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Functional level of patients with chronic fatigue syndrome reporting use of alternative vs. traditional treatments

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Abstract

Background—Use of complementary and alternative medicine (CAM) is common among patients with chronic fatigue syndrome (CFS), but whether it is viewed as more or less effective than traditional medicine is unclear

Purpose—To evaluate patients' level of functioning based on the types of treatments they report using (i.e., traditional-only, CAM-only, or a combination of both).

Methods—Participants were recruited from physician referrals and media sources (newspaper, support groups), and 97 participants were retained for this analysis. Based on self-report, individuals were divided into three groups: using CAM-only ($N=27$), traditional medicine-only ($N=22$), or a combination of both treatments ($N=58$).

Results—Social functioning was significant ($p<.01$), with post-hoc analyses indicating significantly better social functioning for individuals taking CAM-only in comparison to patients using traditional-only or a combination of traditional and CAM treatments. Significantly fewer participants ($p<.01$) using CAM-only had a current psychiatric diagnosis.

Conclusions—These findings suggest using CAM-only treatments in CFS is associated with higher social functioning and fewer current psychiatric diagnoses. The results support the need for research to fully evaluate how CAM may affect functioning among individuals with CFS.

Keywords

alternative medicine; CAM; chronic fatigue syndrome; Myalgic encephalomyelitis

Complementary and alternative medicine (CAM) may be viewed as a spectrum of treatments, medicines, or interventions that deviate from what is generally considered under conventional medicine. CAM has been defined as “any diagnosis, treatment and/or prevention which complements mainstream medicine by contributing to a common whole, by satisfying a demand not met by orthodoxy or by diversifying the conceptual frameworks of medicine.” [1] Use of CAM is widespread, with between 33% and 50% of the general population having tried at least one or more forms of CAM [2, 3], and roughly 62% of adult Americans having used some form of CAM in the last year.[4] The use of CAM has

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continued to increase over the last decade, specifically by those who have chronic illnesses. [5] One possible reason for this is that CAM may offer individuals the possibility of taking control over their illnesses to some degree.[6]

Despite the increasingly widespread use of CAM, there is a lack of education and experience about CAM, and physicians may respond to patients' questions about CAM neutrally or negatively.[7] Some findings suggest that individuals with higher education attainment, women, and people with poorer health status are more likely to use CAM alone or supplement their traditional medicine use with CAM.[4]

Chronic fatigue syndrome (CFS) is a debilitating chronic illness involving a variety of impairing symptoms such as fatigue, post-exertional malaise, sleep problems, and neurocognitive impairments. Currently, no consensus on appropriate medical treatments exists among medical professionals for this illness. Unsurprisingly, the use of alternative treatments are even more common among this patient population.[7] Past research has shown some positive effects of CAM use for individuals with CFS, but the ability to generalize these findings is limited with so few clinical trials.[8]

One large-scale survey from the U.S. examined the use of CAM among individuals with a 'chronic fatiguing illness.' [9] This study included individuals with prolonged fatigue (one to five months duration), chronic fatigue (at least six months duration), and 'CFS-like' conditions (fatigue not alleviated by rest and accompanied by at least four out of eight CFS symptoms). Those previously diagnosed with CFS reported more CAM use than individuals with fatigue who were not diagnosed with CFS. In another study, Edwards and colleagues [10] conducted a qualitative survey to examine how CAM use aligns with self-care among individuals with CFS ($N=8$). Participants reported feeling 'let down and disbelieved' when seeking help from physicians, and therefore may have taken more responsibility for their illness, self-care, and treatment by utilizing the use of CAM.

The purpose of the current study was to evaluate the level of functioning in individuals with CFS based on the type of treatment (i.e., traditional-only, CAM-only, or a combination of both) they were utilizing. These findings could help researchers further understand the characteristics of individuals taking CAM, and how these different treatment types may be aiding in symptom management specific to CFS.

Methods

Sample

The current participant data was drawn from a 2007 study by Jason and colleagues [11] that examined the efficacy of non-pharmacological treatments for CFS. Participants were predominantly recruited from physician referrals but also from media sources like the newspaper and support groups. Initially 114 individuals were included in the sample.

Measures

The Fatigue Severity Scale (FSS) [12] was used to understand how fatigue impacts functioning. This is a 9-item questionnaire with scores ranging from 1.00–7.00, where

higher scores represent greater fatigue impact on functioning. The FSS has been found to be a valid measuring tool for use in CFS.[13]

The Brief Pain Inventory (BPI) [14] assessed pain severity and it impacts on an individual's daily life. Items are scored from 1 to 10, where 10 is the most severe. The inventory has been found to be both valid and reliable.[15]

To determine if individuals within the sample had a current or past psychiatric diagnosis, the Structured Clinical Interview for DSM Disorders (SCID) [16] was used. This was necessary to establish if individuals had a diagnosis that may explain their CFS symptoms, as some psychiatric disorders are exclusionary when receiving a diagnosis of CFS. Participants were professionally administered the SCID and diagnoses, both past and present, were recorded. This measure has been validated in a study with individuals who have CFS. [17]

The Medical Outcomes Study 36-item Short-Form Health Survey (SF-36) assessed mental and physical functioning. [18] The questionnaire has 32 items that evaluate 8 scales of functioning, where lower scores indicate poorer health. This measure has been found to have strong discriminant validity and acceptable internal consistency.[19]

A specific question was added that addressed the types of medicine (CAM and/or traditional) that were used by participants to treat or manage symptoms related to CFS.

Data Analysis

Descriptive summary statistics and Chi square were used for demographic variables. A multivariate analysis of variance was used to assess differences on the SF-36 by group and a one way analysis of variance was used to compare fatigue (FSS) and pain (BPI) scores between groups.

Results

For this analysis, 97 participants were retained. Of the 17 removed from the sample, 9 had not responded to the question inquiring about the use of medicine specifically for CFS symptoms. The other eight subjects had responded as not currently taking any medicines for CFS. Of the 97 participants included, 79 (81.4%) were female. Of the 93 who indicated race or ethnicity, 84 (90.0%) were Caucasian, 5 (5.2%) were African American, 4 (4.1%) were Asian, and 4 (4.1%) were Latino or Hispanic. Demographic data can be found in Table 1.

The participants were grouped based on the type of medicines they reported currently taking for CFS symptoms. The groups were: CAM-only ($N=27$), traditional medicine only ($N=22$), and a combination of medicine types ($N=58$). The three groups were then compared on demographic variables. The only significant difference found was for educational attainment [$\chi^2(6, N=97) = 14.44, p < .05$]. Subsequent analyses controlled for educational attainment.

Of the eight SF-36 subscales, only social functioning was significant [$F(2,66) = 3.75, p < .01$] with post-hoc analyses showing that individuals taking CAM had significantly better social functioning than those taking both traditional and CAM or just traditional medicines.

However, no significant difference was found between the three groups on the fatigue (FSS) and pain (BPI) measures.

No significant differences were found for lifetime SCID diagnoses between groups but there was a significant difference for current SCID diagnoses [$\chi^2(2, N = 97) = 10.79, p < .01$] (See Table 2). Specifically, only 13.6% of the CAM group had a current diagnosis compared to 33.9% of the combination group and 64.7% of the traditional medicine only group.

Discussion

These findings align with past research in indicating that individuals with higher educational attainment are more likely to use CAM. These findings also suggest that those individuals with CFS who use CAM exclusively to manage their symptoms function as well as individuals using at least some traditional medicines. The group using CAM-only treatments reported significantly better social functioning than those using CAM plus traditional medicine or only traditional medicine. In addition, among the three groups, there were no significant differences for lifetime SCID diagnosis. However, when assessed for a current SCID diagnosis, CAM users were significantly less likely to have a current psychiatric diagnosis.

There were several limitations in this present study. The information collected was based entirely on cross sectional data generated through participant self-report. No causal inferences can be made from such correlational data. Also the sample was predominantly female and Caucasian making these findings difficult to generalize to other populations.

In summary, there were few differences between the traditional medicine-only, CAM-only, or both traditional medicine and CAM groups. While the CAM group did not differ from traditional medicine in terms of symptom severity, we found fewer current psychiatric diagnoses and better social functioning in this group. Perhaps the use of CAM provides an increased sense of control for patients dealing with a chronic illness. This greater feeling of control could indicate a psychological benefit from the act of taking CAM remedies, a benefit of the treatment itself, and/or an artifact of higher functioning patients choosing CAM. This study cannot determine which among these possibilities may apply to the data. It should be noted, however, that CAM therapies could potentially have harmful or adverse effects such as toxic effects, allergic reactions, contaminations, discontinued use of prescribed drugs, etc.[20, 21]

There is a need for more research to fully evaluate whether the use of CAM is a viable treatment option for individuals with CFS, as well as to examine how CAM may affect functioning among individuals with this illness. It is also imperative that clinical trials be conducted on viable CAM and traditional medicine treatments to better understand how they might impact the functioning of individuals with CFS.

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References

1. Ernst E, Resch KL, Mills S, Hill R, Mitchell A, Willoughby M, White A. Complementary medicine – a definition. *Br J Gen Pract.* 1995; 45:506. [PubMed: 7546880]
2. Dietary Supplement Health and Education Act (1994) Publication nr. 103–417, 108 Stat 4325.
3. MacLennan AH, Wilson DH, Taylor AW. Prevalence and cost of alternative medicine in Australia. *Lancet.* 1996; 347:569–573. [PubMed: 8596318]
4. Barnes AS, Powell-Griner E, McFann K, Nahin RL. Complementary and alternative medicine use among adults. *Adv Data.* 2004; 343:1–19. [PubMed: 15188733]
5. Saydah SH, Eberhardt MS. Use of complementary and alternative medicine among adults with chronic diseases: United States 2002. *J Altern Complement Med.* 2006; 12:805–12. [PubMed: 17034287]
6. Thorne S, Paterson B, Russell C, Schultz A. Complementary/alternative medicine in chronic illness as informed self-care decision making. *Int J Nurs Stud.* 2002; 39(7):671–683. [PubMed: 12231024]
7. Corbin-Winslow L, Shapiro H. Physicians want education about complementary and alternative medicine to enhance communication with their parents. *Arch Intern Med.* 2002; 162:1176–1181. [PubMed: 12020190]
8. Porter NS, Jason LA, Boulton A, Bothne N, Coleman B. Alternative medical interventions used in the treatment and management of myalgic encephalomyelitis/chronic fatigue syndrome and fibromyalgia. *J Altern Complement Med.* 2010; 16:235–49. [PubMed: 20192908]
9. Jones JF, Maloney EM, Boneva RS, Jones AB, Reeves WC. Complementary and alternative medical therapy utilization by people with chronic fatiguing illnesses in the United States.
10. Edwards CR, Thompson AR, Blair A. An ‘overwhelming illness’: women’s experiences of learning to live with chronic fatigue syndrome/Myalgic encephalomyelitis. *Journal of Health Psychology.* 2007; 12(2):203–14. [PubMed: 17284485]
11. Jason LA, Torres-Harding S, Friedberg F, Corradi K, Njoku MG, Donalek J, Reynolds N, Brown M, Weiner BB, Rademaker A, Papernik M. Non-pharmacologic interventions for CFS: A randomized trial. *J Clin Psychol Med Settings.* 2007; 14(4):275–296.
12. Krupp LB, LaRocca NG, Muir-Nash J, Steinberg AD. The Fatigue Severity Scale. Application to patients with multiple sclerosis and systemic lupus erythematosus. *Arch Neurol.* 1989; 46(10): 1121–1123. [PubMed: 2803071]
13. Valko PO, Bassetti CL, Bloch KE, Held U, Baumann CR. Validation of the Fatigue Severity Scale in a Swiss cohort. *Sleep.* 2008; 31(11):1601–1607. [PubMed: 19014080]
14. Mendoza TR, Wang XS, Cleeland CS, et al. The rapid assessment of fatigue severity in cancer patients: use of the Brief Fatigue Inventory. *Cancer.* 1999; 85(5):1186–1196. [PubMed: 10091805]
15. Cleeland CS, Ryan KM. Pain assessment: global use of the Brief Pain Inventory. *Ann Acad Med Singapore.* 1994; 23:129–138. [PubMed: 8080219]
16. Spitzer, RL.; Williams, JBW.; Gibbon, M.; First, MB. Structured Clinical Interview for DSM-IV - Non-Patient Edition (SCID-NP, Version 2.0). Washington, DC: American Psychiatric Press; 1995.
17. Taylor RR, Jason LA, Torres A. Fatigue Rating Scales: an empirical comparison. *Psychol Med.* 2000; 30(4):849–856. [PubMed: 11037093]
18. Ware JE Jr, Sherbourne CD. The MOS 36-item short-form health survey (SF-36): I. Conceptual framework and item selection. *Med Care.* 1992; 30(6):473–483. [PubMed: 1593914]
19. McHorney CA, Ware JE Jr, Lu JR, Sherbourne CD. The MOS 36-item Short-Form Health Survey (SF-36): III. Tests of data quality, scaling assumptions, and reliability across diverse patient groups. *Med Care.* 1994; 32(1):40–66. [PubMed: 8277801]
20. De Smet PAGM. Health risks of herbal remedies. *Drug Saf.* 1995; 13:81–93. [PubMed: 7576267]
21. Ernst, E. Risks associated with complementary therapies. In: Dukes, MNG.; Aronson, JK., editors. *Meyler’s side effects of drugs.* 14. Elsevier; Amsterdam: 2000. p. 1649–1681.

Table 1

Demographics by medicine usage groups (N=97)

	Trad Only (n=17)	Alt Only (n=22)	Both (n=58)	Sig.
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	
Age	45.06 (13.51)	40.36 (11.71)	44.50 (10.81)	.31
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	
Gender				.84
Male	4 (23.5)	4 (18.2)	10 (17.2)	
Female	13 (76.5)	18 (81.8)	48 (82.8)	
Ethnicity				.36
White	15 (93.8)	17 (81.0)	52 (92.9)	
Non-White	1 (6.3)	4 (19.0)	4 (7.1)	
Educational Level				.03
Some HS/HS Degree or GED	0 (0.0) ^c	1 (4.5)	8 (13.8) ^c	
Some College or Specialized Training	8 (47.1)	4 (18.2)	9 (15.5)	
Standard College Degree	6 (35.3)	9 (40.9)	32 (55.2)	
Graduate/Professional Degree	3 (17.6)	8 (36.4)	9 (15.5)	
Hollingsworth Socioeconomic Status				.83
Low	7 (50.0)	11 (57.9)	27 (50.0)	
High	7 (50.0)	8 (42.1)	27 (50.0)	

Table 2

Outcome measures by medicine usage group (N=97)

	Trad Only (n=17)	Alt Only (n=22)	Both (n=58)	Sig.
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	
SF-36 Subscales				
Physical Functioning	38.63 (26.30)	49.77 (20.03)	43.42 (21.90)	.29
Role Physical	1.56 (6.25)	7.95 (17.91)	3.07 (10.64)	.20
Bodily Pain	39.00 (23.52)	42.91 (15.24)	38.46 (23.81)	.72
General Health Functioning	35.48 (18.28)	36.86 (18.07)	29.43 (17.18)	.18
Vitality	15.00 (12.25)	22.27 (16.95)	15.61 (12.21)	.12
Social Functioning	27.34 (16.59) ^a	52.27 (29.03) ^{ab}	37.50 (22.41) ^b	.005
Role Emotional	43.75 (48.26)	68.18 (37.76)	51.79 (43.07)	.182
Mental Health	64.25 (14.86)	67.64 (17.93)	63.37 (18.17)	.63
Fatigue Severity Scale				
	5.99 (1.32)	5.84 (0.71)	6.21 (0.62)	.17
BPI - Pain Severity				
	4.15 (2.17)	4.13 (1.58)	4.17 (2.30)	.997
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	
Current SCID Diagnosis				
Yes	11 (64.7) ^{ac}	3 (13.6) ^{ab}	22 (37.9) ^{bc}	.005
Lifetime SCID Diagnosis				
Yes	12 (70.6)	11 (50.0)	37 (63.8)	.38

^{abc} Similar superscript letters across row variables indicate significant differences at the $p < .05$ level.