Physician Satisfaction in Treating Medically Unexplained Symptoms

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Objectives: To determine whether treating conditions having medically unexplained symptoms is associated with lower physician satisfaction and higher ascribed patient responsibility, and to determine whether higher ascribed patient responsibility is associated with lower physician satisfaction in treating a given condition.

Methods: We surveyed a nationally representative sample of 1504 US primary care physicians. Respondents were asked how responsible patients are for two conditions with more-developed medical explanations (depression and anxiety) and two conditions with less-developed medical explanations (chronic back pain and fibromyalgia), and how much satisfaction they experienced in treating each condition. We used Wald tests to compare mean satisfaction and ascribed patient responsibility between medically explained conditions and medically unexplained conditions. We conducted single-level and multilevel ordinal logistic models to test the relation between ascribed patient responsibility and physician satisfaction.

Results: Treating medically unexplained conditions elicited less satisfaction than treating medically explained conditions (Wald $P < 0.001$). Physicians attribute significantly more patient responsibility to the former (Wald $P < 0.005$), although the magnitude of the difference is small. Across all four conditions, physicians reported experiencing less satisfaction when treating symptoms that result from choices for which patients are responsible (multilevel odds ratio 0.57, $P = 0.000$).

Conclusions: Physicians experience less satisfaction in treating conditions characterized by medically unexplained conditions and in treating conditions for which they believe the patient is responsible.

Key Words: chronic back pain, fibromyalgia, medically unexplained symptoms

Conditions characterized by medically explained symptoms/conditions are common. For example, chronic back pain is the second most common condition seen by physicians,[1] and much of it is medically unexplained. Fibromyalgia is found in 2% to 4% of the population.[2] Debate exists as to the causes and proper treatments of medically unexplained symptoms. Some experts have come to understand them as signs of psychological distress that have no physical interpretation[3]; others have argued in favor of occult neurological or endocrinal causes.[4,5] The debate extends to which treatments are effective. Opioids are prescribed commonly for medically unexplained symptoms. Although they may be effective in short-term pain reduction, there is less evidence that they are effective in the long term, and they have a high rate of abuse.[1] Cognitive behavioral therapy shows promise for immediate and long-term improvements,[6] and some researchers have advocated for multistage, multidisciplinary interventions.[7,8]

Physicians face difficulties when treating conditions with medically unexplained symptoms. With most other conditions, physical indicators align with a patient's personal experience, creating agreement between the physician and patient.[9] In the case of medically unexplained symptoms, however, physical indicators are incongruent with the patient's symptoms, often eliciting contention between the physician and the patient. Physicians find it burdensome to interpret patients' subjective experiences.[10] In response, physicians often order more tests than they should, fearing they are missing a diagnosis.[11] Physicians interpret negative test results as indicators of psychological illness,[3–5] but patients with medically unexplained symptoms tend to emphasize somatic symptoms and deny cognitive or affective symptoms.[12] It has been argued that when physicians withhold a diagnosis, patients' experiences are made illegitimate, and patients often compensate by increasing medical visits.[13] At the same time, patients with medically unexplained symptoms often are empowered by close acquaintances, support groups, and pharmaceutical companies that argue for the legitimacy of an unrecognized diagnosis.[2,9,14,15]

Key Points

- Physicians derive less satisfaction treating unexplained symptoms.
- Patients are perceived by physicians as being more responsible for unexplained symptoms.
- Physicians derive less satisfaction in treating symptoms that they believe the patient causes.

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In light of the above, we hypothesized that physicians would report less satisfaction in treating conditions characterized by medically unexplained symptoms than in treating other mental health conditions for which there is less controversy about the condition and greater efficacy in available treatments. In the present study, we analyzed data from a representative sample of US physicians to compare physicians' experiences with medically explained (depression and anxiety[16]) and medically unexplained conditions (chronic back pain[13,17] and fibromyalgia[2,18]), the extent to which physicians attribute responsibility for each condition to patients, as well as the relative satisfaction that physicians experience in caring for patients with each condition. We hypothesized that because medically unexplained symptoms are characterized by a disjunction of bodily symptoms and bodily signs, physicians will be more likely to attribute responsibility to the patient for conditions with medically unexplained symptoms. Finally, we hypothesize that the more responsibility a physician ascribes to the patient for the condition, the less satisfied physicians will be in treating that condition.

Methods

Survey Data

The methods for the overarching study have been published previously.[19] Between September 2009 and June 2010, we mailed a confidential, self-administered questionnaire to a stratified random sample of 1504 US primary care physicians 65 years old or younger. The sample was generated from the American Medical Association Physician Masterfile, a database intended to include all practicing US physicians. To increase Muslim, Hindu, and Jewish representation, we used validated ethnic surname lists[20–22] to enhance the power of analyses that is not central to the present study. Physicians received up to three separate mailings of the questionnaire. To encourage participation, we included a $20 bill in the first mailing and offered an additional $30 for participation in the third. All of the data were double-keyed, cross-compared, and corrected against the original questionnaires. The study was approved by the University of Chicago institutional review board.

Questions

The four primary dependent variables measured the level of personal satisfaction that physicians experienced when providing care to patients with four conditions: depression, anxiety, chronic back pain, and fibromyalgia. Respondents could report, "none" (0), "a little" (1), "some" (2), or "a lot" (3), for each condition.

The main independent variables of interest measured physicians' beliefs about the extent to which each of the above conditions resulted from choices for which patients are responsible. Respondents could report "not at all" (0), "a little" (1), "somewhat" (2), or "a lot" (3).

The control variables included physician sex, age, importance of religion, occupational calling, immigrant status, and specialty. Sex was a dichotomous variable coded such that female was the reference category. Age was measured continuously. Physicians' self-reported importance of religion was measured on a four-point scale, with values for "not important/not applicable" (0), "fairly important" (1), "very important" (2), and "most important" (3). Occupational calling was measured with the prompt "The practice of medicine is a calling," to which responses included "disagree strongly" (0), "disagree somewhat" (1), "agree somewhat" (2), and "agree strongly" (3). Immigrant status was measured dichotomously, in which nonimmigrant physicians were treated as the reference category. Finally, physician specialty was coded as a categorical variable, in which family medicine served as the reference category, with additional categories for general practice and internal medicine.

Data Analyses

We tested three hypotheses. Hypotheses 1 and 2 were tested by comparing survey-adjusted means using a Wald test. Hypothesis 1 states that physicians will experience less personal satisfaction when treating conditions characterized by medically unexplained symptoms (chronic back pain and fibromyalgia) than when treating patients with more established medical explanations (depression and anxiety). We tested four comparisons, pairing the satisfaction experienced in treating chronic back pain and treating fibromyalgia with the satisfaction experienced treating depression and treating anxiety. We then conducted a fifth test using an additive scale for the two former (hereafter, "unexplained conditions" and the two latter (hereafter, "explained conditions") conditions.

Hypothesis 2 states that physicians are more likely to ascribe patient responsibility for chronic back pain and fibromyalgia than for depression and anxiety. As before, we tested four comparisons, pairing the patient responsibility ascribed for each unexplained condition with the responsibility ascribed for each explained condition, then conducting a fifth test using additive scales for unexplained conditions and explained conditions.

Hypothesis 3 states that the more responsibility that physicians ascribe to patients for a medical condition, the less likely they are to be satisfied in treating it. We tested hypothesis 3 using survey-adjusted single-level and multilevel ordinal logistic regressions, using the svy:ologit and meologit with pweight commands in STATA 14 (StataCorp, College Station, TX). The one exception is that we estimated a multinomial logistic regression model (svy:mlogit) when regressing satisfaction treating chronic back pain on the predictors because the ordinal logistic model did not meet the proportional odds assumption (Brant test $P = 0.041$).

First, we estimated single-level regression models in which satisfaction with respect to treating each of the four conditions is predicted by how much responsibility for the condition physicians ascribe to patients. For each condition, we estimated three models: a simple model in which physician satisfaction is regressed on his or her belief that patients cause the condition;

a model that included controls for physician sex, age, and importance of religion; and a third model that further controlled for occupational calling, immigrant status, and specialty.

Then, to estimate the effect across conditions, we treated each condition for each respondent as the unit of analysis and used a multilevel ordinal logistic regression with each respondent as the second level. We estimated two models. First, we included physician attribution of patient responsibility and indicator variables for each condition as level 1 predictors. Second, we interacted patient responsibility and condition, allowing the slope of patient responsibility to vary according to the condition.

Results

Descriptive Statistics

Table 1 reports how much satisfaction physicians experience in treating depression, anxiety, chronic back pain, and fibromyalgia. Most physicians report experiencing some or a lot of satisfaction in treating depression and anxiety, 77% and 71%, respectively. Fewer physicians report experiencing some or a lot of satisfaction treating chronic back pain and fibromyalgia, 42% and 35%, respectively. Table 2 reports how responsible patients are for their conditions, according to physicians. Most physicians believe that patients are not primarily responsible for the conditions of depression and anxiety, with 71% and 69%, respectively, indicating that they are a little responsible or not responsible. A majority of physicians also believe that patients are not primarily responsible for their chronic back pain or fibromyalgia, with 55% and 64%, respectively, reporting they are a little responsible or not responsible.

Hypothesis 1: Medically Unexplained Conditions and Satisfaction

Physicians experience less satisfaction, on average, when treating unexplained conditions. On the 7-point scale (0–3) described above, physicians report a mean satisfaction rating of 1.30 when treating chronic back pain and 1.15 when treating fibromyalgia, compared with 2.02 when treating depression and 1.86 when treating anxiety. Unexplained conditions elicit significantly less satisfaction than explained conditions in all four comparisons (chronic back pain vs depression Wald F = 431, P = 0.0000; chronic back pain vs anxiety Wald F = 281, P = 0.0000; fibromyalgia vs depression Wald F = 623, P = 0.0000, fibromyalgia vs anxiety Wald F = 438, P = 0.0000). When two 7-point scales (0–6) are created by adding the two unexplained conditions together and the two explained conditions together, this difference in means remains significant: unexplained conditions elicit a mean satisfaction of 2.4 compared with 3.9 for explained conditions (Wald F = 546, P = 0.0000).

Table 1. Responses to question "How much satisfaction do you get treating…"

	Unweighted n (weighted %)			
	Depression	Anxiety	Chronic back pain	Fibromyalgia
"None"	36 (4)	55 (6)	170 (20)	229 (26)
"A little"	156 (18)	197 (23)	340 (38)	350 (40)
"Some"	440 (50)	443 (50)	301 (34)	250 (29)
"A lot"	249 (27)	184 (21)	73 (8)	53 (6)
Weighted mean	2.02	1.86	1.30	1.15
n	881	879	884	882

Table 2. Responses to the question "How responsible are patients for their…"

	Unweighted n (weighted %)			
	Depression	Anxiety	Chronic back pain	Fibromyalgia
"None"	235 (26)	191 (22)	139 (16)	199 (21)
"A little"	402 (45)	422 (47)	369 (39)	377 (43)
"Some"	229 (27)	248 (29)	327 (39)	253 (30)
"A lot"	21 (2)	25 (3)	53 (6)	55 (6)
Weighted mean	1.06	1.13	1.35	1.20
n	887	886	888	884

Hypothesis 2: Medically Unexplained Conditions and Patient Responsibility

When comparing mean attribution of responsibility to the patient, physicians attributed significantly more responsibility to the patient for unexplained conditions, although the differences were relatively small. Using the four-point scale (0–3) described above, physicians reported a mean patient responsibility of 1.35 for chronic back pain and 1.20 for fibromyalgia, compared with 1.06 for depression and 1.13 for anxiety. In all four comparisons, patients were believed to be more responsible for the unexplained conditions than the explained conditions to a statistically significant degree (chronic back pain vs depression Wald F = 90, P = 0.0000; chronic back pain vs anxiety Wald F = 54, P = 0.0000; fibromyalgia vs depression Wald F = 26, P = 0.0000, fibromyalgia vs anxiety Wald F = 8, P = 0.005). When two 7-point scales (0–6) are created for unexplained conditions and explained conditions, the differences remain statistically significant. Mean patient responsibility for unexplained conditions is 2.6 compared with 2.2 for explained conditions (Wald F = 56, P = 0.0000).

Hypothesis 3: Patient Responsibility and Satisfaction

Table 3 reports the regression odds ratios (ORs) for the predicted effect of ascribed patient responsibility for each condition on physician satisfaction treating each condition. Including controls made little substantive impact on the predicted relation between patient responsibility and physician satisfaction. We proceeded by interpreting the full models (model 3 for each symptom),

Table 3. Ordinal logistic regression models predicting physician satisfaction in treating symptoms

	OR (*P*)								
	Satisfaction treating depression			Satisfaction treating anxiety			Satisfaction treating fibromyalgia		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Patient responsible for symptom	0.84 (0.065)	0.84 (0.087)	0.79* (0.022)	0.84 (0.079)	0.84 (0.091)	0.80* (0.033)	0.72*** (0.000)	0.71*** (0.000)	0.72*** (0.000)
Male sex		0.91 (0.552)	1.00 (0.979)		0.93 (0.624)	1.01 (0.942)		0.87 (0.368)	0.95 (0.769)
Age, y		1.02*** (0.002)	1.02* (0.041)		1.01 (0.089)	1.01 (0.333)		1.03*** (0.000)	1.04*** (0.000)
Importance of religion		1.16* (0.042)	1.04 (0.641)		1.13 (0.083)	1.03 (0.635)		1.17* (0.027)	1.10 (0.210)
Professional calling			1.41** (0.001)			1.28** (0.007)			1.29** (0.008)
Immigrant			1.26 (0.160)			1.57** (0.007)			2.22*** (0.000)
Specialty									
Family medicine (reference)									
General practice			1.37 (0.556)			1.90 (0.224)			1.40 (0.447)
Internal medicine			0.46*** (0.000)			0.52*** (0.000)			0.78 (0.116)
N		856	842	881	863	848	875	857	843

**P < 0.05; **P < 0.01; ***P < 0.001.*

noting differences in significance between models when relevant. When tested using separate regressions, ascribed patient responsibility was found to be a statistically significant predictor of physician satisfaction for fibromyalgia (OR 0.72, $P = 0.000$) in all three models. Patient responsibility also was a significant predictor in the full models for depression (OR 0.79, $P = 0.022$) and anxiety (OR 0.80, $P = 0.033$). Patient responsibility for chronic back pain did not significantly predict physician satisfaction. The multinomial model suggests that those who report that patients with chronic back pain are partially responsible for their condition are no more or less likely to experience satisfaction from treating chronic back pain than those who report patients have no responsibility (relative risk ratio [RR] 1.23, $P = 0.161$), some responsibility (relative RR 0.95, $P = 0.665$), and a lot of responsibility (relative RR 0.93, $P = 0.690$).

These coefficients indicate that physician satisfaction is negatively associated with ascribing responsibility to the patient. For example, physicians who believe that patients have no responsibility for their fibromyalgia have only a 0.17 predicted probability of reporting that they derive no satisfaction from treating fibromyalgia, compared with a 0.39 predicted probability for those who report that patients have a lot of responsibility. Although similar effects are present in the depression and anxiety models, physicians are predicted to be far less likely to report that they derive no satisfaction from treating these conditions. Instead, physicians who believe that patients have no responsibility for their depression have a 0.15 predicted probability of reporting that they obtain only a little satisfaction from treating depression, compared with a 0.27 predicted probability for those who report that patients have a lot of responsibility. Similarly, physicians who believe that patients have no responsibility for their anxiety have a 0.20 predicted probability of deriving only a little satisfaction from treating anxiety, compared with a 0.30 predicted probability for those who report that patients have a lot of responsibility.

We used multilevel models to distinguish the predictive powers of ascribed patient responsibility, condition, and individual characteristics on physician satisfaction in treating each condition. The results are reported in Table 4. Model 1 includes indicator variables for fibromyalgia, depression, anxiety, and all of the controls. Physicians are predicted to gain less satisfaction from treating fibromyalgia than chronic back pain (OR 0.58, $P = 0.000$), but substantially more satisfaction from treating depression (OR 15.07, $P = 0.000$) and anxiety (OR 8.06, $P = 0.000$). Model 2 adds patient responsibility to assess whether physicians derive less satisfaction from treating unexplained conditions than explained conditions because physicians ascribe more patient responsibility for the former. The ORs are 7% to 11% smaller in model 2 than in model 1, suggesting that the ascribed patient responsibility for each condition only partially explains why physicians experience less satisfaction from treating chronic back pain and fibromyalgia than depression and anxiety. Across conditions, physicians who ascribe responsibility to patients for their condition are predicted to derive less satisfaction from treating the condition (OR 0.57, $P = 0.000$). Model 3 adds interactions between attributing responsibility to the patient and each condition. None of the interactions are significant, indicating that the predicted difference in satisfaction between physicians who attributed a lot of responsibility to patients and physicians who attributed no responsibility to patients did not differ by condition.

Discussion

In this study of a representative sample of US physicians, we found that physicians experience less satisfaction when treating

Table 4. Multilevel ordinal logistic regression models predicting physician satisfaction in treating symptoms

	OR (*P*)	
	Model 1	**Model 2**
Patient responsible for symptom	0.57*** (0.000)	0.61*** (0.000)
Symptom		
Chronic back pain (reference)		
Fibromyalgia	0.54*** (0.000)	0.63* (0.019)
Depression	13.39*** (0.000)	14.77*** (0.000)
Anxiety	7.44*** (0.000)	8.54*** (0.000)
Responsible * symptom		
Responsible * fibromyalgia		0.89 (0.394)
Responsible * depression		0.93 (0.685)
Responsible * anxiety		0.90 (0.553)
Male sex	1.15 (0.496)	1.15 (0.492)
Age, y	1.04*** (0.000)	1.04*** (0.000)
Importance of religion	1.06 (0.519)	1.06 (0.512)
Professional calling	1.62*** (0.000)	1.62*** (0.000)
Immigrant	2.40*** (0.000)	2.40*** (0.000)
Specialty		
Family medicine (reference)		
General practice	2.10 (0.240)	2.09 (0.243)
Internal medicine	0.39*** (0.0 00)	0.394*** (0.000)
N	3377	3377
Groups (respondents)	849	849

*$P < 0.05$; **$P < 0.01$; ***$P < 0.001$.

two conditions characterized by unexplained symptoms compared with two medically explained conditions, supporting our first hypothesis. This was evident when comparing mean satisfaction and in multivariate regression models. The difference in means/ORs is significant and substantive and conforms to our expectation that physicians experience stress in treating unexplained symptoms. The literature mentions several possible sources of this stress, including exhaustion and frustration from overtesting,[11] increased burden from a patient-centered treatment of a medically unidentifiable source,[10] threats to physician legitimacy,[9] and repeated visits by patients seeking medical legitimacy of their condition.[13]

We also found that physicians ascribe greater responsibility to patients for their unexplained conditions than for their explained conditions; however, the magnitude of the difference was small (0.1–0.2 points on a 4-point scale). As such, although our second hypothesis was supported, the actual difference in ascribed patient responsibility was not as large as we expected. It is possible that physicians generally accept the psychosocial model of medically unexplained symptoms[2–5,10] and are only moderately burdened by not having a medical explanation for the condition.

Finally, we found that physicians experience less satisfaction when treating conditions for which they believe the patient is responsible, supporting our third hypothesis. Differences in ascribed patient responsibility only partially explain why physicians experience less satisfaction treating chronic back pain and fibromyalgia than they do treating depression and anxiety, however. This suggests that the relative dissatisfaction in treating unexplained conditions may be less a result of "blaming the patient" than fatigue in trying to treat conditions that are difficult to understand, in which the patient becomes more dependent on the doctor,[10,13] and for which available treatments are relatively ineffective and bring significant adverse effects.[1]

This study has limitations. The four specific conditions we studied may not be representative of other medically explained and unexplained conditions. If chronic back pain and fibromyalgia are particularly unsatisfying to treat compared with other conditions characterized by medically unexplained symptoms, or anxiety and depression are particularly satisfying to treat compared with other medically explained conditions, then the difference between medically explained and medically unexplained conditions may be less pronounced than we found.

Conclusions

Treating conditions characterized by medically unexplained symptoms is associated with lower physician satisfaction. Greater ascribed patient responsibility also is associated with lower physician satisfaction, but physicians are only slightly, albeit significantly, more likely to ascribe responsibility to patients for unexplained conditions. Higher ascribed patient responsibility only partially explains the decreased satisfaction experienced when treating conditions with medically unexplained symptoms.

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