

ATTRIBUTIONS AND SELF-ESTEEM IN DEPRESSION AND CHRONIC FATIGUE SYNDROMES

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Abstract—There is considerable overlap in symptomatology between chronic fatigue syndrome (CFS) and affective disorder. We report a comparison of depressive phenomenology and attributional style between a group of CFS subjects seen in a specialized medical setting, which included a high proportion with depression diagnosed by Research Diagnostic Criteria (RDC), and depressed controls seen in a specialized psychiatric setting. Significant symptomatic differences between the depressed CFS group and depressed controls were observed for features such as self-esteem and guilt as well as attribution of illness. All the CFS groups tended to attribute their symptoms to external causes whereas the depressed controls experienced inward attribution. This may have resulted from differences in the severity of mood disorder between the samples, but it is also suggested that an outward style of attribution protects the depressed CFS patients from cognitive changes associated with low mood but at the expense of greater vulnerability towards somatic symptoms such as fatigue.

INTRODUCTION

IN THE last five years the conditions known as chronic fatigue syndrome, myalgic encephalomyelitis (ME) and post-viral fatigue syndrome (PVFS) have arisen as a sphere of often intense controversy. There is little consensus surrounding their nosology, aetiology, symptomatology, management and prognosis [1]. Even the name is disputed. However, for the rest of this paper we will employ the term chronic fatigue syndrome (CFS) [2] to cover these heterogenous disorders, since it makes no aetiological or pathological assumptions.

Recent work has shown that the symptomatology of CFS overlaps with that of operationally defined depressive disorders. Several studies have shown that between 46 and 67% of CFS patients seen in hospital practice [3-8] have met diagnostic criteria for depressive illness. These figures suggest that much affective illness in patients with a primary symptom of fatigue is unrecognized not only by referring doctors but also by those with an interest in CFS. Possible reasons for non-recognition of depression in general medical patients with fatigue have been discussed elsewhere [9]. However, little attention has been paid to the phenomenology and explanatory style of CFS sufferers. We have shown previously [3] that there are important differences in attribution between CFS sufferers fulfilling research criteria (RDC [10]) for depression and depressive patients seen in a conventional setting, with 86% (18/21) of the former and 14% (3/22) of the latter groups attributing their illness only to physical causes. The present paper considers the possible effects of these attributional differences.

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Two further related questions, therefore, remain regarding the phenomenology of depression in CFS and the role of attributional style. Does the phenomenology of depression in CFS differ from that in depressed patients presenting conventionally, and if so are specific phenomenological features related to the attributional style of CFS sufferers? These issues have an important bearing on the difficulties in diagnosing depression in CFS as well as recognizing the role of attribution in the experience and expression of illness.

A concept of particular relevance to this study is that of attribution theory. This has been used to show that individuals vulnerable to depression generally have an internal, stable and global style of attribution [11, 12]. The theory suggests that individuals with such an attributional framework tend to experience negative life-events as being in some way due to their own inadequacy which may lead via feelings of helplessness and hopelessness to a depressive diathesis.

METHODS

Patient selection

The study population is extended from a sample reported elsewhere [3] but does not differ in any variable from that reported previously. It consists of 58 of 66 (88%) cases of unexplained fatigue referred to neurological assessment to a tertiary referral centre for neurology and a control group of depressed patients ($N = 33$) seen in a large psychiatric hospital. All the cases of CFS fulfilled the criteria suggested by a recent consensus conference on CFS in the U.K. [13].

CFS subjects. They met the following operational criteria: a primary complaint of fatigue (usually on both physical and mental effort); an illness lasting six or more months; no diagnosis reached after physical investigation ('postviral' syndrome was not included as a diagnosis); an absence of significant abnormalities on conventional neurological testing (muscle enzymes, nerve conduction studies, EMG and muscle biopsy when performed); and a minimum age of 18 yr.

Depressed subjects. The control group were 33 consecutive in-patients at a psychiatric hospital who met criteria for major depression diagnosed by RDC [10].

Assessment

The assessment of patients has been previously described in detail [3]. To summarize, all patients were given a standardized assessment. Eligible patients were contacted either at home by letter, or on the ward, and completed a self-assessment questionnaire which included the following elements: attribution of symptoms; previous medical experiences; and satisfaction with treatment measured with six questions using five-point scales. Finally, self-diagnosis was recorded. All patients were later interviewed (CFS by SW and affectives by RP) using the Schedule for Affective Disorder and Schizophrenia (SADS) [14].

One pitfall encountered in studying the relationship between fatigue and depression is that the former is itself a symptom of depressive illness. Therefore, fatigue was excluded from the Research Diagnostic Criteria employed.

Statistics

Data collected was stored on a microcomputer and analysed using the SPSS-PC statistical package. Comparisons between groups were made using non-parametric tests and all significance tests were two tailed. Two cases who did not complete all the questionnaires were not included.

RESULTS

Demographic data

The CFS group was younger (mean age 37 yr vs 45 yr) and had been ill for a longer period (58 months vs 30 months). Information bias almost certainly distorted the data in that depressives were reporting their current episode of illness but CFS sufferers tended to date the commencement of their illness to the initial onset of their fatigue. In both groups there was a slight female excess (CFS 66% (38/58), affectives

TABLE I.—SOMATIC SYMPTOMS PRESENT IN MORE THAN 50% OF CFS SUFFERERS

| | |
|---------------|----------------------|
| Back pain | Insomnia |
| Stiffness | Nausea |
| Headaches | Dizziness |
| Tremor | Daytime drowsiness |
| Perspiration | Sensitivity to noise |
| Paraesthesiae | Eyestrain |

63% (22/35)). There was no significant difference between groups in self-report measures of impairment of function, both being severely impaired in all areas of their life.

Somatic symptoms

The CFS patients typically suffered from numerous somatic symptoms including post-exercise myalgia in 87% (45/52), resting myalgia 69% in (35/52) and many others (Table I). Seventy-four per cent reported that their illness commenced with a viral infection.

Phenomenology

Depressive features of the two groups were assessed and compared using the battery of probes on depressive symptomatology from SADS. Significant differences were identified for symptoms of guilt and self esteem and are reported below.

Guilt. The responses to the probe on guilt (SADS) showed substantial differences between the two groups with the affective group tending to experience guilt most severely (Table II). This was very marked in the comparison between the depressed CFS (78% none, 22% moderate and none severe) and the affective controls (19% none, 25% moderate and 56% severe). There was a smaller difference within the CFS group itself: there was increased guilt in the depressed CFS sufferers compared with the non-depressed CFS sufferers (78% none and 22% moderate).

Self-esteem. Self-esteem as assessed on the SADS also differed between the CFS and the control groups.

Most of the affective group had severely impaired self-esteem (63%) as compared with all CFS sufferers in whom feeling of self-worth are well preserved (3% severe impairment) (Table III). Restricted to depressed patients only, the affective controls suffered from more severely impaired self-esteem (12% none, 25% moderate and 63% severe) than the depressed CFS sufferers (52% none, 42% moderate and 6% severe). It is possible that these differences are an artifact of observer bias since, as

TABLE II.—SEVERITY OF GUILT (SADS)

| Group | Score No. (%) | | | | | | Total |
|-------------------|---------------|------|----------|---|---------|---|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| Total CFS | 48 (83) | | 10 (17) | | 0 | | 58 |
| Non-Depressed CFS | 24 (89) | | 3 (11) | | 0 | | 27 |
| Depressed CFS | 24 (78) | | 7 (22) | | 0 | | 31 |
| Affective | 6 (19) | | 8 (25) | | 18 (56) | | 32 |
| Severity | | none | moderate | | severe | | |

Kruskal-Wallis one-way ANOVA: CFS-depressed vs affective— $\chi^2 = 31.88$, (df = 3) $p < 0.0001$.

TABLE III.—LOSS OF SELF-ESTEEM (SADS)

| Group | Score No. (%) | | | | | | Total |
|-------------------|---------------|------|---------|----------|---------|--------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| Total CFS | 39 (67) | | 17 (29) | | 2 (3) | | 58 |
| Non-Depressed CFS | 23 (85) | | 4 (15) | | 0 | | 27 |
| Depressed CFS | 16 (52) | | 13 (42) | | 2 (6) | | 31 |
| Affective | 4 (12) | | 8 (25) | | 20 (63) | | 32 |
| Severity | | none | | moderate | | severe | |

Kruskal Wallis one-way ANOVA: CFS-depressed vs affective $\chi^2 = 26.28$, (df = 3) $p < 0.0001$.

in any standardized interview, the researcher is not blind to diagnostic category, whilst no formal attempts were made to measure inter-rater reliability. However, identical results were obtained with the self-administered question on self esteem contained in the General Health Questionnaire (GHQ [15]) (see Table IV).

It is also possible that differences observed in guilt and self-esteem are simply associated with severity of mood disorder. Affective controls were indeed more severely depressed than the CFS-depressives, perhaps because the former were entirely in-patients, but most of the latter out-patients. There were significant differences in the Hospital Anxiety and Depression (HAD) Depression subscale [16] scores (quoted in preference to GHQ as it does not contain items measuring self-esteem and worthlessness) (see Table V).

However, severity of depression alone does not account for all the observed difference in self-esteem since such marked distinctions were not found on other questions. Other questions (e.g. 'Have you been losing confidence in yourself?') showed trends for higher scores in the affective group but did not reach significance.

Attribution

We have previously reported [3] differences in patterns of symptom attribution, which achieve almost total separation between the groups. In summary 80% (39/47) of CFS patients attributed their illness to a physical cause (mainly post-viral fatigue), with only one subject (a psychiatrist) writing 'depression?'. The reverse picture was true for the group with major depression, most of whom attributed their condition to psychological causes, and only one to 'viral fatigue'.

DISCUSSION

Our results show phenomenological distinctions between CFS and major depression. In contrast to depressed controls, depressed CFS sufferers experienced very little

TABLE IV.—SELF-REPORT OF WORTHLESSNESS (GHQ)

| | No | Yes | Total |
|---------------|----------|----------|-------|
| Depressed CFS | 16 (53%) | 14 (47%) | 30 |
| Affective | 5 (15%) | 28 (85%) | 33 |

$\chi^2 = 8.66$ after Yates. $p = 0.003$ df = 1.

Q = Have you recently been thinking of yourself as a worthless person?

A: No = Less than usual or the same, Yes = More or much more than usual.

TABLE V.—SEVERITY OF DEPRESSION (HAD-DEPRESSION SUBSCALE)

| | Mean HAD-D Scores (95% CI) |
|---------------|----------------------------|
| Depressed-CFS | 9.35 (7.72–10.99) |
| Affectives | 13.78 (12.34–15.22) |

self-blame or lowered self-esteem. Instead those in the CFS group who satisfied criteria for depression did so largely by virtue of mood change together with weight, appetite and sleep disturbance, somatic symptoms and anhedonia. Low mood (described as feeling wretched, awful, irritable, labile etc) was often accompanied by pessimism about the future and also profound helplessness. However, this was not accompanied by suicidal ideation, lowered self-esteem or feelings of guilt. Thus the groups were similar in measures of affectivity and biological symptoms but differed in cognitions relating to self-worth.

Limitations

The possible role of the severity of depression as a confounding factor has already been discussed. A further limitation of this study is the nature of the study group which, because of both duration and severity, is unrepresentative of the CFS sufferers seen in primary care. However, the control group was also chosen to reflect a degree of selection bias, albeit less extreme than that associated with a national tertiary referral centre. Theoretically the controls were selected according to different criteria of chronicity (RDC stipulates two weeks) although in fact almost all of the depressed patients had a history of at least six months duration. Indeed, although the depressed patients appeared to have a shorter duration of illness, this may have been due to ascertainment bias. Finally, interviewing was non-blind to diagnosis. Therefore, caution is needed in drawing comparisons between the two groups, and the results cannot be generalized to those seen outside the specialist setting.

Attributions and their consequences

Considerable research shows that how patients view and attribute their problems can influence both the duration of and the disability associated with a number of both medical and psychiatric illnesses. Riley *et al.* [17] have shown that in chronic pain out-patients, impairment of function covaries with subjective pain 'only to the extent that these constructs are perceived as linked ... with chronic pain'. Thus the interventions of professional carers may perpetuate disability by teaching patients to attribute impairment to pain. Skevington [18] showed that chronic back pain volunteers suffered from more depression than controls. However, this was not associated with the construct of personal helplessness (e.g. self-blame) but rather that of universal helplessness (i.e. external rather than internal attribution). This corresponds with our findings of greater external attribution in the CFS group. Brown *et al.* [19] followed-up volunteers and out-patients with Parkinsons Disease. They found that although depression, as characterized by dysphoria, pessimism and somatic symptoms, was common, guilt and self-blame were not. One divergent result was that of Manu *et al.* [5], who, in study of self referrals of subjects with chronic fatigue (CF) to a specially organized 'fatigue' clinic, found a breakdown of RDC diagnoses similar to our own results as well as a corresponding proportion of patients

with a physical attribution [20]. They also found [21] that for a significant proportion of CF sufferers the fatigue occurred as a symptom of depressive illness. However, the depressed CF sufferers in the American study had more low self-esteem and suicidal ideation than we encountered. These discrepancies may be due to sampling differences.

One cannot over emphasize that it is impossible to judge the 'correctness' of the attributional style found in either CFS or depression, especially in the light of current neurobiological discoveries in psychiatry. However, it is still valid to consider the differences in attributions and the consequences of such differences without any reference to their accuracy. This research shows that in the setting of longstanding CFS, those with major depression having an external attributional style experience less guilt and have preservation of their self-esteem. Depressives assessed in specialized psychiatric settings show the converse picture.

Such an external style of attribution has certain advantages, 'Symptoms attributed to an external cause are less disabling than symptoms attributed to a personal cause' [22]. An external style of attribution may be exerting a protective influence against certain cognitive changes of depression as compared with an internal style of attribution causing the patient to experience greater psychological distress and lower self-esteem [23]. External attribution also protects the patient from being exposed to the stigma of being labelled psychiatrically disordered. However, there also appear to be detrimental aspects to such an attributional style, especially when the alleged cause is seen as untreatable. Such an external attribution of cause in CFS (as in the 72% blaming a viral infection in our sample) may lead to helplessness, increased fatigue, lack of self-efficacy and diminished responsibility for ones own health [24, 25]. In a study of anxious in-patients Hoehn-Saric and McLeod [26] showed that patients with an external locus of control were more depressed and had higher levels of state anxiety, indecisiveness, fatigue, agoraphobia and somatic symptoms.

Attributions and helplessness

It is over a decade since Abramson *et al.* reformulated the learned helplessness model of depression predicting that individuals vulnerable to clinical depression should have an internal, stable, and global style of attribution [11]. Our results are close to those predicted by the 'learned helplessness' theory of depression. The stimuli associated with the post-viral states which were claimed by most of our CFS sample are potent, uncontrollable, aversive and frightening. As such they predict a high rate of depression, which we found. Furthermore, the learned helplessness theory states that attribution to an external cause should lead to preservation of self-esteem. This was also confirmed. Finally these findings predict that cognitive therapy should be of benefit in treatment [27].

CFS and depression

Although half of our CFS sample fulfilled the RDC criteria for depression they were clinically different from 'conventional' depressives. This difference was obscured by the use of operational research diagnostic criteria, highlighting some of the deficiencies in the operational classification of depression. Ray [28] has outlined the many conceptual and methodological ambiguities in relating CFS and depression, our data confirms both the heterogeneity of the condition and the inadequacies of

a single explanatory system. We have suggested that the differences we observed are in part a consequence of attributional and social variables exerting a pathoplastic effect on phenomenology. However, other explanations are possible. It is plausible that there exist differences in neurobiological substrate: that is to say we may be dealing not only with phenomenological but also nosological differences. There is preliminary work suggesting patterns of neuroendocrine function [29], immune function [30] and cognitive evoked potentials [31] in CFS different from those found in depressive disorder, and studies are currently in progress using appropriate depressed controls. Such potential differences are even more relevant in the proportion of CFS patients who did not fulfil criteria for depressive illness.

The pattern of presenting symptoms also has consequences for the recognition of illness and subsequent referral patterns. Patients suffering from depression with primarily somatic features are more likely to be referred to physicians whereas those with mainly traditional psychological features, especially guilt and low self-esteem, are most likely to be referred to psychiatrists [32, 33]. This is one of many explanations [9] of why the diagnosis of depressive illness is so often missed in fatigued patients [34], as was the case in this sample. Moreover, such 'inappropriate' referrals to physicians can lead to extensive physical investigation that may perpetuate the symptom patterns of physical attributions. The converse may apply following psychiatric referral, and it is probable that the attributional styles noted in both samples were reinforced by their respective settings. Indeed, given the cross-sectional nature of the study, it is impossible to exclude the suggestion that the observed attributional differences were entirely secondary consequences of referral, although this seems unlikely.

Plus Ça change . . .

One of the most intriguing aspects of the current interest in fatigue syndromes is how little is actually new. At the end of the nineteenth century the patients now viewed as suffering from CFS were usually diagnosed as neurasthenic [35-37]. While neurasthenia was gradually eclipsed and replaced by the concepts of neurosis and depression, contemporary writers such as Kraepelin in psychiatry, Oppenheim in neurology and Ballet in medicine commented on the differences between the affective changes found in neurasthenia and those in depression [35]. For example, Ballet [38] felt that the difference between neurasthenia and melancholia was that in the latter the patient did not suffer from 'false ideas of unworthiness, guilt or ruin', and Oppenheim [39] observed that 'mental depression is usually present but is neither deep nor persistent'.

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