

# **Counselling for Medically Unexplained Symptoms**

## **A summary of the literature**

**March 2010**

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## Introduction and Overview

This bulletin summarises studies that have been conducted relating to the psychological treatment of medically unexplained symptoms, focussing on systematic reviews and randomised controlled trials to provide high quality evidence of research relating to psychological therapies. It is based on a search of Medline, Psychinfo and the Cochrane Library for studies published since 2000. Keywords used in the search included medically unexplained symptoms, somatoform disorders and somatization. Individual studies have not been critically appraised; evidence for this bulletin has been based on the authors' conclusions alone and thus should be treated with a degree of caution.

This bulletin presents the evidence for systematic reviews and randomised controlled trials in summary tables. These are followed by an alphabetical listing of all the studies included.

In summary, the studies presented suggest:

- Evidence from systematic reviews of the effectiveness of psychodynamic therapies, CBT and problem solving therapies
- A need for more rigorous research as there were methodological weaknesses in the studies included in systematic reviews
- A need for further investigation into the effectiveness of CBT conducted by primary health care professionals (two studies suggested that CBT was no more effective than usual care – this contradicts the majority of evidence relating to the effectiveness of CBT)
- A need for further investigation into the effectiveness of CBT in the longer term (RCTs suggested conflicting results on this issue)
- Evidence for the cost effectiveness of CBT due to reduced health care utilisation

Although research into different counselling approaches is increasing, there is still a lack of research in these areas compared to CBT. Furthermore all the systematic reviews drew attention to methodological weaknesses in randomised controlled trials. Further studies should seek to improve the quality of trials and other types of research evidence.

## Level of evidence: systematic reviews and meta-analyses

A range of systematic reviews and meta-analyses provide evidence of the effectiveness of psychological therapies. The majority noted the lack of good quality studies that are included in their reviews and meta-analyses and the need to view the conclusions with caution.

Author	Condition	Therapy	Authors' Conclusions
Abbass, A., S. Kisely, et al. (2009)	Somatic disorders	Short-term psychodynamic psychotherapy	STPP may be effective for a range of medical and physical conditions underscoring the role of patients emotional adjustment in overall health. Future research should include high-quality randomized and clinical effectiveness studies with attention to healthcare use and costs.
Abbass, A. A., J. T. Hancock, et al (2006)	Common mental disorders (including somatic)	Short-term psychodynamic psychotherapy	STPP shows promise, with modest to moderate, often sustained gains for a variety of patients. However, given the limited data and heterogeneity between studies, these findings should be interpreted with caution. Furthermore, variability in treatment delivery and treatment quality may limit the reliability of estimates of effect for STPP. Larger studies of higher quality and with specific diagnoses are warranted.
Allen, L. A., J. I. Escobar, et al. (2002)	Multiple unexplained physical symptoms	Psychosocial treatments	Various psychosocial interventions have been investigated with polysymptomatic somatizers. Although the majority of studies suggest psychosocial treatments benefit this population, the literature is tarnished by methodological shortcomings. Effect sizes are modest at best. Long-term improvement has been demonstrated in fewer than one-quarter of the trials. Although seemingly beneficial, psychosocial treatments have not yet been shown to have a lasting and clinically meaningful influence on the physical complaints of polysymptomatic somatizers
Huibers, M. J., A. J. Beurskens, et al. (2007)	Somatisation and other health disorders	Psychosocial treatments provided by GPs	Ten studies were included in the review. Selected studies addressed different psychosocial interventions for five distinct disorders or health complaints. There is good evidence that problem-solving treatment by general practitioners is effective for major depression. The evidence concerning the remaining interventions for other health complaints (retribution or cognitive behavioural group therapy for somatisation, cognitive behavioural therapy for unexplained fatigue, counselling for smoking cessation, behavioural interventions to reduce alcohol reduction) is either limited or conflicting. In general, there is little

			available evidence on the use of psychosocial interventions by general practitioners. Of the psychosocial interventions reviewed, problem-solving treatment for depression may offer promise, although a stronger evidence-base is required and the effectiveness in routine practice remains to be demonstrated. More research is required to improve the evidence-base on this subject.
Kroenke, K. (2007)	Somatoform disorders	Any treatment (including psychological)	The author concluded that there is strong evidence favouring the use of cognitive-behavioural therapy for somatoform disorders and moderate evidence supporting a psychiatric consultation letter. Evidence for antidepressants is promising. Although these conclusions appear to be supported by the data, the questionable quality of the primary studies and the methodological limitations of the review make it difficult to assess their reliability.
Kroenke, K. and R. Swindle (2000)	Somatization and symptom syndromes	CBT	Both individual and group CBT can be an effective treatment for patients with somatization or symptom syndromes. Benefits can occur whether or not psychological distress is ameliorated. Since chronic symptoms are exceptionally common and most studies were conducted in referral populations, the optimal sequencing of CBT in treating primary care patients and the identification of those most likely to accept and respond to therapy should be further evaluated.
Malouff, J. M., E. B. Thorsteinsson, et al. (2007)	Mental and physical health problems	Problem Solving Therapy	The meta-analysis, encompassing 2895 participants, showed that PST is significantly more effective than no treatment ( $d=1.37$ ), treatment as usual ( $d=0.54$ ), and attention placebo ( $d=0.54$ ), but not significantly more effective than other bona fide treatments offered as part of a study ( $d=0.22$ ). Significant moderators included whether the PST included problem-orientation training, whether homework was assigned, and whether a developer of PST helped conduct the study.
Stetter, F. and S. Kupper (2002)	Various including - somatoform pain disorder (unspecified type)	Autogenic training	Sixty studies (35 randomized controlled trials [RCT]) qualified for inclusion in the meta-analysis. Medium-to-large effect sizes (ES) occurred for pre-post comparisons of disease-specific AT-effects, with the RCTs showing larger ES. When AT was compared to real control conditions, medium ES were found. Comparisons of AT versus other psychological treatment mostly resulted in no

			<p>effects or small negative ES. This pattern of results was stable at follow-up. Unspecific AT-effects (i.e., effects on mood, cognitive performance, quality of life, and physiological variables) tended to be even larger than main effects. Separate meta-analyses for different disorders revealed a significant reduction of the heterogeneity of ES. Positive effects (medium range) of AT and of AT versus control in the meta-analysis of at least 3 studies were found for tension headache/migraine, mild-to-moderate essential hypertension, coronary heart disease, asthma bronchiale, somatoform pain disorder (unspecified type), Raynaud's disease, anxiety disorders, mild-to-moderate depression/dysthymia, and functional sleep disorders.</p>
Thomson, A. B. and L. A. Page (2007)	Psychotherapy	Hypochondriasis	<p>Cognitive therapy, behavioural therapy, cognitive behavioural therapy and behavioural stress management are effective in reducing symptoms of hypochondriasis. However, studies included in the review used small numbers of participants and do not allow estimation of effect size, comparison between different types of psychotherapy or whether people are "cured". Most long-term outcome data were uncontrolled. Further studies should make use of validated rating scales, assess treatment acceptability and effect on resource use, and determine the active ingredients and nonspecific factors that are important in psychotherapy for hypochondriasis.</p>

### Level of evidence: reviews (non-systematic)

The studies below review a range of treatments and conditions, however it was not clear from the abstract whether these were systematic reviews or meta-analyses. Therefore no judgement can be made regarding the quality of the review evidence.

Author	Condition	Therapy	Authors' Conclusions
Jackson, J. L., P. G. O'Malley, et al. (2006)	symptom syndromes	CBT	This article reviews the randomized controlled trial data for the use of antidepressant and cognitive-behavior therapy for 11 somatic syndromes: irritable bowel syndrome, chronic back pain, headache, fibromyalgia, chronic fatigue syndrome, tinnitus, menopausal symptoms, chronic facial pain, noncardiac chest pain, interstitial cystitis, and chronic pelvic pain. For some syndromes, the data for or against treatment effectiveness is relatively robust, for many, however, the data, one way or the other is scanty.
Leichsenring, F. (2005)	Somatoform disorder (amongst others)	Psychodynamic Psychotherapy	Four RCTs provided evidence relating to somatoform disorder. According to results of process research, outcome in psychodynamic psychotherapy is related to the competent delivery of therapeutic techniques and to the development of a therapeutic alliance. With regard to psychoanalytic therapy, controlled quasi-experimental effectiveness studies provide evidence that psychoanalytic therapy is (1) more effective than no treatment or treatment as usual, and (2) more effective than shorter forms of psychodynamic therapy. Conclusions are drawn for future research.
Mai, F. (2004)	Somatization disorder	Range of treatments	SD is a psychiatric disorder, but patients are reluctant to see and be treated by psychiatrists. They frequently are managed by nonpsychiatric physicians who have limited understanding of the condition. Cognitive-behavioural therapy (CBT) is the most efficacious treatment in SD, although antidepressants and supportive psychotherapy also have a role for some patients. A cadre of clinicians with training in the theory and practice of CBT for SD is required. They need to be based both in the community and in tertiary health care centres, where most patients with this condition are located.

Nezu, A. M., C. Maguth Nezu, et al. (2001)	Medically unexplained symptoms	CBT	This review provided support for the efficacy of CBT for medically unexplained symptoms, CFS, FMS and NCCP, but it also identified a variety of methodological limitations regarding the included studies. Further research is warranted before the efficacy of CBT for these disorders can be established.
Tazaki, M. and K. Landlaw (2006)	Somatoform disorder	CBT	According to reviews, randomized controlled trials are limited, but the efficacy of the intervention is quite impressive. Most of the studies use multiple treatment strategies, and no standardized treatment methods have been established. In general, the following steps are taken in CBT treatments: (1) assessment; (2) rationale of treatment choice; (3) course of treatment; (4) evaluation of treatment; and (5) reviewing treatment effects. In CBT, functional analysis in the assessment session is the key to success, to identify the relationship among discriminative stimuli and consequences, in order to reduce the undesirable behaviour, and the most effective approach of the treatment would be a combination of multiple techniques. However, as the efficacy of the treatments is established, expansion of accurate knowledge of functional analysis and training sessions for health care providers and patients should be provided. Further research should explore the effect of individual techniques, and comparison should be made to identify the relative benefits of the techniques using both individual, and group format

## Level of evidence: Randomised Controlled Trials

The studies below provide evidence of the effectiveness (or otherwise) of a range of psychological therapies which are not covered within systematic reviews or where trials have been published since the above systematic reviews. All the studies included below were randomised controlled trials, and therefore should provide good level evidence of the effectiveness of the treatments concerned, however the quality of each study has not been assessed here.

Author	Condition	Therapy	Authors' Results and Conclusions
Allen, L. A., R. L. Woolfolk, et al. (2006).	Somatization disorder (multiple medically unexplained symptoms)	CBT	84 patients were included in the study. Fifteen months after baseline, somatization symptoms were significantly less severe in the group treated with CBT (0.84 points on the CGI-SD 7-point scale) ( $P < .001$ ). Patients treated with CBT also were significantly more likely to be rated as either very much improved or much improved than patients treated with only augmented standard medical care (40% [ $n = 17$ ] vs 5% [ $n = 2$ ]). Cognitive-behavioral therapy was associated with greater improvements in self-reported functioning and somatic symptoms and a greater decrease in health care costs. For patients diagnosed as having SD, CBT may produce clinical benefits beyond those that result from the current state-of-the-art treatment
Arnold, I. A., M. W. de Waal, et al. (2009).	Medically unexplained symptoms	CBT provided by primary care physician	65 participants were allocated to care-as-usual or the experimental condition. RESULTS: After 6 and 12 months, the cognitive-behavioral intervention by trained family physicians was not more effective than care-as-usual. CONCLUSION: Possibly, the intensity of treatment was insufficient for the severe and persistent symptoms that were encountered in primary care.
Barsky, A. J. and D. K. Ahern (2004).	Hypochondriasis	CBT	102 individuals were assigned to CBT and 85 were assigned to medical care as usual. The sociodemographic and clinical characteristics of the 2 groups were similar at baseline. Using an intent-to-treat analytic strategy, a consistent pattern of statistically and clinically significant treatment effects was found at both 6- and 12-month follow-up, adjusting for baseline covariates that included educational level, generalized psychiatric distress, and participant status (patient vs volunteer). At 12-month follow-up, CBT patients had significantly lower levels of hypochondriacal symptoms, beliefs, and attitudes ( $P < .001$ ) and health-related anxiety ( $P = .009$ ). They also had significantly less impairment of social role functioning ( $P = .05$ ) and intermediate activities of daily living



			(P<.001). Hypochondriacal somatic symptoms were not improved significantly by treatment. CONCLUSION: This brief, individual CBT intervention, developed specifically to alter hypochondriacal thinking and restructure hypochondriacal beliefs, appears to have significant beneficial long-term effects on the symptoms of hypochondriasis.
Bleichardt, G., B. Timmer, et al. (2004)	Multiple somatoform symptoms	CBT	191 Patients were randomly assigned to (I) "standard treatment (CBT) + soma (group treatment)" or (II) "standard treatment (CBT)+ relaxation training." A waiting control group consisted of 34 patients. Results show high impairment of the sample prior to treatment. At the 1-year follow-up, all outcome criteria were significantly reduced. The differential effect of the additional soma treatment was significant only for a reduction of visits to the doctor. Greatest longitudinal effect sizes were found for the reduction of somatoform symptoms. Considering the subjects' high initial impairment, the outcome results are encouraging. The specific effect on health care use highlights the socioeconomic relevance.
Buwalda, F. M., T. K. Bouman, et al. (2007)	Hypochondriasis	Psychoeducation	Two 6-week psychoeducational courses for hypochondriasis are compared, one based on the cognitive-behavioural approach, and the other on the problem-solving approach. 48 patients were randomized into one of the two course conditions. Results showed beneficial effects of both courses. Few differential treatment effects were found: in both conditions all effect measures decreased significantly over time (p<0.01). Acceptability and feasibility of both courses were rated highly by their respective participants. It is concluded that both courses can be considered equally beneficial and effective over time, with the effects evident immediately after treatment and maintained over the follow-up period.
Escobar, J. I., M. A. Gara, et al. (2007)	Medically unexplained symptoms	CBT	Patients were randomly assigned to receive either CBT plus a consultation letter or usual clinical care plus a consultation letter. A significantly greater proportion of patients in the intervention group had physical symptoms rated by clinicians as "very much improved" or "much improved" compared with those in the usual care group (60% vs 25.8%; odds ratio = 4.1; 95% confidence interval, 1.9-8.8; P<.001). CBT's effect on unexplained physical symptoms was

			greatest at treatment completion, led to relief of symptoms in more than one-half of the patients, and persisted months after the intervention, although its effectiveness gradually diminished. CBT also led to significant improvements in patient-reported levels of physical symptoms, patient-rated severity of physical symptoms, and clinician-rated depression, but these effects were no longer noticeable at follow-up.
Greeven, A., A. J. van Balkom, et al. (2007) Greeven, A., A. J. van Balkom, et al. (2009)	Hypochondriasis	CBT+paroxetine	The authors randomly assigned 112 subjects with hypochondriasis according to DSM-IV criteria to 16 weeks of outpatient treatment with CBT, paroxetine, or a placebo. CBT and paroxetine were significantly superior to placebo, but did not differ significantly from each other. both are effective short-term treatment options for subjects with hypochondriasis. Following a naturalistic follow-up period of 18 months the initial treatment effects of CBT and paroxetine were sustained suggesting that both are also effective in the longer term
Lidbeck, J. (2003).	Somatization disorders	Group CBT	The long-term follow-up (of a previous controlled study) manifested maintained improvement with respect to hypochondriasis. There was additional reduction of anxiety and psychosocial preoccupation, whereas somatization and depression-anxiety scores improved progressively. CONCLUSION: A short cognitive-behavioural group treatment of psychosomatic patients can be useful in primary care and may manifest maintained or progressive beneficial outcome.
Magallon, R., M. Gili, et al. (2008)	Abridged Somatization Disorder (SSI 4,6)	CBT (group and individual)	Sets out methodology for a randomised controlled trial that will examine both group and individual CBT approaches to treating patients with abridged somatization disorder.
Sumathipala, A., S. Siribaddana, et al. (2008)	Medically unexplained symptoms	CBT administered by primary care physicians	Cognitive-behavioural therapy given by primary care physicians after a short course of training is no more efficacious than structured care. Natural remission is an unlikely explanation for improvements in people with chronic medically unexplained symptoms, but lack of a 'treatment as usual' arm limits further conclusions. Further research on enhanced structured care, medical assessment and structured care incorporating simple elements of CBT principles is worthy of consideration.
Fava, G. A., S. Grandi, et al.	Hypochondriasis	Explanatory therapy	Twenty patients with DSM-IV hypochondriasis were randomly assigned to either explanatory therapy or a waiting list control. All patients received usual

(2000).			medical care from their physicians. In both groups, explanatory therapy was significantly associated with a reduction of hypochondriacal fears and beliefs, improvement in affective disturbances and anxiety sensitivity, and a decrease in health care utilization. Therapeutic gains were maintained at follow-up. Substantial residual symptomatology, however, remained.
Robins, P. M., S. M. Smith, et al. (2005)	Reccurent paediatric abdominal pain	Family therapy (CBT)	Children and parents participating in the combined SMC + CBT intervention reported significantly less child and parent reported child abdominal pain than children in the SMC intervention immediately following the intervention and up to 1 year following study entry, as well as significantly fewer school absences. Significant differences in functional disability and somatization were not revealed.
Schweickhardt, A., A. Larisch, et al. (2007)	Somatization disorders	Psychotherapeutic sessions based on the modified reattribution model	Short-term psychotherapeutic interventions for somatizing patients in general hospitals have a moderately better effect on motivation for psychotherapy and contacting a psychotherapist than psychoeducational reading material alone. Future studies should attempt to prove the effectiveness of short-term psychoeducational interventions for somatizing patients in the general hospital.
Visser, S. and T. K. Bouman (2001)	Hypochondriasis	Exposure plus response prevention vs cognitive therapy	Seventy-eight patients with a DSM-IV diagnosis of hypochondriasis were randomly assigned to (1) exposure in vivo plus response prevention, (2) cognitive therapy or (3) a waiting-list control conditions. Patients in both active treatment conditions improved significantly on all the measures, whereas the patients in the waiting-list control condition did not improve. The improvements were clinically significant. Exposure in vivo plus response prevention and cognitive therapy were equally effective. The improvements were maintained at the 7 months follow up.

## Costs and healthcare utilisation

Author	Condition	Therapy	Authors' Conclusions
Hiller, W., M. M. Fichter, et al. (2003).	Somatoform disorders	CBT	The SFD patients who had received CBT improved significantly with respect to physical symptom distress, health anxieties, dysfunctional beliefs towards body and health, depression and psychosocial functioning. Their outpatient plus inpatient charges during the 2 years prior to treatment were about 2.2-fold higher than for average patients of the health system. At the 2-year follow-up, we found treatment-related cost offset of 382 (-24.5%) for outpatient and 1098 (-36.7%) for inpatient care. Indirect socioeconomic costs due to days lost from work decreased by 6702 (-35.3%). Per patient savings of 32,174 (-63.9%) were found in a subgroup of somatizing high-utilizers.
Kolk, A. M., S. Schagen, et al. (2004)	Multiple medically unexplained physical symptoms	Psychological intervention (unspecified)	98 subjects were assigned to psychological intervention by a qualified therapist plus care as usual by a general practitioner (GP) or care as usual only. ANOVAs for repeated measures showed that self-reported and GP-registered unexplained physical symptoms decreased from pretest to posttest to follow-up. Psychological symptoms and consultations decreased from pretest to posttest. GP-registered explained symptoms did not decrease. However, intervention and control groups did not differ in symptom reduction. Path analysis revealed two paths to a decrease in self-reported unexplained physical symptoms: from more negative affectivity via more psychological attribution and more pretreatment anxiety, and from more somatic attribution via more psychological attribution and more pretreatment anxiety.
Luo, Z., J. Goddeeris, et al. (2007).	Medically unexplained physical symptoms	CBT and pharmacological therapy	The difference in total costs (\$1,071) for the 12-month intervention was not significant. The treatment group had significantly higher costs for antidepressants than the usual-care group (\$192 higher) during the intervention, and a larger proportion received antidepressants. The intervention group used less medical care outside the HMO and missed one less work day per month on average (1.23 days), indicating a slight improvement in productivity, but the difference was not significant. The between-group

			<p>difference in estimated total cost was smaller in the year after the intervention (difference of \$341) but were not significant. CONCLUSIONS: The total costs for the intervention group were not significantly different, but the group had greater use of antidepressants. Coupled with findings of improved mental health outcomes for this group in a previous study, the results indicate that the intervention may be cost-effective. The longer-term impact needs to be further studied.</p>
Margalit, A. P. and A. El-Ad (2008)	Unexplained medical symptoms	Biopsychosocial intervention	<p>In the intervention group, the annual number of visits to consultants declined from 31.8 to 12.6 (<math>p &lt; .0001</math>) and 14.6 (<math>p = .72</math>) after 1 and 2 years, respectively; visits to hospital emergency wards declined from 33.5 to 4.1 (<math>p &lt; .0001</math>) and 3.5 (<math>p = .18</math>); and in-hospital days declined from 112.7 to 19 (<math>p &lt; .0001</math>) and 6.5 (<math>p = .25</math>). Those parameters remained unchanged in the control group. Five years follow-up demonstrated a reduction in mortality rates between the two groups: 6/21 versus 17/21 (<math>p &lt; 0.001</math>). CONCLUSIONS: When compared to usual care, a BPS intervention was followed by a decline in patients' visits to medical settings and health-care expenditures, along with significant decline in mortality rate.</p>
Myhr, G. and K. Payne (2006).	Mental disorders	CBT	<p>We identified 22 health economic studies involving CBT for mood, anxiety, psychotic, and somatoform disorders. Across health care settings and patient populations, CBT alone or in combination with pharmacotherapy represented acceptable value for health dollars spent, with CBT costs offset by reduced health care use. CONCLUSIONS: International evidence suggests CBT is cost-effective. Greater access to CBT would likely improve outcomes and result in cost savings. Future research is warranted to evaluate the economic impact of CBT in Canada</p>

## Alphabetical Listing of all the studies included in the above tables

(Abstracts taken from Medline, Psycinfo, Cochrane Library and DARE)

Abbass, A., S. Kisely, et al. (2009). "Short-term psychodynamic psychotherapy for somatic disorders: Systematic review of meta-analysis of clinical trials." *Psychotherapy and Psychosomatics* 78(5): 265-274.

Background: Somatic symptom disorders are common, disabling and costly. Individually provided short-term psychodynamic psychotherapies (STPP) have shown promising results. However, the effectiveness of STPP for somatic symptom disorders has not been reviewed. Methods: We undertook a systematic review of randomized controlled trials and controlled before and after studies. The outcomes included psychological symptoms, physical symptoms, social-occupational function, healthcare utilization and treatment continuation. Results: A total of 23 studies met the inclusion criteria and covered a broad range of somatic disorders. Thirteen were RCTs and 10 were case series with pre-post outcome assessment. Of the included studies, 21/23 (91.3%), 11/12 (91.6%), 16/19 (76.2%) and 7/9 (77.8%) reported significant or possible effects on physical symptoms, psychological symptoms, social-occupational function and healthcare utilization respectively. Meta-analysis was possible for 14 studies and revealed significant effects on physical symptoms, psychiatric symptoms and social adjustment which were maintained in long-term follow-up. Random-effect modeling attenuated some of these relationships. There was a 54% greater treatment retention in the STPP group versus controls. Conclusion: STPP may be effective for a range of medical and physical conditions underscoring the role of patients emotional adjustment in overall health. Future research should include high-quality randomized and clinical effectiveness studies with attention to healthcare use and costs. (PsycINFO Database Record (c) 2009 APA, all rights reserved)

Abbass, A. A., J. T. Hancock, et al. (2006). "Short-term psychodynamic psychotherapies for common mental disorders." *Cochrane Database Syst Rev*(4): CD004687.

BACKGROUND: Over the past 40 years, short-term psychodynamic psychotherapies (STPP) for a broad range of psychological and somatic disorders have been developed and studied. Four published meta-analyses of STPP, using different methods and samples, have found conflicting results. OBJECTIVES: This review evaluated the efficacy of STPP relative to minimal treatment and non-treatment controls for adults with common mental disorders. SEARCH STRATEGY: We searched CCDANCTR-Studies and CCDANCTR-References on 25/4/2005, CENTRAL, MEDLINE, CINAHL, EMBASE, PsycINFO, DARE and Biological Abstracts were also searched. We contacted trialists and checked references from papers retrieved. SELECTION CRITERIA: All randomised controlled trials (RCT) of adults with common mental disorders, in which a brief psychodynamic therapy lasting less than 40 hours in total, and provided in individual format, were included. DATA COLLECTION AND ANALYSIS: Three reviewers working in pairs evaluated studies. Studies were selected only if pairs of reviewers agreed they met inclusion criteria. A third reviewer was consulted if two reviewers could not reach consensus. Data were collected and entered into Review Manager. Study quality was assessed and scored by pairs of raters. Publication bias was assessed using a funnel plot. Sensitivity analyses were also conducted. MAIN RESULTS: 23 studies of 1431 randomised patients with common mental disorders were included. These studies evaluated STPP for general, somatic, anxiety, and depressive symptom reduction, as well as social adjustment. Outcomes for most categories of disorder suggested significantly greater improvement in the treatment versus the control groups, which were generally maintained in medium and long term follow-up. However, only a small number of studies contributed data for each category of disorder, there was significant heterogeneity between studies, and results were not always maintained in sensitivity analyses. AUTHORS' CONCLUSIONS: STPP shows promise, with modest to moderate, often sustained gains for a variety of patients. However, given the limited data and heterogeneity between studies, these findings should be interpreted with caution. Furthermore, variability in treatment delivery and treatment quality may limit the reliability of estimates of effect for STPP. Larger studies of higher quality and with specific diagnoses are warranted.

Allen, L. A., J. I. Escobar, et al. (2002). "Psychosocial treatments for multiple unexplained physical symptoms: a review of the literature." *Psychosom Med* 64(6): 939-50.

OBJECTIVE: Patients presenting with multiple medically unexplained physical symptoms, termed polysymptomatic somatizers, often incur excessive healthcare charges and fail to respond to standard medical treatment. The present article reviews the literature assessing the efficacy of psychosocial treatments for polysymptomatic somatizers. METHODS: Relevant articles were identified by scanning Medline and PsychLit. Thirty-four randomized, controlled studies were located. Whenever possible results from each study were transformed into effect sizes. An analysis of the efficacy of the psychotherapeutic approaches is provided. RESULTS: Various psychosocial interventions have been investigated with polysymptomatic somatizers. Although the majority of studies suggest psychosocial treatments benefit this population, the literature is tarnished by methodological shortcomings. Effect sizes are modest at best. Long-term improvement has been demonstrated in fewer than one-quarter of the trials.

**CONCLUSIONS:** Although seemingly beneficial, psychosocial treatments have not yet been shown to have a lasting and clinically meaningful influence on the physical complaints of polysymptomatic somatizers.

Allen, L. A., R. L. Woolfolk, et al. (2006). "Cognitive-behavioral therapy for somatization disorder: a randomized controlled trial." *Arch Intern Med* 166(14): 1512-8.

**BACKGROUND:** Patients diagnosed as having somatization disorder (SD) who present with a lifetime history of multiple, medically unexplained physical symptoms represent a significant challenge to health care providers. To date, no psychotherapeutic or pharmacologic intervention has been found to produce clinically meaningful improvement in symptoms or functioning of patients with SD. We examined the efficacy of cognitive-behavioral therapy (CBT) for SD. **METHODS:** Eighty-four participants meeting criteria for SD were randomly assigned to 1 of 2 conditions: (1) standard medical care augmented by a psychiatric consultation intervention or (2) a 10-session, manualized, individually administered CBT regimen added to the psychiatric consultation intervention. Assessments were conducted at baseline and 3, 9, and 15 months after baseline. The primary outcome measure was the severity scale of the Clinical Global Impression Scale for Somatization Disorder (CGI-SD). Secondary outcome measures were responder status as determined by clinical ratings, self-reported measures of physical functioning and somatic symptoms, and health care utilization assessed via medical records. **RESULTS:** Fifteen months after baseline, somatization symptoms were significantly less severe in the group treated with CBT (0.84 points on the CGI-SD 7-point scale) ( $P < .001$ ). Patients treated with CBT also were significantly more likely to be rated as either very much improved or much improved than patients treated with only augmented standard medical care (40% [ $n = 17$ ] vs 5% [ $n = 2$ ]). Cognitive-behavioral therapy was associated with greater improvements in self-reported functioning and somatic symptoms and a greater decrease in health care costs. **CONCLUSION:** For patients diagnosed as having SD, CBT may produce clinical benefits beyond those that result from the current state-of-the-art treatment.

Arnold, I. A., M. W. de Waal, et al. (2009). "Medically unexplained physical symptoms in primary care: a controlled study on the effectiveness of cognitive-behavioral treatment by the family physician." *Psychosomatics* 50(5): 515-24.

**BACKGROUND:** Disabling medically unexplained physical symptoms occur in 16% of all patients in primary care. **OBJECTIVE:** The aim of this study was to assess the effectiveness of a cognitive-behavioral intervention by the family physician. **METHOD:** In a controlled design with detailed information on patient selection, 6,409 patients were screened on somatoform disorder, and 65 participants were allocated to care-as-usual or the experimental condition. **RESULTS:** After 6 and 12 months, the cognitive-behavioral intervention by trained family physicians was not more effective than care-as-usual. **CONCLUSION:** Possibly, the intensity of treatment was insufficient for the severe and persistent symptoms that were encountered in primary care.

Barsky, A. J. and D. K. Ahern (2004). "Cognitive behavior therapy for hypochondriasis: a randomized controlled trial." *JAMA* 291(12): 1464-70.

**CONTEXT:** Hypochondriasis is a chronic, distressing, and disabling condition that is prevalent in ambulatory medical practice. Until recently, no specific treatment has been clearly demonstrated to be effective. **OBJECTIVE:** To assess the efficacy of a cognitive behavior therapy (CBT) for hypochondriasis. **DESIGN:** A randomized, usual care control group design, conducted between September 1997 and November 2001. The individual primary care physician was the unit of randomization, and all patients clustered within each physician's practice were assigned to the experimental treatment (individual CBT and a consultation letter to the primary care physician) or to the control condition. Subjects were assessed immediately before and 6 and 12 months after the completion of treatment. **SETTING AND PARTICIPANTS:** Participants were 80 patients from primary care practices and 107 volunteers responding to public announcements, all of whom exceeded a predetermined cutoff score on a hypochondriasis self-report questionnaire on 2 successive occasions. **INTERVENTION:** A scripted, 6-session, individual CBT intervention was compared with medical care as usual. The CBT was accompanied by a consultation letter sent to the patient's primary care physician. **MAIN OUTCOME MEASURES:** Hypochondriacal beliefs, fears, attitudes, and somatic symptoms; role function and impairment. **RESULTS:** A total of 102 individuals were assigned to CBT and 85 were assigned to medical care as usual. The sociodemographic and clinical characteristics of the 2 groups were similar at baseline. Using an intent-to-treat analytic strategy, a consistent pattern of statistically and clinically significant treatment effects was found at both 6- and 12-month follow-up, adjusting for baseline covariates that included educational level, generalized psychiatric distress, and participant status (patient vs volunteer). At 12-month follow-up, CBT patients had significantly lower levels of hypochondriacal symptoms, beliefs, and attitudes ( $P < .001$ ) and health-related anxiety ( $P = .009$ ). They also had significantly less impairment of social role functioning ( $P = .05$ ) and intermediate activities of daily living ( $P < .001$ ). Hypochondriacal somatic symptoms were not improved significantly by treatment. **CONCLUSION:** This brief, individual CBT intervention, developed specifically to alter hypochondriacal thinking and restructure hypochondriacal beliefs, appears to have significant beneficial long-term effects on the symptoms of hypochondriasis.

Bleichardt, G., B. Timmer, et al. (2004). "Cognitive-behavioural therapy for patients with multiple somatoform symptoms--a randomised controlled trial in tertiary care." *J Psychosom Res* 56(4): 449-54.

OBJECTIVE: (a) To evaluate the effect of a cognitive-behavioural inpatient treatment and (b) to analyse the differential efficacy of an additional ("soma") group management training of somatisation. METHODS: The final sample consisted of 191 patients with somatisation syndrome (patients with at least eight DSM-IV somatoform symptoms). Patients were randomly assigned to (I) "standard treatment + soma" or (II) "standard treatment + relaxation training." A waiting control group consisted of 34 patients. All patients were diagnosed with a structured clinical interview for DSM-IV and received an interview on medical consulting behaviour and questionnaires concerning somatoform symptoms, general psychopathology, subjective health status, and life satisfaction. RESULTS: Results show high impairment of the sample prior to treatment. At the 1-year follow-up, all outcome criteria were significantly reduced. The differential effect of the additional soma treatment was significant only for a reduction of visits to the doctor. Greatest longitudinal effect sizes were found for the reduction of somatoform symptoms. CONCLUSION: Considering the subjects' high initial impairment, the outcome results are encouraging. The specific effect on health care use highlights the socioeconomic relevance.

Buwalda, F. M., T. K. Bouman, et al. (2007). "Psychoeducation for hypochondriasis: a comparison of a cognitive-behavioural approach and a problem-solving approach." *Behav Res Ther* 45(5): 887-99.

In this study, two 6-week psychoeducational courses for hypochondriasis are compared, one based on the cognitive-behavioural approach, and the other on the problem-solving approach. Effects of both courses on hypochondriacal complaints, depression, trait anxiety, and number of problems encountered in daily life, are measured pre-treatment, post-treatment, and at 1- and 6-month follow-up. Participants (N=48, of whom 4 dropped out), suffering from DSM-IV hypochondriasis, were randomized into one of the two course conditions. Results showed beneficial effects of both courses. Few differential treatment effects were found: in both conditions all effect measures decreased significantly over time ( $p < 0.01$ ). However, between- and inter-individual variability in decrease-patterns was of considerable size, leading to large deviations from the mean pattern. Acceptability and feasibility of both courses were rated highly by their respective participants. It is concluded that both courses can be considered equally beneficial and effective over time, with the effects evident immediately after treatment and maintained over the follow-up period.

Escobar, J. I., M. A. Gara, et al. (2007). "Effectiveness of a time-limited cognitive behavior therapy type intervention among primary care patients with medically unexplained symptoms." *Ann Fam Med* 5(4): 328-35.

PURPOSE: Patients seeking care for medically unexplained physical symptoms pose a major challenge at primary care sites, and there are very few well-accepted and properly evaluated interventions to manage such patients. METHODS: We tested the effectiveness of a cognitive behavior therapy (CBT)-type intervention delivered in primary care for patients with medically unexplained physical symptoms. Patients were randomly assigned to receive either the intervention plus a consultation letter or usual clinical care plus a consultation letter. Physical and psychiatric symptoms were assessed at baseline, at the end of treatment, and at a 6-month follow-up. All treatments and assessments took place at the same primary care clinic where patients sought care. RESULTS: A significantly greater proportion of patients in the intervention group had physical symptoms rated by clinicians as "very much improved" or "much improved" compared with those in the usual care group (60% vs 25.8%; odds ratio = 4.1; 95% confidence interval, 1.9-8.8;  $P < .001$ ). The intervention's effect on unexplained physical symptoms was greatest at treatment completion, led to relief of symptoms in more than one-half of the patients, and persisted months after the intervention, although its effectiveness gradually diminished. The intervention also led to significant improvements in patient-reported levels of physical symptoms, patient-rated severity of physical symptoms, and clinician-rated depression, but these effects were no longer noticeable at follow-up. CONCLUSIONS: This time-limited, CBT-type intervention significantly ameliorated unexplained physical complaints of patients seen in primary care and offers an alternative for managing these common and problematic complaints in primary care settings.

Fava, G. A., S. Grandi, et al. (2000). "Explanatory therapy in hypochondriasis." *J Clin Psychiatry* 61(4): 317-22; quiz 323.

OBJECTIVE: The aim of the study was to evaluate the effectiveness of individual explanatory therapy in hypochondriasis. METHOD: Twenty patients with DSM-IV hypochondriasis were randomly assigned to 2 groups. One received explanatory therapy and was assessed again after a 6-month follow-up. The other was first assigned to a waiting list and subsequently treated with explanatory therapy. All patients received usual medical care from their physicians. Assessments involved both observer and self-rated instruments. RESULTS: In both groups, explanatory



therapy was significantly associated with a reduction of hypochondriacal fears and beliefs, improvement in affective disturbances and anxiety sensitivity, and a decrease in health care utilization. Therapeutic gains were maintained at follow-up. Substantial residual symptomatology, however, remained. CONCLUSION: The results suggest that hypochondriasis is a treatable condition and that explanatory therapy is a viable therapeutic tool. Further research should disclose the actual components of the mechanism of change in hypochondriacal patients.

Graham, J., O. Manor, et al. (2007). "Introducing humanistic group counselling for somatisation in a primary care practice: Preliminary findings." *Counselling & Psychotherapy Research* 7(4): 220-226.

Can group counselling help patients who present with symptoms that cannot be explained medically? Preliminary results of working with one such group are reported. Six patients in a primary care practice were offered weekly sessions for half a year. The findings suggest that the patients attended all group sessions. The patients reported experiences known to be related to group counselling, and when the group ended, patient reports show that the severity of their problems was reduced significantly ( $p < .001$ ). Furthermore, during the six months after the group ended patients significantly ( $p < .025$ ) reduced their visits to their general practitioners. These results seem to call for wider use of humanistic group counselling with somatising patients and further research into the impact of such form of counselling. (PsycINFO Database Record (c) 2009 APA, all rights reserved)

Greeven, A., A. J. van Balkom, et al. (2009). "Cognitive behavioral therapy versus paroxetine in the treatment of hypochondriasis: an 18-month naturalistic follow-up." *J Behav Ther Exp Psychiatry* 40(3): 487-96.

BACKGROUND: The present maintenance study investigated whether the reduction in hypochondriacal complaints after initial treatment with CBT or paroxetine sustained during a follow-up period and whether psychiatric severity at pretest predicted the course of hypochondriacal symptoms. METHOD: A naturalistic follow-up period of 18 months after a 16-week RCT consisting of 33 patients initially allocated to a CBT condition and 29 patients to a paroxetine condition. The main outcome measure was the Whiteley Index. RESULTS: The initial treatment effect of CBT and paroxetine sustained during the follow-up period. No significant differences between CBT and paroxetine were found. Treatment course could not be predicted by psychiatric comorbidity. CONCLUSION: CBT and paroxetine are both effective treatments for hypochondriasis in the long term.

Greeven, A., A. J. van Balkom, et al. (2007). "Cognitive behavior therapy and paroxetine in the treatment of hypochondriasis: a randomized controlled trial." *Am J Psychiatry* 164(1): 91-9.

OBJECTIVE: This study, to the authors' knowledge, is the first randomized controlled trial comparing the efficacy of cognitive behavior therapy (CBT), paroxetine, and a placebo (administered in a double blind fashion) in the treatment of hypochondriasis. METHOD: The authors randomly assigned 112 subjects with hypochondriasis according to DSM-IV criteria to 16 weeks of outpatient treatment with CBT, paroxetine, or a placebo. The main outcome measure was the Whiteley Index. The authors made pretest and posttest assessments and analyzed all outcome measures using a General Linear Model 3x2 repeated measures analysis of variance with Helmert contrasts. The authors considered subjects who scored at least one standard deviation below the mean pretest score on the Whiteley Index as responders. All analyses were conducted on intent-to-treat and completer bases. RESULTS: On the Whiteley Index, Helmert contrasts on the intent-to-treat and completer cohorts revealed that pooled CBT and paroxetine were significantly superior to placebo, but did not differ significantly from each other. The responder analysis on the intent-to-treat cohort and completer cohort, respectively, revealed the following percentages of responders per group: CBT group, 45% and 54%; paroxetine group, 30% and 38%; and placebo group, 14% and 12%. In the intent-to-treat analysis, only CBT differed significantly from the placebo. In the completer analysis, both paroxetine and CBT differed significantly from the placebo. CONCLUSIONS: CBT or paroxetine are effective short-term treatment options for subjects with hypochondriasis.

Hiller, W., M. M. Fichter, et al. (2003). "A controlled treatment study of somatoform disorders including analysis of healthcare utilization and cost-effectiveness." *J Psychosom Res* 54(4): 369-80.

OBJECTIVE: The purpose of this prospective study was to evaluate the effects of cognitive-behavioral treatment (CBT) on mental health status and healthcare utilization in patients with somatoform disorders (SFD) of a specialized tertiary care center. METHODS: According to DSM-IV interviews, 54 patients had somatization disorder (SD), 51 abridged somatization syndrome (SSI-8) and 67 other defined SFD. A clinical non-SFD comparison group consisted of 123 patients. Treatment effects were controlled against the waiting list. Cost calculations for the 2-year periods before and after treatment were based on medical and billing records from health insurance companies. RESULTS: The SFD patients improved significantly with respect to physical symptom distress, health anxieties, dysfunctional beliefs towards body and health, depression and psychosocial functioning. Their outpatient plus inpatient charges during the 2 years prior to treatment were about 2.2-fold higher than for average patients of the health system.

At the 2-year follow-up, we found treatment-related cost offset of 382 (-24.5%) for outpatient and 1098 (-36.7%) for inpatient care. Indirect socioeconomic costs due to days lost from work decreased by 6702 (-35.3%). Per patient savings of 32,174 (-63.9%) were found in a subgroup of somatizing high-utilizers. CONCLUSION: The results encourage including treatment strategies to reduce somatoform illness behavior into clinical practice.

Huibers, M. J., A. J. Beurskens, et al. (2007). "Psychosocial interventions by general practitioners." *Cochrane Database Syst Rev*(3): CD003494.

**BACKGROUND:** Many patients visit their general practitioner (GP) because of problems that are psychosocial in origin. However, for many of these problems there is no evidence-based treatment available in primary care, and these patients place time-consuming demands on their GP. Therefore, GPs could benefit from tools to help these patients more effectively and efficiently. In this light, it is important to assess whether structured psychosocial interventions might be an appropriate tool for GPs. Previous reviews have shown that psychosocial interventions in primary care seem more effective than usual care. However, these interventions were mostly performed by health professionals other than the GP. **OBJECTIVES:** To examine the effectiveness of psychosocial interventions by general practitioners by assessing the clinical outcomes and the methodological quality of selected studies. **SEARCH STRATEGY:** The search was conducted using the CCDANCTR-Studies and CCDANCTR-References on 20/10/2005, The Cochrane Library, reference lists of relevant studies for citation tracking and personal communication with experts. **SELECTION CRITERIA:** Randomised controlled trials, controlled clinical trials and controlled patient preference trials addressing the effectiveness of psychosocial interventions by GPs for any problem or disorder. Studies published before November 2005 were eligible for entry. **DATA COLLECTION AND ANALYSIS:** Methodological quality was independently assessed by two review authors using the Maastricht-Amsterdam Criteria List. The qualitative and quantitative characteristics of selected trials were independently extracted by two review authors using a standardised data extraction form. Levels of evidence were used to determine the strength of the evidence available. Results from studies that reported similar interventions and outcome measures were meta-analysed. **MAIN RESULTS:** Ten studies were included in the review. Selected studies addressed different psychosocial interventions for five distinct disorders or health complaints. There is good evidence that problem-solving treatment by general practitioners is effective for major depression. The evidence concerning the remaining interventions for other health complaints (reattribution or cognitive behavioural group therapy for somatisation, cognitive behavioural therapy for unexplained fatigue, counselling for smoking cessation, behavioural interventions to reduce alcohol reduction) is either limited or conflicting. **AUTHORS' CONCLUSIONS:** In general, there is little available evidence on the use of psychosocial interventions by general practitioners. Of the psychosocial interventions reviewed, problem-solving treatment for depression may offer promise, although a stronger evidence-base is required and the effectiveness in routine practice remains to be demonstrated. More research is required to improve the evidence-base on this subject.

Jackson, J. L., P. G. O'Malley, et al. (2006). "Antidepressants and cognitive-behavioral therapy for symptom syndromes." *CNS Spectr* 11(3): 212-22.

Somatic symptoms are common in primary care and clinicians often prescribe antidepressants as adjunctive therapy. There are many possible reasons why this may work, including treating comorbid depression or anxiety, inhibition of ascending pain pathways, inhibition of prefrontal cortical areas that are responsible for "attention" to noxious stimuli, and the direct effects of the medications on the syndrome. There are good theoretical reasons why antidepressants with balanced norepinephrine and serotonin effects may be more effective than those that act predominantly on one pathway, though head-to-head comparisons are lacking. For the 11 painful syndromes review in this article, cognitive-behavioral therapy is most consistently demonstrated to be effective, with various antidepressants having more or less randomized controlled data supporting or refuting effectiveness. This article reviews the randomized controlled trial data for the use of antidepressant and cognitive-behavior therapy for 11 somatic syndromes: irritable bowel syndrome, chronic back pain, headache, fibromyalgia, chronic fatigue syndrome, tinnitus, menopausal symptoms, chronic facial pain, noncardiac chest pain, interstitial cystitis, and chronic pelvic pain. For some syndromes, the data for or against treatment effectiveness is relatively robust, for many, however, the data, one way or the other is scanty.

Kolk, A. M., S. Schagen, et al. (2004). "Multiple medically unexplained physical symptoms and health care utilization: outcome of psychological intervention and patient-related predictors of change." *J Psychosom Res* 57(4): 379-89.

**OBJECTIVES:** To test the effect of psychological intervention on multiple medically unexplained physical symptoms, psychological symptoms, and health care utilization in addition to medical care as usual. To identify patient-related predictors of change in symptoms and care utilization. **METHODS:** In a randomized controlled trial, subjects were assigned to one of two conditions: psychological intervention by a qualified therapist plus care as usual by a general practitioner (GP) or care as usual only. Participants (N=98) were administered a standardized interview and several outcome measures at intake and after 6 months and 12 months after intake. GPs rated medically unexplained

and explained symptoms and consultations over a period of 1 1/2 years. RESULTS: ANOVAs for repeated measures showed that self-reported and GP-registered unexplained physical symptoms decreased from pretest to posttest to follow-up. Psychological symptoms and consultations decreased from pretest to posttest. GP-registered explained symptoms did not decrease. However, intervention and control groups did not differ in symptom reduction. Path analysis revealed two paths to a decrease in self-reported unexplained physical symptoms: from more negative affectivity via more psychological attribution and more pretreatment anxiety, and from more somatic attribution via more psychological attribution and more pretreatment anxiety. CONCLUSION: Intervention and control groups did not differ in symptom reduction. Reduction of self-reported medically unexplained symptoms was well predicted by patient-related symptom perception variables, whereas the prediction of change in registered symptoms and consultations requires a different model.

Kroenke, K. (2007) Efficacy of treatment for somatoform disorders: a review of randomized controlled trials (Structured abstract). *Psychosomatic Medicine* 881-888

CRD Summary

The author concluded that there is strong evidence favouring the use of cognitive-behavioural therapy for somatoform disorders and moderate evidence supporting a psychiatric consultation letter. Evidence for antidepressants is promising. Although these conclusions appear to be supported by the data, the questionable quality of the primary studies and the methodological limitations of the review make it difficult to assess their reliability.

CRD commentary

The research objective and inclusion criteria were clear but only one database was searched, thus some studies might have been missed. Moreover, as the search was restricted to articles published in English, the review may be subject to publication and language biases. It is unclear whether steps were taken to minimise error and bias in the study selection and data extraction processes by having more than one reviewer make decisions independently. There is no evidence that study validity was systematically assessed, which makes it difficult to evaluate the evidence presented. The heterogeneity of the studies makes the narrative synthesis appropriate, but the 'vote counting approach' used is crude, as the author noted. It was also noted that the reporting of multiple outcomes in most studies, with no pre-specified primary outcome, may bias the review in favour of positive findings. Although the author's conclusions appear to be supported by the data, the heterogeneity and questionable quality of the primary studies, the restricted literature search, lack of information about study quality and poor reporting of review methods, make it difficult to assess their reliability.

Implications of the review for practice and research

Practice: The author stated that CBT is the best established treatment for several somatoform disorders. A consultation letter to the PCP also appears to be beneficial and there is some evidence to support the use of antidepressants.

Research: The author stated that it needs to be determined whether the effect of antidepressants on somatoform disorders is due to a general reduction in depression and anxiety, or whether antidepressants have a specific effect on somatic symptoms. Research is also needed to determine the optimal balance between PCP care, collaborative care and referral for CBT. A wider range of therapies warrants further research (e.g. psychological therapies other than CBT, optimising pain relief, pain self-management programmes). Combination treatments should also be investigated.

Kroenke, K. and R. Swindle (2000). "Cognitive-behavioral therapy for somatization and symptom syndromes: a critical review of controlled clinical trials." *Psychother Psychosom* 69(4): 205-15.

OBJECTIVE: Few treatments for somatization have been proven effective. In the past decade, however, clinical trials of cognitive-behavioral therapy (CBT) have been promising. Our aim was to critically review and synthesize the evidence from these trials. METHODS: A search of the Medline database from 1966 through July 1999 was conducted to identify controlled trials designed to evaluate the efficacy of CBT in patients with somatization or symptom syndromes. RESULTS: A total of 31 controlled trials (29 randomized and 2 nonrandomized) were identified. Twenty-five studies targeted a specific syndrome (e.g. chronic fatigue, irritable bowel, pain) while 6 focused on more general somatization or hypochondriasis. Primary outcome assessment included physical symptoms, psychological distress and functional status in 28, 26 and 19 studies, respectively. Physical symptoms appeared the most responsive: CBT-treated patients improved more than control subjects in 71% of the studies and showed possibly greater improvement (i.e., a trend) in another 11% of the studies. A definite or possible advantage of CBT for reducing psychological distress was demonstrated in only 38 and 8% of studies, and for improving functional status in 47 and 26%. Group therapy and interventions as brief as 5 sessions proved efficacious. Benefits were sustained for up to 12 months. CONCLUSION: CBT can be an effective treatment for patients with somatization or symptom syndromes. Benefits can occur whether or not psychological distress is ameliorated. Since chronic symptoms are exceptionally common and most studies were conducted in referral populations, the optimal sequencing of CBT in treating primary care patients and the identification of those most likely to accept and respond to therapy should be further evaluated.

Leichsenring, F. (2005). "Are psychodynamic and psychoanalytic therapies effective?: A review of empirical data." *Int J Psychoanal* 86(Pt 3): 841-68.

There is a need for empirical outcome research in psychodynamic and psychoanalytic therapy. However, both the approach of empirically supported therapies (EST) and the procedures of evidence-based medicine (EBM) have severe limitations making randomised controlled trials (RCTs) an absolute standard. After a critical discussion of this approach, the author reviews the empirical evidence for the efficacy of psychodynamic psychotherapy in specific psychiatric disorders. The review aims to identify for which psychiatric disorders RCTs of specific models of psychodynamic psychotherapy are available and for which they are lacking, thus providing a basis for planning further research. In addition, results of process research of psychodynamic psychotherapy are presented. As the methodology of RCTs is not appropriate for psychoanalytic therapy, effectiveness studies of psychoanalytic therapy are reviewed as well. Studies of psychodynamic psychotherapy published between 1960 and 2004 were identified by a computerised search using Medline, PsycINFO and Current Contents. In addition, textbooks and journal articles were used. Twenty-two RCTs were identified of which 64% had not been included in the 1998 report by Chambless and Hollon. According to the results, for the following psychiatric disorders at least one RCT providing evidence for the efficacy of psychodynamic psychotherapy was identified: depressive disorders (4 RCTs), anxiety disorders (1 RCT), post-traumatic stress disorder (1 RCT), somatoform disorder (4 RCTs), bulimia nervosa (3 RCTs), anorexia nervosa (2 RCTs), borderline personality disorder (2 RCTs), Cluster C personality disorder (1 RCT), and substance-related disorders (4 RCTs). According to results of process research, outcome in psychodynamic psychotherapy is related to the competent delivery of therapeutic techniques and to the development of a therapeutic alliance. With regard to psychoanalytic therapy, controlled quasi-experimental effectiveness studies provide evidence that psychoanalytic therapy is (1) more effective than no treatment or treatment as usual, and (2) more effective than shorter forms of psychodynamic therapy. Conclusions are drawn for future research.

Lidbeck, J. (2003). "Group therapy for somatization disorders in primary care: maintenance of treatment goals of short cognitive-behavioural treatment one-and-a-half-year follow-up." *Acta Psychiatr Scand* 107(6): 449-56.

**OBJECTIVE:** The objective of this study was to evaluate the maintenance of treatment goals of a short cognitive-behavioural group treatment programme for the management of somatization disorders in primary care. **METHOD:** In a previous controlled 6-month follow-up study, patients with somatization disorders (n=32) improved with respect to illness and somatic preoccupation, hypochondriasis, and medication usage. In the present report the same group of patients were also investigated one-and-a-half year after initial treatment. **RESULTS:** The long-term follow-up manifested maintained improvement with respect to hypochondriasis. There was additional reduction of anxiety and psychosocial preoccupation, whereas somatization and depression-anxiety scores improved progressively. **CONCLUSION:** A short cognitive-behavioural group treatment of psychosomatic patients can be useful in primary care and may manifest maintained or progressive beneficial outcome.

Luo, Z., J. Goddeeris, et al. (2007). "Costs of an intervention for primary care patients with medically unexplained symptoms: a randomized controlled trial." *Psychiatr Serv* 58(8): 1079-86.

**OBJECTIVE:** This study sought to determine whether an intervention for patients with medically unexplained symptoms in primary care reduced total costs, components of cost, and longer-term costs and whether it led to decreased service use outside the health maintenance organization (HMO). **METHODS:** A randomized controlled trial involving 206 patients with medically unexplained symptoms was conducted in a staff-model HMO. The protocol emphasized the provider-patient relationship and included cognitive-behavioral therapy and pharmacological management. Cost data for medical treatments were derived from the HMO's electronic database. Patients were interviewed about work days lost and out-of-pocket expenses for medical care outside the HMO. **RESULTS:** The difference in total costs (\$1,071) for the 12-month intervention was not significant. The treatment group had significantly higher costs for antidepressants than the usual-care group (\$192 higher) during the intervention, and a larger proportion received antidepressants. The intervention group used less medical care outside the HMO and missed one less work day per month on average (1.23 days), indicating a slight improvement in productivity, but the difference was not significant. The between-group difference in estimated total cost was smaller in the year after the intervention (difference of \$341) but were not significant. **CONCLUSIONS:** The total costs for the intervention group were not significantly different, but the group had greater use of antidepressants. Coupled with findings of improved mental health outcomes for this group in a previous study, the results indicate that the intervention may be cost-effective. The longer-term impact needs to be further studied.

Magallon, R., M. Gili, et al. (2008). "Cognitive-behaviour therapy for patients with Abridged Somatization Disorder (SSI 4,6) in primary care: a randomized, controlled study." *BMC Psychiatry* 8: 47.

**BACKGROUND:** Somatoform disorders are characterized by the presence of multiple somatic symptoms without an organic cause that completely explains their symptoms. These patients generate a high cost in health services. We aim to evaluate the effectiveness and feasibility of a cognitive-behaviour therapy (CBT) programme, administered in group and individual formats in primary care for patients who are diagnosed with abridged somatization disorder. **METHOD/DESIGN:** Design: Multicentre, randomized, controlled trial involving 3 groups, one of which is the control group consisting of standardized recommended treatment for somatization disorder in primary care (Smith's norms) and the 2 others, the intervention groups, consisting of cognitive-behavioural therapy (10 sessions) administered in individual format (intervention group 1) or in group format (intervention group 2). **Setting:** 29 primary care health centres in the province of Zaragoza and 3 primary care health centres in the province of Mallorca, Spain. **Sample:** N = 204 patients, (68 in each of the three groups), aged 18-65 years, able to understand and read Spanish, who fulfil Escobar's criteria of Abridged Somatization Disorder (SSI 4,6), stable with pharmacotherapy over the previous month, and who will remain stable for the next 3 months in the doctor's opinion, having signed informed consent. **Intervention:** Control group: Standardized recommended treatment for somatization disorder in primary care (Smith's norms). Intervention group: 10 weekly sessions of CBT, following a protocol designed by Prof. Escobar's group at UMDNJ, USA. There are 2 different treatment conditions: individual and group format. **Measurements:** Survey on the use of health services, number and severity of somatic symptoms, anxiety, depression, quality of life and clinical global impression. The interviewers will not know which group the patient belongs to (blind). The assessments will be carried out at baseline, post-treatment, 6 months and 12 post-treatment. **Main variables:** Utilization of health services, number and severity of somatic symptoms. **Analysis:** The analysis will be per intent to treat. We will use the general linear models of the SPSS v.15 statistical package, to analyse the effect of treatment on the result variable (utilization of health services, number and severity of somatic symptoms). **DISCUSSION:** It is necessary to develop more effective psychological treatments for somatoform disorders. This randomised clinical trial will determine whether cognitive behaviour therapy, both in group or in individual format, is effective for the treatment of these patients. **TRIAL REGISTRATION:** Current controlled trials ISRCTN69944771.

Mai, F. (2004). "Somatization disorder: a practical review." *Can J Psychiatry* 49(10): 652-62.

**OBJECTIVE:** This paper reviews the present state of knowledge on the etiology, prevalence, diagnosis, and treatment of somatization disorder (SD). **METHOD:** A comprehensive review of the literature on SD is described under the above headings. **RESULTS:** SD is a common condition that is not well managed by many physicians. Patients with SD get caught between the cracks of the health care system, with expensive consequences. SD is a psychiatric disorder, but patients are reluctant to see and be treated by psychiatrists. They frequently are managed by nonpsychiatric physicians who have limited understanding of the condition. Cognitive-behavioural therapy (CBT) is the most efficacious treatment in SD, although antidepressants and supportive psychotherapy also have a role for some patients. **CONCLUSIONS:** A cadre of clinicians with training in the theory and practice of CBT for SD is required. They need to be based both in the community and in tertiary health care centres, where most patients with this condition are located.

Malouff, J. M., E. B. Thorsteinsson, et al. (2007). "The efficacy of problem solving therapy in reducing mental and physical health problems: a meta-analysis." *Clin Psychol Rev* 27(1): 46-57.

This paper describes a meta-analysis of 31 studies that examined the efficacy of problem solving therapy (PST). The meta-analysis, encompassing 2895 participants, showed that PST is significantly more effective than no treatment ( $d=1.37$ ), treatment as usual ( $d=0.54$ ), and attention placebo ( $d=0.54$ ), but not significantly more effective than other bona fide treatments offered as part of a study ( $d=0.22$ ). Significant moderators included whether the PST included problem-orientation training, whether homework was assigned, and whether a developer of PST helped conduct the study.

Margalit, A. P. and A. El-Ad (2008) Costly patients with unexplained medical symptoms: a high-risk population. *Patient education and counseling* 173-8

**OBJECTIVES:** To identify a group of costly patients with unexplained medical symptoms (UMS), and address their needs. **METHODS:** Prospective controlled trial; 42 patients with annual costs of care of \$6500 or more were randomized into an intervention and a usual care group. A primary care team with expertise in the biopsychosocial (BPS) approach implemented the intervention. **RESULTS:** In the intervention group, the annual number of visits to consultants declined from 31.8 to 12.6 ( $p<.0001$ ) and 14.6 ( $p=.72$ ) after 1 and 2 years, respectively; visits to hospital emergency wards declined from 33.5 to 4.1 ( $p<.0001$ ) and 3.5 ( $p=.18$ ); and in-hospital days declined from 112.7 to 19 ( $p<.0001$ ) and 6.5 ( $p=.25$ ). Those parameters remained unchanged in the control group. Five years follow-up demonstrated a reduction in mortality rates between the two groups: 6/21 versus 17/21 ( $p<0.001$ ). **CONCLUSIONS:** When compared to usual care, a BPS intervention was followed by a decline in patients' visits to medical settings and

health-care expenditures, along with significant decline in mortality rate. PRACTICE IMPLICATION: Costly UMS patients should be identified every year and treated using a BPS approach.

Martin, A., E. Rauh, et al. (2007). "A one-session treatment for patients suffering from medically unexplained symptoms in primary care: a randomized clinical trial." *Psychosomatics* 48(4): 294-303.

The aim of the study was to evaluate a one-session cognitive-behavior treatment (CBT) versus standard medical care for 140 primary-care patients with multiple somatoform symptoms. DSM-IV diagnoses were assessed with structured interviews. Primary outcome variables were healthcare utilization, number, and severity of somatoform symptoms, and secondary outcome measures were psychopathology dimensions. Assessments were done at study enrollment, at 4-weeks, and at 6-month follow-up. General acceptance of CBT was high (positive session evaluations, low dropout rate: 15%). Using an intent-to-treat analytic strategy, both groups improved. Yet results showed a stronger reduction in doctor visits and somatization severity in CBT versus standard care.

Myhr, G. and K. Payne (2006). "Cost-effectiveness of cognitive-behavioural therapy for mental disorders: implications for public health care funding policy in Canada." *Can J Psychiatry* 51(10): 662-70.

OBJECTIVE: Publicly funded cognitive-behavioural therapy (CBT) for mental disorders is scarce in Canada, despite proven efficacy and guidelines recommending its use. This paper reviews published data on the economic impact of CBT to inform recommendations for current Canadian mental health care funding policy. METHOD: We searched the literature for economic analyses of CBT in the treatment of mental disorders. RESULTS: We identified 22 health economic studies involving CBT for mood, anxiety, psychotic, and somatoform disorders. Across health care settings and patient populations, CBT alone or in combination with pharmacotherapy represented acceptable value for health dollars spent, with CBT costs offset by reduced health care use. CONCLUSIONS: International evidence suggests CBT is cost-effective. Greater access to CBT would likely improve outcomes and result in cost savings. Future research is warranted to evaluate the economic impact of CBT in Canada.

Nezu, A. M., C. Maguth Nezu, et al. (2001) Cognitive-behavior therapy for medically unexplained symptoms: a critical review of the treatment literature (Structured abstract). *Behavior Therapy* 537-583

#### Authors' objectives

To review the existing literature regarding cognitive-behaviour therapy (CBT) for medically unexplained symptoms and three related disorders: chronic fatigue syndrome (CFS), fibromyalgia syndrome (FMS) and noncardiac chest pain (NCCP).

#### Authors' conclusions

This review provided support for the efficacy of CBT for medically unexplained symptoms, CFS, FMS and NCCP, but it also identified a variety of methodological limitations regarding the included studies. Further research is warranted before the efficacy of CBT for these disorders can be established.

#### CRD commentary

The review aim was clearly set out and supported by a priori defined inclusion criteria. The search was somewhat limited as only two electronic databases were searched. In addition, there were no efforts to identify unpublished literature and it was unclear whether non-English language studies were sought. Relevant studies may therefore have been missed. While methodological issues relating to the included studies were discussed, there was no formal validity assessment. The studies were pooled appropriately in a narrative synthesis and grouped sensibly in the reporting of the results. No details relating to the review process, such as how the inclusion assessment and data extraction were carried out, were reported. Hence, it is not possible to determine whether steps were taken to minimise bias in this process. The authors' conclusions appear justified based on the findings, but they should be viewed in light of the methodological limitations of the review.

#### Implications of the review for practice and research

Practice: The authors stated that CBT was found to be effective in significantly improving the medical status of the patients reviewed. However, the findings of the review do not provide unequivocal support for CBT in these indications. Research: The authors stated that more research evaluating the efficacy of a wide range of CBT strategies is needed. Such research should include adequate control groups, use manualised protocols, include treatment integrity measures, use more multimodal assessment procedures for outcome measurement, and describe in detail the population under study. Research should delineate specific treatment strategies, and provide for an assessment of the specific impact of a particular intervention on a given hypothesised mechanism of action and its resulting impact on changes in physical symptoms. It should also identify important mediators and moderators of treatment efficacy, and identify important 'mechanisms of action'. Research should try to identify effective means of enhancing maintenance effects, either through the application of certain intervention approaches or by varying certain features of a protocol. Finally, research

should assess savings in health care costs related to CBT interventions, and should aim to improve treatment implementation and access.

Robins, P. M., S. M. Smith, et al. (2005). "A randomized controlled trial of a cognitive-behavioral family intervention for pediatric recurrent abdominal pain." *J Pediatr Psychol* 30(5): 397-408.

**OBJECTIVE:** To investigate whether the combination of standard medical care (SMC) and short-term cognitive-behavioral family treatment (CBT) in the treatment of recurrent abdominal pain (RAP) was more effective than SMC alone. **METHODS:** Children recently diagnosed with RAP via physician examination were randomized into SMC (n = 29) and SMC plus CBT (n = 40) groups. Outcome measures included multiple dimensions of child and parent reported child pain, somatization, and functional disability, and school absences and physician contacts. **RESULTS:** Children and parents participating in the combined SMC + CBT intervention reported significantly less child and parent reported child abdominal pain than children in the SMC intervention immediately following the intervention and up to 1 year following study entry, as well as significantly fewer school absences. Significant differences in functional disability and somatization were not revealed. **CONCLUSIONS:** These results, in combination with previous studies, add support to the effectiveness of CBT intervention in reducing the sensory aspects of RAP. Results are discussed with respect to the cost-benefit of integrated medical and short-term psychological services.

Schweickhardt, A., A. Larisch, et al. (2007). "Short-term psychotherapeutic interventions for somatizing patients in the general hospital: a randomized controlled study." *Psychother Psychosom* 76(6): 339-46.

**BACKGROUND:** Treatment acceptance and motivation for psychotherapy of somatizing patients in the general hospital is low. **METHODS:** Patients (n = 91) fulfilling the criteria for somatization were randomized into an intervention group (n = 49) and a control group (n = 42). The patients in the intervention group attended 5 psychotherapeutic sessions based on the modified reattribution model. The patients in the control group received psychoeducational reading material. The primary outcomes were motivation for psychotherapy and contacting a psychotherapist after discharge. The secondary outcomes consisted of changes regarding somatoform symptoms, emotional distress and quality of life. **RESULTS:** Patients from the intervention group were significantly more motivated for psychotherapy (p = 0.001) than patients from the control group. At the 3-month follow-up, 42% of the patients from the intervention group had contacted a psychotherapist, compared to 20% of the patients from the control group (p = 0.045). At the 6-month follow-up, however, the ratio of patients having contacted a psychotherapist had changed to 44 and 29%, respectively, and was no longer significant. The intensity of somatoform symptoms and the anxiety symptoms decreased and mental functioning improved significantly over time for patients from both groups. **CONCLUSIONS:** Short-term psychotherapeutic interventions for somatizing patients in general hospitals have a moderately better effect on motivation for psychotherapy and contacting a psychotherapist than psychoeducational reading material alone. Future studies should attempt to prove the effectiveness of short-term psychoeducational interventions for somatizing patients in the general hospital.

Stetter, F. and S. Kupper (2002). "Autogenic training: a meta-analysis of clinical outcome studies." *Appl Psychophysiol Biofeedback* 27(1): 45-98.

Autogenic training (AT) is a self-relaxation procedure by which a psychophysiological determined relaxation response is elicited. A meta-analysis was performed to evaluate the clinical effectiveness of AT. Seventy-three controlled outcome studies were found (published 1952-99). Sixty studies (35 randomized controlled trials [RCT]) qualified for inclusion in the meta-analysis. Medium-to-large effect sizes (ES) occurred for pre-post comparisons of disease-specific AT-effects, with the RCTs showing larger ES. When AT was compared to real control conditions, medium ES were found. Comparisons of AT versus other psychological treatment mostly resulted in no effects or small negative ES. This pattern of results was stable at follow-up. Unspecific AT-effects (i.e., effects on mood, cognitive performance, quality of life, and physiological variables) tended to be even larger than main effects. Separate meta-analyses for different disorders revealed a significant reduction of the heterogeneity of ES. Positive effects (medium range) of AT and of AT versus control in the meta-analysis of at least 3 studies were found for tension headache/migraine, mild-to-moderate essential hypertension, coronary heart disease, asthma bronchiale, somatoform pain disorder (unspecified type), Raynaud's disease, anxiety disorders, mild-to-moderate depression/dysthymia, and functional sleep disorders.

Stuart, S. and R. Noyes Jr (2006). "Interpersonal Psychotherapy for Somatizing Patients." *Psychotherapy and Psychosomatics* 75(4): 209-219.

The interpersonal model is important for understanding somatizing behavior. According to this model, somatizing behavior is a form of interpersonal communication driven by insecure attachment. Interpersonal psychotherapy (IPT) is a time-limited, manual-based treatment designed to relieve symptoms and improve interpersonal

functioning. Based on our experience using IPT with somatizing patients, we recommend a series of strategies for its successful implementation. These strategies include an emphasis on the therapeutic alliance within a bilaterally negotiated treatment contract, and aiming for improvement in interpersonal functioning rather than for alleviation of physical symptoms. Specific techniques include the use of bridging metaphors, communication analysis, and genuine positive reinforcement. With a focus on communication in a time-limited frame, fostered by a strong collaborative relationship, IPT appears to be a promising method of reducing somatizing behavior. We urge further research on the efficacy of this form of therapy. (PsycINFO Database Record (c) 2009 APA, all rights reserved)

Stubhaug, B., S. A. Lie, et al. (2008). "Cognitive-behavioural therapy v. mirtazapine for chronic fatigue and neurasthenia: randomised placebo-controlled trial." *Br J Psychiatry* 192(3): 217-23.

**BACKGROUND:** Single interventions in chronic fatigue syndrome have shown only limited effectiveness, with few studies of comprehensive treatment programmes. **AIMS:** To examine the effect of a comprehensive cognitive-behavioural treatment (CCBT) programme compared with placebo-controlled mirtazapine medication in patients with chronic fatigue, and to study the effect of combined medication and CCBT. **METHOD:** A three-armed randomised clinical trial of mirtazapine, placebo and a CCBT programme was conducted to investigate treatment effect in a patient group (n=72) with chronic fatigue referred to a specialist clinic. The CCBT programme was compared with mirtazapine or placebo therapy for 12 weeks, followed by 12 weeks treatment with a mixed crossover-combination design. Assessments were done at 12 weeks and 24 weeks. **RESULTS:** By 12 weeks the treatment effect was significantly better in the group initially receiving CCBT, as assessed with the Fatigue Scale (P=0.014) and the Clinical Global Impression Scale (P=0.001). By 24 weeks the treatment group initially receiving CCBT for 12 weeks followed by mirtazapine for 12 weeks showed significant improvement compared with the other treatment groups on the Fatigue Scale (P<0.001) and the Clinical Global Impression Scale (P=0.002). Secondary outcome measures showed overall improvement with no significant difference between treatment groups. **CONCLUSIONS:** Multimodal interventions may have positive treatment effects in chronic fatigue syndrome. Sequence of interventions seem to be of importance.

Sumathipala, A., S. Hewege, et al. (2000). "Randomized controlled trial of cognitive behaviour therapy for repeated consultations for medically unexplained complaints: a feasibility study in Sri Lanka." *Psychol Med* 30(4): 747-57.

**BACKGROUND:** Research on the management and the outcome of treatment of medically unexplained symptoms is very limited. Development of simple but effective techniques for treatment and demonstration of their effectiveness when applied in primary health care are needed. **METHODS:** A randomized controlled trial was carried out with follow-up assessments at 3 months after baseline assessments using the Short Explanatory Model Interview (SEMI), General Health Questionnaire (GHQ-30), Bradford Somatic Inventory (BSI) and patient satisfaction on a visual analogue scale. The study was carried out in a general out-patient clinic in Sri Lanka. The intervention group received six, 30 min sessions based on the principles of cognitive behavioural therapy over a period of 3 months. The control group received standard clinical care. **RESULTS:** Eighty patients out of the 110 patients referred, were eligible. Sixty-eight were randomly allocated equally to the control and treatment groups. All 34 in the treatment group accepted the treatment offer and 22 completed between three and six sessions. At 3 months, 24 in the treatment and 21 in the control group completed follow-up assessments. Intention-to-treat analysis revealed significant differences in mean scores of outcome measures (adjusted for baseline scores) between control and intervention groups respectively--complaints 6.1 and 3.8 (P = 0.001), GHQ 10.4 and 6.3 (P = 0.04), BSI score 15.6 and 132 (P < 0-01), visits 7.9 and 3.1 (P = 0.004). **CONCLUSIONS:** Intervention based on cognitive behavioural therapy is feasible and acceptable to patients with medically unexplained symptoms from a general out-patients clinic in Sri Lanka. It had a significant effective in reducing symptoms, visits and distress, and in increasing patient satisfaction.

Sumathipala, A., S. Siribaddana, et al. (2008). "Cognitive-behavioural therapy v. structured care for medically unexplained symptoms: randomised controlled trial." *Br J Psychiatry* 193(1): 51-9.

**BACKGROUND:** A pilot trial in Sri Lanka among patients with medically unexplained symptoms revealed that cognitive-behavioural therapy (CBT) administered by a psychiatrist was efficacious. **AIMS:** To evaluate CBT provided by primary care physicians in a comparison with structured care. **METHOD:** A randomised control trial (n=75 in each arm) offered six 30 min sessions of structured care or therapy. The outcomes of the two interventions were compared at 3 months, 6 months, 9 months and 12 months. **RESULTS:** In each arm, 64 patients (85%) completed the three mandatory sessions. No difference was observed between groups in mean scores on the General Health Questionnaire or the Bradford Somatic Inventory, or in number of complaints or patient-initiated consultations at 3 months. For both groups, all outcome measures improved at 3 months, and remained constant in the follow-up assessments. **CONCLUSIONS:** Cognitive-behavioural therapy given by primary care physicians after a short course of training is no more efficacious than structured care. Natural remission is an unlikely explanation for improvements in people with chronic medically unexplained symptoms, but lack of a 'treatment as usual' arm limits further conclusions. Further research on enhanced



structured care, medical assessment and structured care incorporating simple elements of CBT principles is worthy of consideration.

Tazaki, M. and K. Landlaw (2006). "Behavioural mechanisms and cognitive-behavioural interventions of somatoform disorders." *Int Rev Psychiatry* 18(1): 67-73.

Due to the lack of adequate cure or medication for somatoform disorders, cognitive-behavioural intervention or cognitive-behavioural therapy (CBT) seems to be an optimal treatment resource for patients with these disorders, since the cause of the somatoform disorders cannot to be explained by medical illness, but can be analyzed in the process of both responding and operant conditioning. According to the reviews, randomized controlled trials are limited, but the efficacy of the intervention is quite impressive. Most of the studies use multiple treatment strategies, and no standardized treatment methods have been established. In general, the following steps are taken in CBT treatments: (1) assessment; (2) rationale of treatment choice; (3) course of treatment; (4) evaluation of treatment; and (5) reviewing treatment effects. In CBT, functional analysis in the assessment session is the key to success, to identify the relationship among discriminative stimuli and consequences, in order to reduce the undesirable behaviour, and the most effective approach of the treatment would be a combination of multiple techniques. However, as the efficacy of the treatments is established, expansion of accurate knowledge of functional analysis and training sessions for health care providers and patients should be provided. Further research should explore the effect of individual techniques, and comparison should be made to identify the relative benefits of the techniques using both individual, and group format.

Thomson, A. B. and L. A. Page (2007). "Psychotherapies for hypochondriasis." *Cochrane Database Syst Rev*(4): CD006520.

**BACKGROUND:** Hypochondriasis is associated with significant medical morbidity and high health resource use. Recent studies have examined the treatment of hypochondriasis using various forms of psychotherapy. **OBJECTIVES:** To examine the effectiveness and comparative effectiveness of any form of psychotherapy for the treatment of hypochondriasis. **SEARCH STRATEGY:** 1. CCDANCTR-Studies and CCDANCTR-References were searched on 7/8/2007, CENTRAL, Medline, PsycINFO, EMBASE, Cinahl, ISI Web of Knowledge, AMED and WorldCat Dissertations; Current Controlled Trials meta-register (mRCT), CenterWatch, NHS National Research Register and clinicaltrials.gov; 2. Communication with authors of relevant studies and other clinicians in the field; 3. Handsearching reference lists of included studies and relevant review articles, and electronic citation search in ISI Web of Knowledge for all included studies. **SELECTION CRITERIA:** All randomised controlled studies, both published and unpublished, in any language, in which adults with hypochondriasis were treated with a psychological intervention. **DATA COLLECTION AND ANALYSIS:** Data were extracted independently by two authors using a standardised extraction sheet. Study quality was assessed independently by the two authors qualitatively and using a standardised scale. Meta-analyses were performed using RevMan software. Standardised or weighted mean differences were used to pool data for continuous outcomes and odds ratios were used to pool data for dichotomous outcomes, together with 95% confidence intervals. **MAIN RESULTS:** Six studies were included, with a total of 440 participants. The interventions examined were cognitive therapy (CT), behavioural therapy (BT), cognitive behavioural therapy (CBT), behavioural stress management (BSM) and psychoeducation. All forms of psychotherapy except psychoeducation showed a significant improvement in hypochondriacal symptoms compared to waiting list control (SMD (random) [95% CI] = -0.86 [-1.25 to -0.46]). For some therapies, significant improvements were found in the secondary outcomes of general functioning (CBT), resource use (psychoeducation), anxiety (CT, BSM), depression (CT, BSM) and physical symptoms (CBT). These secondary outcome findings were based on smaller numbers of participants and there was significant heterogeneity between studies. **AUTHORS' CONCLUSIONS:** Cognitive therapy, behavioural therapy, cognitive behavioural therapy and behavioural stress management are effective in reducing symptoms of hypochondriasis. However, studies included in the review used small numbers of participants and do not allow estimation of effect size, comparison between different types of psychotherapy or whether people are "cured". Most long-term outcome data were uncontrolled. Further studies should make use of validated rating scales, assess treatment acceptability and effect on resource use, and determine the active ingredients and nonspecific factors that are important in psychotherapy for hypochondriasis.

Visser, S. and T. K. Bouman (2001). "The treatment of hypochondriasis: exposure plus response prevention vs cognitive therapy." *Behav Res Ther* 39(4): 423-42.

In this study (1) exposure in vivo plus response prevention, (2) cognitive therapy and (3) a waiting-list control condition were compared on their efficacy on the treatment of hypochondriasis. Seventy-eight patients with a DSM-IV diagnosis of hypochondriasis were randomly assigned to one of these conditions. Patients in both active treatment conditions improved significantly on all the measures, whereas the patients in the waiting-list control condition did not improve. The improvements were clinically significant. Exposure in vivo plus response prevention and cognitive therapy were equally effective. The improvements were maintained at the 7 months follow up.

