

Does it matter what you call it?: Lay beliefs for overcoming chronic fatigue syndrome, myalgic encephalomyelitis, and post-viral fatigues syndrome.

Mark R. McDermott<sup>1</sup>

Chris Bendle<sup>1</sup>

Murray Griffin<sup>2</sup>

&

Adrian Furnham<sup>3</sup>

<sup>1</sup> University of East London

<sup>2</sup> University of Essex

<sup>3</sup> University College London

Key words: chronic fatigue, post-viral, myalgic encephalomyelitis, lay beliefs

## ABSTRACT

The study reported here examines variation in beliefs about how best to overcome a health complaint when it is nominally designated in one of three different ways, namely as: chronic fatigue syndrome (CFS); myalgic encephalomyelitis (ME); or as post-viral fatigue syndrome (PVFS). In a repeated measures design, the participant sample (n= 140) was presented with an adapted version of Knapp and Karabenick's (1985) questionnaire which asks respondents to rate the degree to which single item coping strategies would most useful for overcoming each of the three designated complaints. Factor analysis of the coping items produce three groups of items as belief components: 'self-reliance', 'seeking help' and 'external control'. The chronic fatigue syndrome appellation invoked significantly higher scores on the self-reliance factor and on external control than did the other two diagnostic labels. However, seeking help was considered to be the most important strategy for overcoming all three of the designated incarnations of the condition. In conclusion, 'chronic fatigue syndrome' is the linguistic construction which bestows the most beneficial outlook for assisting individuals to overcome this complaint. Thereby, the use of this descriptor in current medical nomenclatures arguably is well placed.

## INTRODUCTION

Chronic fatigue syndrome (CFS), myalgic encephalomyelitis (ME) and post-viral fatigue syndrome (PVFS) are terms that in the past have been used interchangeably to denote a somatic condition characterised by debilitating fatigue, muscular and joint aches, inability to recover energy post-exertion, unrefreshing sleep, headaches and spells of dizziness (Burns, Bennet & McGough, 2012; Fukuda et al, 1994; Carruthers et al, 2011; Jenkins 1991). According to Devanur & Kerr (2006), CFS affects 0.4-1% of the population worldwide with 800,000 cases in the United States of America and 240,000 in the United Kingdom. However, prevalence rates vary whether self-reported clinically diagnosed, with the former eliciting greater numbers than the latter (Johnston, Brenu, Staines & Marshall-Gradisnik, 2013). Historically, there have been discrepancies regarding the agreed aetiology, diagnosis and definitions of these designated conditions, with disputes remaining between the psychological and biomedical academic communities (Wojcik, Armstrong & Kanaan, 2011; Jason, Taylor, Stepanek & Plioplys, 2001; Grue, 2014). The outcome of these conflicts has given birth to and shaped differences in attitudes towards each of these nominated conditions, with medical, patient and public health beliefs varying along a continuum of psychological and biomedical causal explanations, with concomitant implications for management and recovery strategies.

In order to understand different effects on beliefs about CFS, ME & PVFS, it is important to understand the history behind these terms. Goetz (2001) suggests that neurasthenia, a condition characterised by tiredness, weakness and dyspepsia was a possible precursor to CFS & ME. Goetz discusses how a preceding viral infection was believed to be the cause of this condition. Neurasthenia, however, fell out of use in the early 20<sup>th</sup> century when psychoanalytical models took precedence due to the comorbidity of fatigue with depression (Arnett & Clark, 2012). Post-viral aetiology theories resurfaced in the 1930s with the emergence of conditions such as poliomyelitis and neuromyasthenia, which were later grouped under the term ‘myalgic encephalomyelitis’ after an outbreak of an unknown illness among staff at the Royal Free Hospital in 1955 (Acheson, 1959; Shorter, 1993; Wojcik, Armstrong & Kanaan, 2011; Arnett & Clark, 2012). ME was used as a medical diagnosis until 1988 when it was replaced by the less medical label of

CFS (Holmes et al 1988). This shift arguably reflected a transition between accepted nomenclatures from a biomedical to a more psychologically based one. This change in emphasis arguably is warranted by virtue of fact that that no single biological marker in the aetiology of this condition has been confirmed and that such are unaffected by environmental and psychosocial influences, such aetiological uncertainty having been noted, by for example Klimas, Salvato, Morgan & Fletcher (1990). Research has shown that attitudes towards these labels are vary across different social groups. Jason et al (2001) presented a patient case describing symptoms such as fatigue, muscular pain, joint pain and other indicators akin to CFS to 105 medical trainees and 141 undergraduates. A third of the sample were informed that the patient had been diagnosed with 'ME', while another third were told 'CFS' and the remaining third were informed that the patient had been diagnosed with Florence Nightingale disease. Subsequently, participants who received the ME diagnosis tended to advocate biomedical causes and treatments, those who received the CFS diagnosis were more likely to endorse psychiatric factors as causes. Additionally, group differences emerged as the medical trainees were more likely than the undergraduates to propose that patients would have a poorer quality of life, worse long term prognosis regardless of 'ME' or 'CFS' the diagnosis. However, for a CFS diagnosis, the undergraduates were more likely to endorse the notion that such individuals were in fact just malingering. This study illustrates how these two labels differentially shape beliefs about aetiology and the appropriateness of various kinds of intervention.

In a similar vein, a longitudinal study by Hamilton et al (2005) followed 18,122 patients diagnosed with either CFS, ME, PVFS or fibromyalgia. Patients diagnosed with ME had a significantly worse prognosis compared to the other conditions. The authors comment that the diagnostic label itself appears to alter patient beliefs about prognosis, along with suggesting a poorer degree of treatability, thereby resulting in less utilisation of healthcare services. Wojcik, Armstrong & Kanaan (2011) commenting on Hamilton et al (2005) accredit these findings to the biological connotations of the ME nomenclature which implicitly excludes the psychosocial basis of interventions such as cognitive behavioural therapy or graded exercise. Hamilton et al (2005) contend that overcoming 'PVFS' has the best prognosis associated with it, positing that a viral infection which triggered the patients' fatigue is perceived as more benign than other conditions.

Thus, the impact of prospective prognosis is argued to play a large role in overcoming these conditions, in their estimated treatability, use of healthcare services and compliance with treatment regimes.

Attitudes and beliefs about the propensity to overcome an illness and how they may be related to factors such as self-reliance and seeking help have been studied by Furnham & McDermott (1994). They examined the lay beliefs of 122 participants regarding the efficacy of strategies for coping with common health and well-being problems, namely obesity, marital problems, insomnia, stuttering & drug addiction. A factor analysis of the belief statements revealed three components: 'self-reliance', 'help-seeking' and 'internal-external control'. Self-reliance as a strategy for overcoming health complaints was found to be most salient for drug addiction and obesity, while seeking help was found to be most salient for overcoming drug addiction, stuttering and insomnia. Belief in external control was not considered important for overcoming any of these complaints. A meta-analysis by Furnham & Hayward (1997) found a similar landscape of belief factors such as inner control, social consequences, understanding, receiving help and fate. Inner control and understanding were seen as a highly promising factors for recovery. Across the studies reviewed they observed a consistent theme that being self-reliant and understanding of a problem is integral to taking an active role in managing one's own condition. Likewise, seeking help, being compliant, perceived control and being acceptant of the condition is viewed as beneficial to recovery.

Self-reliance and internal-external control are recurrent themes which appear in literature on recovering from CFS and ME. Baker & Shaw (2007) strongly advocate that patients engage in a self-management strategy for the benefit of their recovery, while paradoxically. Edwards et al (2001) discuss how adjustment to CFS can distort patients' perceptions of the controllability of their condition, with illness identity and patient expectations of consequences emerging as the greatest predictors of adjustment to CFS.

Studies of CFS, ME and PVFS in frequently compare the effects of all three variables simultaneously. However, it is apparent from those studies that have been conducted of pairs of these labels suggest the nomenclature of this condition is important as a determinant of beliefs in medical versus psychosocial causes and interventions. In a study of lay beliefs about recovery, Shiloh et al (2007), found that belief in psychosocial aetiologies are associated with an internal health locus of control for recovery

and with a belief thereby in the possibility of a faster recovery, whereas medical attributions tend to be associated with external health loci of control beliefs and a slower recovery.

Overall, perceptions and beliefs about overcoming either CFS, ME and PVFS syndrome are all heavily influenced by the semantics and connotations of each label. Despite the absence of a biological marker, ME is more often viewed as bio-medically caused, while CFS is believed to be more psychosomatic in origin. The current study, using the repeated measures methodology of Furnham & McDermott (1994) seeks to examine lay beliefs about overcoming CFS, ME and PVFS. It is hypothesised that beliefs about how to overcome each of these conditions will differ systematically, and that such differences will align with the biomedical versus psychosocial connotations of each label.

## METHOD

### Participants

70 men 70 women provided responses to the questionnaire, aged 18 to 60 years, with 84% being between the ages of 18 and 30, and 47% being aged 18-20, attending as students at the University of East London. 72% of respondents were educated to secondary school 'A' level. In terms of religious affiliation, 28% self-designated as Church of England, 11% as 'other protestant denominations', 14% as Catholic, 2% as Hindu, 2% as Muslim, 6% as Jewish and 36% as agnostic. Occupationally 87% self-designated as a student, with 8% as either full-time or part-time employed. In terms of partner status, 81% self-designated as single, 10% as married, 4% as divorced, and 5% as unspecified.

### Materials

The four-page questionnaire was a variant of the one as used by Knapp and Karabenick (1985) and as adapted by Henley and Furnham (1988) and by Furnham (1989) and as used by Furnham and McDermott (1994). The first page introduced the study, the second the three terms to be considered (CFS, ME, PVFS – in that order of presentation), the nature of the task and questions asking for relevant demographic information from the respondent. At the head of each of the following three successive pages occurred the prompt '*Factors that may be important in overcoming the problem of ...*', with either CFS, ME or PVFS included at its end unabbreviated, in full. After the prompt was followed a listing of twenty-four items, as reported in Furnham & McDermott (1994), wherein originally twenty had been selected by Knapp and Karabenick (1985) from Weiner's (1980) attributional framework, with four additional items coming from interviews with six lay people (Furnham and Henley, 1988).

### Procedure

Respondents were asked to consider the three labels and for each to rate on a scale from zero to nine the importance of the twenty-four strategies, from '*not important at all*' to '*extremely important*', the former indicating an ineffective strategy, the latter a most effective one for overcoming the problem as defined.





## RESULTS

### (i) Investigating the questionnaire dimensions

An initial scree analysis of the 24 questionnaire items as after Cattell (1966) indicated a three factor solution. Table 1 shows the results of a subsequent 3-factor principal components analysis with varimax rotation on the 24 items about overcoming the health problems designated by the three labels. Noticeably, the pattern loadings broadly replicates that of Furnham & McDermott (1994), producing three subscales identifiable as: self-reliance (lead item: *'how much will power a person has'*); seeking help (lead item: *'whether the person seeks out trained medical/psychological professionals'*); and, external locus of control (lead item: *'whether there is something wrong with the person's brain or nervous system'*).

Table 1: Results of principal components analyses with varimax rotation, specifying three factors

Items	Mean	Factor		
		1	2	3
1. How hard a person tries	4.27	<u>.76</u>	-.05	.16
2. How much willpower (inner strength) a person has	5.02	<u>.80</u>	-.08	.14
3. How lucky a person is	1.87	.19	-.4	<u>.37</u>
4. Whether a person gets professional help	6.69	.08	<u>.81</u>	.07
5. A person's general ability to overcome problems	6.35	.43	<u>.73</u>	-.04
6. How much information a person has about the problem	5.41	<u>.73</u>	.19	.16
7. Whether the problem is a symptom of some other deep-rooted problem	5.95	.35	<u>.56</u>	.24
8. Whether the person believes it is possible to eliminate the problem	6.22	<u>.72</u>	.34	-.00
9. How embarrassed the person feels about having the problem	4.17	<u>.62</u>	.10	.15
10. How damaging the problem is to the person's feelings of self-worth or self-esteem	5.16	<u>.53</u>	.34	.06
11. How much eliminating the problem would please others	3.13	.44	-.11	.46
12. How much a person stays away from situations that make the problem worse	5.36	.03	.2	<u>.47</u>
13. How much a person understands about the underlying reasons for the problem	6.45	.47	<u>.69</u>	-.01
14. How much self-control the person has	4.58	<u>.68</u>	.08	.38
15. Whether the person gets help from other people (friends or loved ones)	6.46	.59	.49	.02
16. How intelligent the person is	2.37	.33	.07	<u>.53</u>
17. How much a person believes in God	2.00	.08	-.13	<u>.55</u>
18. How much the person stays away from others with similar problems	2.40	.34	-.11	.47
19. Whether there is something wrong with the person's brain or nervous system	5.09	-.12	.43	<u>.61</u>
20. Whether the person's mother and/or father have a similar problem	4.59?	.02	.47	.6
21. Whether the person seeks out trained medical/psychological professionals	7.12	-.01	<u>.86</u>	.08
22. How much the person really wants to get better	6.36	<u>.76</u>	.32	-.02
23. Whether the person really wants to get better	5.72	.5	.51	.08
24. How much courage a person has to change his/her life style	5.78	<u>.7</u>	.11	.24
	Eigenvalue	8.04	2.90	1.85
	Variance	33.5%	12.09%	7.7%

Table 2: Repeated measures MANOVAs for 24 items and three factors

Items	C FS	ME	PVFS	F Level	P
1. How hard a person tries	4.56	4.14	4.11	3.18	0.05
2. How much willpower (inner strength) a person has	5.3 <sup>a</sup>	5.07	4.7 <sup>a</sup>	4.8	0.01
3. How lucky a person is	1.94	2.02	1.64	2.69	0.07
4. Whether a person gets professional help	6.39 <sup>a</sup>	6.82	6.86 <sup>a</sup>	4.13	0.02
5. A person's general ability to overcome problems	6.16	6.41	6.49	1.7	0.19
6. How much information a person has about the problem	5.63	5.43	5.19	3.19	0.45
7. Whether the problem is a symptom of some other deep-rooted problem	6.24 <sup>a</sup>	5.87	5.75 <sup>a</sup>	3.07	0.05
8. Whether the person believes it is possible to eliminate the problem	6.37	6.30	5.98	2.47	0.09
9. How embarrassed the person feels about having the problem	4.22	4.29	4.00	0.99	0.37
10. How damaging the problem is to the person's feelings of self-worth or self-esteem	5.49 <sup>a</sup>	5.36 <sup>b</sup>	4.63 <sup>ab</sup>	10.41	0.001
11. How much eliminating the problem would please others	3.34	3.01	3.04	2.05	0.13
12. How much a person stays away from situations that make the problem worse	5.64 <sup>a</sup>	4.76 <sup>b</sup>	5.69 <sup>ab</sup>	9.46	0.001
13. How much a person understands about the underlying reasons for the problem	6.56	6.31	6.48	0.88	0.41
14. How much self-control the person has	4.81	4.41	4.53	1.91	0.15
15. Whether the person gets help from other people (friends or loved ones)	6.61 <sup>a</sup>	6.68 <sup>b</sup>	6.09 <sup>ab</sup>	6.82	0.01
16. How intelligent the person is	2.44	2.36	2.31	0.37	0.67
17. How much a person believes in God	2.19 <sup>a</sup>	2.06 <sup>b</sup>	1.76 <sup>ab</sup>	4.47	0.02
18. How much the person stays away from others with similar problems	2.18	2.41	2.63	1.91	0.15
19. Whether there is something wrong with the person's brain or nervous system	5.27	5.23	4.76	3.05	0.05
20. Whether the person's mother and/or father have a similar problem	5.04 <sup>a</sup>	4.56	4.20 <sup>a</sup>	7.11	0.001
21. Whether the person seeks out trained medical/psychological professionals	6.84 <sup>ab</sup>	7.23 <sup>a</sup>	7.28 <sup>b</sup>	4.41	0.01
22. How much the person really wants to get better	6.64	6.21	6.22	3.55	0.03
23. Whether the person really wants to get better	5.89	5.84	5.44	2.90	0.06
24. How much courage a person has to change his/her life style	6.24 <sup>ab</sup>	5.64 <sup>b</sup>	5.45 <sup>a</sup>	10.54	0.001
<i>Three factors</i>					
1. Self-Reliance	5.47 <sup>ab</sup>	5.21 <sup>a</sup>	4.98 <sup>b</sup>	10.87	.001
2. Seeking Help	6.44	6.53	6.57	0.72	.49
3. External Control	3.89 <sup>a</sup>	3.6	3.63 <sup>a</sup>	4.27	.02

*Means with a common superscript are significantly different*

Table 2 shows the results of MANOVAs for each of the 24 items in the questionnaire and also for each of the three summary subscales. Notably, the most significant difference is observed on self-reliance, with Bonferroni analyses indicating paired differences between CFS and PVFS and between CFS and ME, with most self-reliance being reported for CFS and least for PVFS. Also, higher scores on the external locus of control factor (belief in the role of factors beyond the person's control e.g. *'whether or not there is something wrong with the person's brain'*) were observed for CFS than PVFS. It should also be noted in relation to the external locus of control paired comparisons, that though the difference between the CFS & ME comparison is non-significant at  $p=.05$ , this test approached significance with 'p' at .06

At the level of single item analyses, the most discriminating item between the three labels can be observed to be item 24 from the self-reliance subscale *'how much courage a person has to change his/her lifestyle'*, with the CFS condition soliciting the highest average scores on this item, and significantly more so than on both ME and PVFS. Conversely, for the second most discriminating item, item 10, also from the self-reliance subscale, *'how damaging the problem is to the person's feelings of self-worth or self-esteem'*, average scores on this were most elevated in the CFS condition and significantly different than those in the PVFS condition, likewise between ME and PVSF. A similar pattern of difference is observable for the third and fourth most discriminating items, item 12, from the external control subscale *'how much a person stays away from situations that make the problem worse'*; and item 20, (which loads at .47 on the 'seeking help' factor), *'whether the person's mother and/or father have a similar problem'*.

## DISCUSSION

Firstly, it should be noted that this study has replicated the three factors derived by Furnham & McDermott (1994) from the twenty-four items (see Table 1). Secondly, from the analyses of variance of the three principal components (see Table 2), it is evident that the self-reliance and external control factors discriminate significantly between the three health condition labels, namely CFS, ME and PVFS. Specifically, if the condition is specified as 'chronic fatigue syndrome', respondents report self-reliant strategies as being more important for overcoming the condition than if it is specified as 'myalgic encephalomyelitis' or 'post-viral fatigue syndrome', in that order of priority. Further, and somewhat paradoxically, if the condition is specified as 'chronic fatigue syndrome', respondents report factors beyond their control (such as the influence of brain pathology, of God, or of intelligence) as being relatively more important for overcoming the condition than if it is specified as 'post-viral fatigue syndrome' or 'myalgic encephalomyelitis', in that order of priority, though the range of scores (3.6-3.89) indicates that respondents do not think that external control factors are generally effective, irrespective of what the condition is called. Lastly, it must also be noted that a belief in the efficacy of seeking help as a strategy for overcoming the three health complaints did not discriminate between them ( $f=.72, p=.49$ ); that is to say, it is apparent that what the health condition is called does not differentially affect peoples' belief in the role of social support as an effective strategy for overcoming the complaint. Indeed, it is notable that the scores on the seeking help factor (ranging from 6.44 to 6.57) are greater than for either the self-reliance or external control factors (ranging respectively from 4.98 to 5.47, and 3.6 to 3.89), indicating that seeking help is regarded as the most important strategy of the three for overcoming the health complaint whether it be called CFS, ME or PVFS. In terms of the demographic variables, regression analyses indicated that that there were no predictive effects of these in relation to the three factors, with the exception of frequency of church attendance which independently predicted scores on the total external control factor, with more frequent attendance co-varying with a greater external control orientation ( $\beta=.24, t=2.63, p=.01; r=.18$ ).

The results of the present study replicate the three factor structure of 'self-reliance', 'seeking help' and 'external control' as strategies for overcoming problems as observed by Furnham & McDermott (1994)

in their study of lay beliefs for overcoming obesity, drug addiction, marital difficulties, stuttering and insomnia. Likewise, Twohig & Furnham (1998) also found that lay beliefs for paraphilia such as fetishism, paedophilia, sexual sadism and voyeurism, also produced these factors, indicating that irrespective of health complaint, they represent stable aspects of belief architecture for overcoming health problems.

A recurring theme in research on lay beliefs is that self-reliance is an important factor in overcoming problems. In the Furnham & McDermott (1994) study, self-reliance was rated highly for overcoming problems of consumption (drug addiction, obesity) and in Twohig & Furnham (1998) for overcoming the problematic gratification of sexual activities in the paraphilias. In the study here, though self-reliance was not rated overall as such an important strategy as seeking help, it is evident that where the health complaint is specified as CFS, self-reliance is regarded as a more important strategy than if the condition is labelled as ME or PVFS. This may be because non-medical undergraduate participants are more likely than other types of students to perceive CFS as 'idle malingering', according to Jason et al (2001). Thereby, with CFS being regarded as a matter of personal agency, of self-induced inertia, the significance of self-reliance as a strategy becomes understandable. Indeed, it must be noted that self-reliance is advocated by medical professionals in the context of overcoming conjoined CFS/ME. Burns et al (2012), for example, suggests that nurses should instil a sense of self-reliance in CFS/ME patients by encouraging them to keep a diary of their behaviour and set goals for themselves as a way of understanding their baseline activity and to focus on improvement without exacerbation of symptoms. Self-control of sleeping patterns as well as utilising self-help techniques for pain management are also encouraged as part of a self-management repertoire. However this self-reliant mode is accompanied by medical guidance, since Burns et al (2012) states it is imperative that increases in patient activity should be closely supervised by an experienced therapist. Along with Furnham & McDermott (1994) and the current study then, the presence of self-reliance in conjunction with seeking help emerge as interrelated, paired factors for overcoming CFS/ME/PVFS.

Notably in this study, however, seeking help was rated as most important strategy for all three representations of symptoms. This finding aligns with the results of Furnham & Hayward's (1997) meta-analysis of five separate studies covering a diverse range of complaints in which seeking help was deemed

to be a prominent and frequently endorsed coping strategy. Seeking out and receiving professional help whilst also exerting self-reliance and control are somewhat contradictory strategies because one incorporates admitting to needing and relying on others for support, whereas the other emphasises self-management and self-control (Reevy & Maslach, 2001). The deployment of either seeking help or self-reliance as lead strategies, however, may also be informed and led by culture. In a cross-cultural study of British students, Japanese students and Japanese students studying in Britain by Furnham, Ota, Tatsuro & Koyasu (2000), lay beliefs about agoraphobia, depression, smoking cessation, lack of confidence and obesity were observed, with British students rating 'professional help' as the most important factor in overcoming these problems, particularly for depression, while for both Japanese cohorts belief in inner control was rated as the most effective way of coping, chiefly for problems of consumption like smoking and obesity. Furthermore, as well cultural variation being salient, though no effect of gender was observed in this study, Mo, Malik & Coulson (2009) have noted that male patients may be more reluctant to seek professional help, given the masculine identity of self-reliance can thereby be challenged, with anything less being viewed as an admission of lack of control or weakness. Overall, lay beliefs about seeking help and self-reliance are generally considered beneficial to recovery.

In consideration of the external control factor in this study, Furnham, Ota, Tatsuro & Koyasu (2000) found that British students considered 'fate' to be an important factor when dealing with drug addiction. However, in Furnham and Hayward's (1997) study they observed for overcoming the cognate difficulties dyslexia, fear of flying, amnesia and learning difficulties, 'fate' was ranked the last in terms of importance and that religiosity was a strong predictor of 'fate' being favoured as a method of overcoming problems. According to Afari et al (2000), twins who utilised avoidant coping strategies were more likely to have chronic fatigue syndrome and suffer worse for this than twins who used problem focused coping strategies. Notably frequency of church attendance in the present study is a significant independent predictor of external control scores. This aligns well with findings from studies using the God Health Locus of Control (GLHC) which is a measure used to assess a major and specific facet of external control orientation (Wallston et al, 1999). Wallston (2005), for example, found that high scores on the GLHC correlate with being actively religious as a means of coping with pain, though Ryan and Francis (2012) found that

‘awareness of god’ was also associated with better psychological wellbeing. Hence for the sample in the present study, religiosity as an external control orientation is linked with ways of overcoming CFS and PVSF.

The notion of internal LOC as good versus external LOC as bad, (the so-called ‘good-boy/bad-boy’ dichotomy as Rotter (1975) called it in his critical review of the literature published since his 1966 landmark monograph outlining the theory of which LOC was a part), however is more complex. For example, Hareide, Finset & Wyller (2011) found that young CFS sufferers attribute the cause of their illness to external forces yet view themselves as having internal control, this profile of belief being beneficial to their psychological health and feelings of helplessness. Further, Edwards et al (2001) found that belief in a psychological cause of CFS, a strong illness identity, belief in severe consequences of the illness, and little perceived control is associated with higher levels of anxiety and depression. Thereby, the perception of CFS/ME/PVFS as externally caused cannot be simplistically aligned with maladaptive coping.

The discriminative utility of these factors could be enhanced further with measurement of how familiar participants are with CFS, ME and PVSF. Jason et al (2001), for example, assessed how much respondents knew of CFS and ME, finding unsurprisingly that medical students are more knowledgeable than their undergraduate counterparts. Indeed, the degree to which an individual will actively seek out information and strategies for overcoming an illness has been found to be strongly associated with perceived control among CFS patients, as well as a prominent factor within lay beliefs in a number of other studies (Edwards et al, 2001; Furnham & Hayward, 1997). Differences in belief as a function of cultural background needs integration into further work, as indicated by Furnham, Ota, Tatsuro & Koyasu (2000).

In summary and conclusion, the self-reliance and external control factors have been found here to discriminate significantly between the CFS, ME and PVFS labels. When specified as ‘chronic fatigue syndrome’, self-reliant strategies come to the fore and also belief in the efficacy of some external factors, such as brain pathology, God, and intelligence. How the health condition is linguistically constructed does not differentially affect peoples’ belief in the efficacy of seeking social support, a belief which exceeds that for either self-reliant or external control strategies. On balance however, it would appear our findings



support the contention that `chronic fatigue syndrome' is the linguistic construction of the three tested here which bestows on those to whom it is applied the most beneficial cognitive and psychological outlook for helping such individuals to adapt to and overcome the daily limitations associated with this malady.

Thereby, its appellation within current orthodox medical nomenclatures is well chosen and placed.

## REFERENCES

- Acheson, E. D. (1959). The clinical syndrome variously called benign myalgic encephalomyelitis, Iceland disease and epidemic neuromyasthenia. *The American journal of medicine*, 26(4), 569-595.
- Afari, N., Schmaling, K. B., Herrell, R., Hartman, S., Goldberg, J., & Buchwald, D. S. (2000). Coping strategies in twins with chronic fatigue and chronic fatigue syndrome. *Journal of psychosomatic research*, 48(6), 547-554.
- Arnett, S. V., & Clark, I. A. (2012). Inflammatory fatigue and sickness behaviour—lessons for the diagnosis and management of chronic fatigue syndrome. *Journal of affective disorders*, 141(2), 130-142.
- Baker, R., & Shaw, E. J. (2007). Guidelines: diagnosis and management of chronic fatigue syndrome or myalgic encephalomyelitis (or encephalopathy): summary of NICE guidance. *BMJ: British Medical Journal*, 335(7617), 446-448.
- Burns, D., Bennett, C., & McGough, A. (2012). Chronic fatigue syndrome or myalgic encephalomyelitis. *Nursing Standard*, 26(25), 48.
- Carruthers, B.M., van de Sande, M.I., De Meirleir, K.L., Klimas, N.G., Broderick, G., Mitchell, T., Staines, D., Powles, A.C.P., Speight, N., Vallings, R., Bateman, L., Baumgarten-Austrheim, B., Bell, D.S., Carlo-Stella, N., Chia, J., Darragh, A., Jo, D., Light, A.R., Marshall-Gradisbik, S., Mena, I., Mikovits, J.A., Miwa, K., Murovska, M., Pall, M.L., & Stevens, S. (2011). Myalgic encephalomyelitis: international consensus criteria. *Journal of internal medicine*, 270(4), 327-338.
- Devanur L.D., & Kerr J.R. (2006) 'Chronic fatigue syndrome.' *Journal of Clinical Virology*, 37, 139-150.

- Edwards, R., Suresh, R., Lynch, S., Clarkson, P., & Stanley, P. (2001). Illness perceptions and mood in chronic fatigue syndrome. *Journal of psychosomatic research*, 50(2), 65-68.
- Fernie, B., & Murphy, G. (2009). *Coping Better With Chronic Fatigue Syndrome/Myalgic Encephalomyelitis: Cognitive Behaviour Therapy for CFS/ME*. Karnac Books.
- Fukuda K, Straus SE, Hickie I, et al. (1994) The chronic fatigue syndrome: A comprehensive approach to its definition and study. *Annals of Internal Medicine* 121: 953–959.
- Furnham, A., & Hayward, R. (1997). A study and meta-analysis of lay attributions of cures for overcoming specific psychological problems. *The Journal of genetic psychology*, 158(3), 315-331.
- Furnham, A., & McDermott, M. R. (1994). Lay beliefs about the efficacy of self-reliance, seeking help and external control as strategies for overcoming obesity, drug addiction, marital problems, stuttering and insomnia. *Psychology and Health*, 9(5), 397-406.
- Furnham, A., Ota, H., Tatsuro, H., & Koyasu, M. (2000). Beliefs about overcoming psychological problems among British and Japanese students. *The Journal of social psychology*, 140(1), 63-74.
- Goetz, C. G. (2001). Poor Beard!! Charcot's internationalization of neurasthenia, the "American disease". *Neurology*, 57(3), 510-514.

- Grue, J. (2014). A Garden Of Forking Paths: A Discourse Perspective On 'Myalgic Encephalomyelitis' And 'Chronic Fatigue Syndrome'. *Critical Discourse Studies*, 11(1), 35-48.
- Hamilton, W. T., Gallagher, A. M., Thomas, J. M., & White, P. D. (2005). The prognosis of different fatigue diagnostic labels: a longitudinal survey. *Family Practice*, 22(4), 383-388.
- Hareide, L., Finset, A., & Wyller, V. B. (2011). Chronic fatigue syndrome: a qualitative investigation of young patient's beliefs and coping strategies. *Disability and rehabilitation*, 33(22-23), 2255-2263.
- Holmes, G. P., Kaplan, J. E., Gantz, N. M., Komaroff, A. L., Schonberger, L. B., Straus, S. E., Jones, J.F., Dubois, R.E., Cunningham-Rundles, C., Pahwa, S., Tosato, G., Zegans, L.S., Purtilo, D.T., Brown, N., Schooley, R.T., & Brus, I. (1988). Chronic fatigue syndrome: a working case definition. *Annals of internal medicine*, 108(3), 387-389.
- Jason, L. A., Taylor, R. R., Stepanek, Z., & Plioplys, S. (2001). Attitudes regarding chronic fatigue syndrome: The importance of a name. *Journal of Health Psychology*, 6(1), 61-71.
- Jenkins, R. (1991). Epidemiology: Lessons from the past. *British medical bulletin*, 47(4), 952-965.
- Johnston, S., Brenu, E. W., Staines, D., & Marshall-Gradisnik, S. (2013). The prevalence of chronic fatigue syndrome/myalgic encephalomyelitis: a meta-analysis. *Clinical epidemiology*, 5, 105-110.
- Knapp, J. & Karabenick, S. (1985). Overcoming problems: The perceived importance of willpower and other contributors. *Cognitive Therapy and Research*, 9, 343-354.
- Klimas, N.G., Salvato, F.R., Morgan, R. & Fletcher, M.A. (1990). Immunologic abnormalities in chronic fatigue syndrome. *Journal of Clinical Microbiology*, 28(6), 1403-1410.

- Mo, P. K., Malik, S. H., & Coulson, N. S. (2009). Gender differences in computer-mediated communication: a systematic literature review of online health-related support groups. *Patient education and counselling*, 75(1), 16-24.
- Reevy, G. M., & Maslach, C. (2001). Use of social support: Gender and personality differences. *Sex roles*, 44(7-8), 437-459.
- Rotter, J. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80, 609, 1-28.
- Rotter, J.B. (1975). Some problems and misconceptions related to the construct of internal versus external control of reinforcement. *Journal of Consulting & Clinical Psychology*, 43, 56-67.
- Ryan, M. E., & Francis, A. J. (2012). Locus of control beliefs mediate the relationship between religious functioning and psychological health. *Journal of religion and health*, 51(3), 774-785.
- Shiloh, S., Peretz, G., Iss, R., & Kiedan, R. (2007). Recovery attributions: Explicit endorsement of biomedical factors and implicit dominance of psycho-social factors. *Journal of behavioral medicine*, 30(3), 243-251.
- Shorter, E. (1993). Chronic fatigue in historical perspective. In *Chronic Fatigue Syndrome* (pp. 83-101). John Wiley New York.
- Twohig, F., & Furnham, A. (1998). Lay beliefs about overcoming four sexual paraphilias: Fetishism, paedophilia, sexual sadism and voyeurism. *Personality and Individual Differences*, 24(2), 267-278.

Wallston, K. A. (2005). The validity of the multidimensional health locus of control scales. *Journal of Health Psychology, 10*(5), 623-631.

Wallston, K. A., Malcarne, V. L., Flores, L., Hansdottir, I., Smith, C. A., Stein, M. J., ... & Clements, P. J. (1999). Does God determine your health? The God locus of health control scale. *Cognitive Therapy and Research, 23*(2), 131-142.

Wojcik, W., Armstrong, D., & Kanaan, R. (2011). Chronic fatigue syndrome: labels, meanings and consequences. *Journal of psychosomatic research, 70*(6), 500-504.