAS			BDI			STAI		
Fixed effects	Estimate	*S.E.*	*t*	Estimate	*S.E.*	*t*	Estimate	*S.E.*	*t*
Intercept (mean score at t2)	94.4	5.0		12.7	1.3		49.9	1.8	
Mean difference at t1 (vs. t2)	1.0	5.8	0.2	0.0	1.3	0.0	0.7	2.1	0.3
Mean difference at t3 (vs. t2)	-21.3	5.0	-4.3***	-2.5	1.1	-2.3**	-4.4	1.8	-2.4*
Mean difference at t4 (vs. t2)	-24.3	5.3	-4.6***	-3.9	1.2	-3.3***	-6.9	1.8	-3.8***
Between individual variance	488.7	154.3		39.0	11.4		69.0	21.2	
Measurement variance	301.5	56.8		14.9	2.9		36.3	6.9	

Note. t1 = pre-measurement 1(waiting list group); t2 = pre-measurement 2 (pre-assessment 2 of the waiting list group, pre-assessment of the immediate treatment group); t3 = post-measurement (after six weeks of bibliotherapy); t4 = follow-up measurement (after 3 months). GIAS = Groningen Illness Attitude Scale; BDI = Beck's Depression Inventory; STAI = The Trait Scale of the Spielberger's State Trait Anxiety Inventory.   * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.00$.

Clinical significance analyses

Reliable change was computed using the formula described in Figure 6.1. The total scale of the GIAS was used ($\alpha = 0.96$). Results showed that at post-assessment (with regard to the second pre-assessment), 3 of the 10 (30 %) participants who returned their post-assessment of the waiting list control group, achieved reliable change, and in the immediate treatment group, 7 out of 16 (43.8 %) of the participants achieved reliable change. At the 3 month follow-up, 4 out of 8 (50 %) participants of the waiting list group showed reliable change, with regard to the second pre-assessment. At the 3 month follow-up, 4 out of 8 (50 %) participants of the waiting list group who returned this assessment showed reliable change with regard to the pre-assessment filled out immediately after the waiting list period. At follow-up, 8 out of 11 (72.7 %) participants of the immediate treatment group who returned this assessment showed reliable change. Because of the substantial amount of missing data, these results should be viewed with caution.

By means of *t*-tests, it was determined whether participants ended up in a range that rendered them indistinguishable from an unselected group after the bibliotherapy. For this purpose, GIAS-scores of all the participants in this study at all times of measurement were compared to those of an unselected group in the community, derived by Visser (2000). For this calculation, both immediate treatment participants and waiting list participants were taken together. At pre-assessment, the participants' mean score was 97.3 ($SD = 28.1$), at post-assessment their mean score was 73.2 ($SD = 23.5$), and at 3 month follow-up their mean score was 70.0 ($SD = 22.7$). When these scores were compared to the mean score on the GIAS for the unselected group ($M = 30.5$ ($SD = 25.3$)) by means of *t*-tests, results showed that at pre-assessment, the *t*-value was 13.0 ($p < 0.00$), at post-assessment, the *t*-value was 8.6 ($p < 0.00$), and at follow-up, the *t*-value was 7.3 ($p < 0.00$). This means that at the 3 months follow-up, participants were more similar to the unselected group than at pre-assessment, but the differences between groups were still significant.

Discussion

The first aim of the present study was to determine whether cognitive-behavioural bibliotherapy could be an acceptable intervent treatment for people suffering from hypochondriasis. A second aim was to find out whether cognitive-behavioural bibliotherapy was an effective treatment for hypochondriasis.

With regard to the first aim, it was found that the participants did value the book largely, by rating it and its separate chapters as highly useful. Participants appreciated the theoretical part of the intervention more than the exercises. Many participants carried out the exercises only once or partly, and the exercises described in the later chapters were carried out less often than those described in the first chapters. Still, when rating the exercises, participants did find them useful: overall they received a mean of 4.7 out of 7 ($SD = 1.5$).

With regard to the second aim of this study, bibliotherapy proved to be effective in reducing hypochondriacal complaints, depressive complaints, and trait anxiety. All outcome measures showed on average a significant decrease,

for both hypochondriasis and trait anxiety at post-assessment, and for depressive symptomatology at follow-up. Mean scores on hypochondriasis- and trait anxiety measurements had decreased further at follow-up after 3 months, although not significantly so. These beneficial results show that hypochondriasis can be tackled by an unintrusive type of intervention in which no contact with a therapist is involved. This was shown earlier by Jones (2002), who found a reduction in health worry, fear of illness, reassurance-seeking, and trait anxiety after bibliotherapy as well.

The results of the present study are also in line with findings for bibliotherapy for other disorders. In a meta-analysis into bibliotherapy for depression, Gregory and others (2004) found a mean effect size of 0.77, and Marrs (1995), analyzing bibliotherapy for several disorders, found a mean effect size of 0.56. Cuijpers (1997) reported an effect size of 0.82 for bibliotherapy with depression. The effect size found in the present study for the primary outcome measure of hypochondriasis at post-test (0.86) is comparable.

Despite some authors stating that bibliotherapy could be as effective as therapist delivered interventions (Cuijpers, 1997; Gould & Clum, 1993), when comparing the effect size found for bibliotherapy in the present study, it is not as large as those found for individual CBT for hypochondriasis, reported in a meta-analysis by Looper and Kirmayer (2002). These effect sizes ranged from 1.31 to 1.98. This difference might be due to individual CBT taking longer to complete than the bibliotherapy studied here.

With regard to clinical significance, several participants showed reliable change, both at post-assessment and at the 3 month follow-up. However, participants' scores at post-assessment and at follow-up did not fall within the range of an unselected group, indicating that bibliotherapy did not lead to 'normality'. Furthermore, we have no data on clinical significance of those participants who did not return all measurements, which makes interpretation difficult.

There are several limitations to this study. Firstly, there were many participants who did not return their questionnaires, so that nothing conclusive can be said about them. In future research, it should be studied whether missing patterns influence outcome.

Secondly, generalising the beneficial effects found in this study is difficult, because the patients participating in this study could be a subgroup of hypochondriacal patients. They were self-referred and often well-functioning with respect to holding jobs and maintaining successful relationships.

Furthermore, this group of patients identified themselves as being hypochondriacal in articles in local newspapers or advertisements, and were ready to adopt a psychological point of view according to their physical complaints. This may not be the case for hypochondriacal patients who dwell in general mental health care, and therefore it would be interesting to study usefulness and effectiveness of cognitive-behavioural bibliotherapy for hypochondriasis in this setting.

In addition, although beneficial mean effects were apparent in this study, they should still be considered *mean* effects. The large differences between participants, illustrated in the between participant variance in the multilevel

analyses (see Table 6.1), show that participants differed greatly in the way they benefited from the intervention. There is still little information about which therapy is suitable for which patient, and future research should focus on predicting treatment effect. Also, it might be helpful to study acceptability of bibliotherapy in a qualitative fashion, to learn more about the participants' individual opinion about the treatment offered.

Finally, none of the participants made use of the possibility to contact the researchers and ask questions about the book's theory or exercises. We are not sure whether this was because the book was easy to read, and everything was clear to the participants, or whether participants were not interested in the treatment. This should be assessed more thoroughly in the future, as long as it is done within the boundaries of minimal contact bibliotherapy.

In line with Fritzler, Hecker and Losee (1997) we would like to conclude that cognitive-behavioural bibliotherapy can be a useful and effective tool as a first step in a stepped care program for hypochondriacal patients. The intervention could be helpful in decreasing the length of waiting lists currently preventing patients from being treated promptly in general mental health care. Through bibliotherapy, participants can gain insight in their complaints in a short period of time, and show a decrease in complaints, without the involvement of a therapist.