

Effect of psychiatric disorders on outcome of cognitive–behavioural therapy for chronic fatigue syndrome

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Summary Psychiatric disorders have been associated with poor outcome in individuals with chronic fatigue syndrome (CFS). This study examines the impact of psychiatric disorders on outcome of cognitive–behavioural therapy (CBT). Psychiatric diagnoses were assessed with a structured psychiatric interview in a CBT trial of 270 people with CFS. Lifetime and current psychiatric disorders were found in 50 and 32% respectively. No significant differences in fatigue severity and functional impairment following treatment were found between participants with and without psychiatric diagnoses.

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The prevalence of psychiatric disorders in chronic fatigue syndrome (CFS) has been obscured by varying CFS criteria, instruments and research settings and by symptom overlap (Wessely *et al*, 1998). Studies of psychiatric disorders as predictors of CFS prognosis have produced conflicting results (Wessely *et al*, 1998), raising questions about the impact of psychiatric comorbidity on the outcome of cognitive–behavioural therapy (CBT), an effective therapy for CFS (Whiting *et al*, 2001). When psychiatric diagnoses were assessed in CBT trials, their effect on treatment outcome was not reported (Sharpe *et al*, 1996), significant differences in improvement were not found (Deale *et al*, 1997) and poor outcome was associated with psychiatric history (Bonner *et al*, 1994). In our CBT trial, psychiatric comorbidity might have caused moderate clinically significant improvement and a high rate of withdrawal from the trial (Prins *et al*, 2001). In this study, psychiatric diagnoses in CFS patients will be examined in relation to treatment outcome.

METHOD

Sample and procedure

Psychiatric disorders were studied in 270 individuals with CFS in a randomised controlled CBT trial (full details: Prins *et al*, 2001). Anxiety disorders, mood disorders, somatoform disorders and post-traumatic stress disorder were assessed at baseline using the Structured Clinical Interview for DSM–III–R (SCID–III–R; Spitzer *et al*, 1990). The outcome measures of fatigue severity, functional impairment, depression and psychological distress were assessed at baseline, 8 and 14 months. Fatigue severity was assessed using a sub-scale of the Dutch Checklist Individual Strength (CIS; Beurskens *et al*, 2000) and functional impairment using eight sub-scales of the Sickness Impact Profile (SIP; Bergner *et al*, 1976). The Symptom Checklist (SCL–90; Arrindell *et al*, 1986) was used for psychological distress. The Beck Depression Inventory (BDI; Beck *et al*, 1988) measured depression. All measures had good reliability and validity.

For comparison we used the published data of a Dutch general population sample with the same age range, in which the same diagnostic categories of DSM–III–R mood and anxiety disorders were obtained using a similar clinical interview (the Composite International Diagnostic Interview; CIDI) during the same period (Bijl *et al*, 1998).

Statistical analysis

Lifetime prevalence refers to disorders at some time in a participant's life and current prevalence refers to disorders at the time of the study. Controlling for overlap between depression and CFS, mood disorders were calculated both with and without fatigue and/or poor concentration. We used Z-scores to compare percentages of psychiatric disorders in the trial participants and in the general population. Percentages of participants with and without psychiatric disorders in those completing

and not completing the trial were compared using Fisher's exact test. Main and interaction effects of psychiatric diagnoses on the outcome variables were analysed with a general linear model for repeated measurements, with trial condition, current psychiatric diagnosis and their first-order interactions as independent variables.

RESULTS

Prevalence of psychiatric disorders

The data of 264 participants were analysed (6 were omitted, owing to missing data). Table 1 shows that lifetime psychiatric disorders were present in 50% of participants and that 28% had two or more diagnoses. Current psychiatric disorders were reported by 32.2%, 11% of whom had two or more diagnoses. Lifetime and current mood disorders were found in 37.1 and 18.9% respectively, and lifetime and current anxiety disorders in 19.7 and 13.3% respectively. Only two participants (0.9%) had post-traumatic stress disorder in remission. Other current somatoform disorders were identified in 8.3%, and 4.9% had a lifetime somatisation disorder.

Participants with lifetime or current psychiatric disorders were not significantly different from those without in terms of age, duration of complaints, education, fatigue and functional impairment. Gender differences were found in lifetime psychiatric diagnoses (female 53.9% *v.* male 36.2%, $P < 0.05$), but not in current psychiatric disorders (33% *v.* 29%).

Compared with the general population, lifetime and current mood disorders in the trial participants were significantly higher (37.1% *v.* 19.1%; $Z = 7.2$, $P < 0.0001$; 18.9% *v.* 3.9%; $Z = 12.5$, $P < 0.0001$). No significant differences were found between lifetime and current anxiety disorders (19.7% *v.* 19.3%; $Z = 0.16$, $P = 0.87$; 13.3% *v.* 9.7%; $Z = 1.89$, $P = 0.058$). No significant differences were found between participants with and without lifetime or current psychiatric diagnoses in the groups of those who completed or did not complete the trial. After controlling for CFS symptoms, fatigue and poor concentration, we found lifetime and current mood disorders in 26.5 and 14% of participants respectively, and lifetime and current psychiatric disorders in 42.8 and 28.4% respectively.

Psychiatric disorders and treatment outcome

In the outcome variables fatigue severity and functional impairment, neither main

effects of current psychiatric diagnosis ($F=0.333$, $P=0.564$; $F=1.58$, $P=0.209$) nor interaction effects of trial condition and current psychiatric diagnosis ($F=0.065$, $P=0.937$; $F=0.848$, $P=0.430$) were found. Participants with a current psychiatric diagnosis had outcomes almost identical to those without. In the outcome variables depression and psychological distress, main effects of current psychiatric diagnosis ($F=25.4$, $P<0.001$; $F=20.2$, $P<0.001$) were found but no interaction effects of trial condition and psychiatric diagnosis ($F=0.067$; $P=0.935$; $F=0.306$, $P=0.737$). This indicated that participants with a current psychiatric diagnosis had higher BDI and SCL-90 scores at baseline, 8 and 14 months, compared with patients without a current psychiatric diagnosis, but both groups had similar difference scores from baseline to post-test and follow-up.

DISCUSSION

The prevalence of psychiatric diagnoses in our sample of individuals with CFS seems low to moderate compared with DSM-III-R diagnoses found in other studies (Wessely *et al*, 1998). As in other studies, post-traumatic stress disorder was rare. In contrast to most studies, in which between 10 and 20% fulfil the criteria, less than 5% of our participants screened positive for somatisation disorder. Lower prevalence rates may be the result of the research setting, in which patients with a main complaint of fatigue were referred to an internal medicine out-patient clinic. The specialist might have diagnosed CFS instead of a

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psychiatric disorder or psychiatric symptoms might have been interpreted as a normal reaction to physical illness. Examiners were not biased to diagnose somatisation disorder or other psychiatric disorders in the trial participants. Somatic complaints rather than psychiatric symptoms were our primary interest.

The question arises whether overdiagnosis explains the higher percentages of mood disorders in people with CFS than in the general population. Controlling for CFS symptoms, respectively 9 and 5% fewer mood disorders resulted. Since more CFS patients were female, a gender effect might also explain the differences.

In contrast to what we expected, equal treatment effects of CBT were found for participants with and without current psychiatric disorders. Depression and psychological distress also benefited from CBT specially tailored for CFS. Treating psychiatric comorbidity may relieve psychological distress, but does not alter fatigue severity. Another interesting finding concerned the natural course of CFS, which was not adversely affected by current psychiatric comorbidity over 14 months. This confirmed results of an earlier study, in which depression was not a significant factor in

the persistence of CFS (Vercoulen *et al*, 1998).

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Table 1 Number and percentage of DSM-III-R diagnoses in the trial sample of individuals with chronic fatigue syndrome compared with published data of a Dutch general population sample (de Bijl *et al*, 1998)

Psychiatric interview	Trial sample, ¹ aged 18–60 years (n=264)				General population, ² aged 18–64 years (n=7076)	
	Lifetime (current and/or former)		Current		Lifetime	1-month
	n	%	n	%	%	%
Mood disorders	98	37.1	50	18.9	19.0	3.9
Anxiety disorders	52	19.7	35	13.3	19.3	9.7
Post-traumatic stress disorder	2	0.9	0	0	–	–
Somatoform disorders						
Somatisation disorder	13	4.9	–	–	–	–
Other somatoform disorders	22	8.3	22	8.3	–	–
One DSM-III-R diagnosis	74	28.0	56	21.2	22.9	11.7
One or more DSM-III-R diagnoses	132	50.0	85	32.2	41.2	16.5

I. Disorders assessed at baseline using the Structured Clinical Interview for DSM-III-R.