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Primary care physicians' and psychiatrists' approaches to treating mild depression

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Abstract

Objective—To measure how primary care physicians (PCPs) and psychiatrists treat mild depression.

Method—We surveyed a national sample of US PCPs and psychiatrists using a vignette of a 52-year-old man with depressive symptoms not meeting Major Depressive Episode criteria. Physicians were asked how likely they were to recommend an antidepressant counseling, combined medication, and counseling or to make a psychiatric referral.

Results—Response rate was 896/1427 PCPs and 312/487 for psychiatrists. Compared with PCPs, psychiatrists were more likely to recommend an antidepressant (70% vs. 56%), counseling (86% vs. 54%), or the combination of medication and counseling (61% vs. 30%). More psychiatrists (44%) than PCPs (15%) were 'very likely' to promote psychiatric referral. PCPs who frequently attended religious services were less likely (than infrequent attenders) to refer the patient to a psychiatrist (12% vs. 18%); and more likely to recommend increased involvement in meaningful relationships/activities (50% vs. 41%) and religious community (33% vs. 17%).

Conclusion—Psychiatrists treat mild depression more aggressively than PCPs. Both are inclined to use antidepressants for patients with mild depression.

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Declaration of interests None.

Author contributions The survey was designed by FC, KR, JY, HK, and KM. KR fielded the survey and supervised data management. RL and KR analyzed the data, and RL drafted the manuscript. FC, KR, and JY provided critical review of the manuscript. RL and KR had full access to all of the data in the study and take full responsibility for the integrity of the data and the accuracy of the data analysis. Funding agencies did not participate in study design, data acquisition, analysis, interpretation, writing, or submission.

Keywords

depression; primary health care; psychotherapy; antidepressant

Introduction

Primary care physicians have been criticized for under-diagnosing and under-treating depression (1–4). But recent literature has also accused them of over-utilizing antidepressants for patients who do not meet criteria for major depression (5–9). Indeed the question of whether antidepressants are effective for anything less than major depression is an area of active debate (5, 10–22). Beyond the antidepressant question, though, there is little consensus about which interventions are safe, effective, and cost-effective for treating mild depression (10, 23, 24) [also called 'minor' (14), 'subthreshold' (23), or 'subsyndromal' (25) depression]. This ambiguity is problematic for primary care physicians, who see large numbers of patients with this complaint (10, 24).

Guidelines in the United States rarely mention mild depression, and those that mention it tend to make only a few cursory comments, which may not offer clinicians any clear direction. The American Psychiatric Association states that *either* antidepressant medication or psychotherapy is a reasonable option for mild depression (the combination is recommended for moderate depression) (26, emphasis added). The Guidelines for Adolescent Depression in the Primary Care Setting recommend 'active support and monitoring' for up to 8 weeks then recommend treating persistent mild depression the same as moderate or severe depression, by initiating medication *and/or* psychotherapy and *considering* a mental health consultation (27, emphasis added).

Looking internationally hardly brings clarity. British guidelines (National Institute for Health and Clinical Excellence, 2004) previously recommended watchful waiting, guided self-help, and brief psychological interventions; reserving medication and psychological intervention for moderate and severe depression (28). However, the revised guidelines in 2009 included medications, psychological interventions, and psychiatric referral as appropriate interventions for mild to severe depression (29). The World Federation of Societies of Biological Psychiatry stated that antidepressants might be indicated in mild depressive episodes (depending on patient characteristics and preferences); otherwise psycho-social therapies alone may be sufficient (30).

Aims of the study

This study's aim was to quantify how frequently physicians would offer various treatments to a depressed patient who did not meet criteria for major depression. To accomplish this, we conducted a national survey of primary care physicians and psychiatrists, using a vignette experiment. Outcome variables included whether the physician would employ antidepressants, psychotherapy, referral to a specialist, or greater involvement in social activities (including religious activities).

Material and methods

Between September 2009 and June 2010, we mailed a confidential self-administered questionnaire to a stratified random sample consisting of 1504 US primary care physicians and 512 US psychiatrists 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.

This survey was part of a larger study of how religious commitments influence medical decisions, and the survey questions were informed by literature suggesting religion is a protective factor from depression (31–33), and suggesting religious physicians are less likely to refer patients to a psychiatrist or psychologist (34). Consequently, we gave special attention to religious interventions, and to the religious characteristics of the vignette-patient and physician-respondents.

In the United States, Christianity is the predominant religion, so there was a risk that the survey would not include sufficient physicians with other religious affiliations. To increase minority religious group representation in the primary care sample, we used validated surname lists to create four strata and oversampled from these strata (35–37). We sampled 121 primary care physicians with typical south Asian surnames, 171 primary care physicians with typical Arabic surnames, 86 primary care physicians with typical Jewish surnames, and 1126 additional primary care physicians (from all those whose surnames were not on one of these ethnic lists). The psychiatrist sample was not sufficiently large to warrant oversampling by ethnic surname. Physicians received up to three separate mailings of the questionnaire. The first mailing included a \$20 bill and the third offered an additional \$30 for participation. Data were double-keyed, cross-compared, and corrected against the original. The University of Chicago institutional review board approved the study.

The questionnaire included a vignette experiment. The core of the vignette involved a 52-year-old man returning to his primary care physician seeking help for depression. Diagnostically, the patient's symptoms of low mood, poor sleep, and reduced appetite meet criteria for 'mild depressive episode' according to the International Classification of Diseases (ICD-10) (38) and 'minor depressive disorder' according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) (39). This part of the vignette allowed us to examine physicians' treatment preferences – in general – for a patient with mild depression.

We also tested whether religious characteristics influenced treatment preferences. For this, we experimentally varied three patient characteristics (symptom severity, religious affiliation, and attendance at religious services) in a factorial between-subjects design (see Fig. 1 for vignette components). Half of the vignettes had a patient who reported problems with his marriage and work (vs. no problems), half of the vignettes had a Jewish patient (vs. Christian), and half of the vignettes had a patient who regularly attended church/synagogue (vs. 'rarely attends'). The three variables were independently sorted, generating eight possible vignettes that were randomly distributed to all potential respondents.

The primary criterion variables asked primary care physicians and psychiatrists how likely they would be to recommend six different interventions (see Table 2 for survey questions and response options).

As part of the analysis, we created three aggregate variables that combined responses across multiple questions. We created a category for physicians who were very likely to prescribe, or to recommend prescribing an antidepressant. We created a category for physicians who were very likely to recommend counseling – from any source (primary care physician, psychiatrist, psychologist, or other licensed counselor). We also created a category for physicians who would recommend both medication and counseling (respondents were 'very likely' to prescribe or recommend antidepressants and were 'very likely' to recommend counseling from any source).

We used physician attendance at religious services as a marker for religiosity. The variable was dichotomized as twice a month or more vs. less-frequent attendance.

Statistical analysis

Stratum weights for the primary care sample were calculated to account for oversampling from the ethnic surname strata (the design weight). We also created a poststratification adjustment weight to correct for a slightly higher response rate among US medical school graduates (65% response) vs. international medical school graduates (56% response, $P = 0.002$), and among physicians whose roles are primarily teaching or 'other' (75% response, 103/138) vs. office-based, hospital-based, research, administrative, or unclassified (62% response, 793/1288, $P = 0.004$). Weights were the inverse probability of a person with the relevant characteristic being in the final data set. The final weight for each case/respondent was the product of the design weight and the poststratification adjustment weight. This enabled us to adjust for sample stratification and variable response rates to generate estimates for the population of US primary care physicians. Weights were not calculated for the psychiatrist sample because no disproportionate sampling by name strata was performed and because response rates for background variables from the Masterfile did not differ significantly.

To analyze the experiment, we created several unsaturated models that included main effects and two-way interactions for each experimental variable. We did not include any three-way interactions because we did not have a priori hypotheses about them. Model 1 analyzed main effects and two-way interactions for the experimental variables among primary care physicians, and model 2 did the same for psychiatrists.

In model 3, we tested the hypothesis that physicians who frequently attend religious services would differ from less-frequent attenders in their treatment of mild depression; perhaps being less likely to use antidepressants, less likely to refer to mental health professionals, or more likely to recommend involvement with community and religious resources. We also hypothesized that physician's attendance would interact with the patient's attendance pattern. For this model, we added physician attendance (main effect) and the two-way interaction (physician attendance $\times$ patient regular attendance) to model 1. A similar analysis could not be performed in the psychiatrist sample because the sample size was too small to support estimation of the number of effects.

In model 4, we directly compared psychiatrists and primary care physicians to examine whether psychiatrists were more likely to promote each intervention. This model included physician specialty, the three experimental patient characteristics, two-way interactions, and physician demographics (sex, age, region, and race). All analyses were conducted using the survey-design-adjusted feature of *STATA* SE statistical software (version 11.0; Stata Corp., College Station, TX, USA).

Results

The response rate was 63% (896/1427) for primary care physicians and 64% (312/487) for psychiatrists, after excluding 77 primary care physicians and 25 psychiatrists who had invalid addresses or were no longer practicing. The response rate for primary care physicians varied by stratum: it was 53% (85/162) among those with Arabic surnames, 56% (63/112) among those with South Asian surnames, 70% (59/84) among those with Jewish surnames, and 64% (689/1069) among the remaining physicians. Response rates did not differ significantly by age, gender, region, or board certification. (see Table 1 for demographic characteristics.)

Antidepressants

Physicians' overall responses to the vignette questions (across all experimental conditions) are shown in Table 2. Half of primary care physicians were very likely to prescribe an

antidepressant (56%). Half of psychiatrists (55%) were very likely to advise the primary care physician to prescribe an antidepressant, and 68% of psychiatrists were very likely to prescribe it themselves if the patients were referred to them. In a direct comparison, psychiatrists were more likely than primary care physicians to prescribe or recommend an antidepressant (70% were very likely vs. 56% of primary care physicians; OR, 1.4; 95% CI, 1.2–1.6; aggregate variable, adjusted for experimental manipulations and physician demographics, result not shown in Table 2).

Counseling

Few primary care physicians (12%) were very likely to see the patient regularly for counseling. Likewise few psychiatrists (18%) would advise the primary care physician to see the patient for counseling; but nearly half of psychiatrists (44%) were very likely to see the patient for counseling if the patient were referred to them (Table 2).

Psychiatrists were more likely than primary care physicians to promote counseling from any source. Specifically, 86% of psychiatrists were very likely to provide or recommend counseling, vs. 54% of primary care physicians (OR, 2.3; 95% CI, 1.9–2.7; aggregate variable, adjusted for experimental manipulations and physician demographics, result not shown in Table 2).

Psychiatrists were more likely than primary care physicians to combine medications and counseling (61% vs. 30%; OR, 1.9; 95% CI, 1.7–2.2; aggregate variable, adjusted for experimental manipulations and physician demographics, result not shown in Table 2).

Referral

Among primary care physicians and psychiatrists, nearly half were very likely to refer the patient to a psychologist or other licensed counselor (Table 2).

Being a psychiatrist had a significant main effect on wanting the patient to see a psychiatrist (OR, 2.1; 95% CI, 1.8–2.5). While relatively few primary care physicians (15%) were very likely to refer the patient to a psychiatrist, 44% of psychiatrists were very likely to advise the primary care physician to refer the patient to a psychiatrist (Table 2).

Primary care physicians who attend services twice a month or more were less likely to refer to a psychiatrist compared with less-frequent attenders (18% vs. 12%; OR, 0.7; 95% CI, 0.6–0.97) (Table 3, model 3).

When patients reported marital and work problems, psychiatrists were more likely to recommend a psychiatric referral (50% vs. 38%; OR, 1.3; 95% CI, 1.01–1.6), or a referral to a psychologist or licensed counselor (49% vs. 31%; OR, 1.5; 95% CI, 1.2–1.9) (Table 3, model 2).

Involvement in meaningful relationships and activities

Approximately half of primary care physicians and psychiatrists were very likely to encourage the patient to get more involved in meaningful relationships and activities (Table 2).

Primary care physicians who attend services twice a month or more were more likely to encourage the patient to get more involved in meaningful relationships and activities, compared with less-frequent attenders (50% vs. 41%; OR, 1.2; 95% CI, 1.04–1.4) (Table 3, model 3).

Involvement in religious communities

Just under one quarter of primary care physicians and psychiatrists were very likely to encourage the patient to get more involved in his religious community. (Table 2) The patient's attendance at services did not affect physicians' recommendations. However, primary care physicians were more likely to recommend religious involvement when the patient reported marital and work problems (28% vs. 19%; OR, 1.3; 95% CI, 1.1–1.5) (Table 3, models 1 and 2).

Primary care physicians who attend religious services twice a month or more were more likely to advise the patient to get more involved in his religious community compared with less-frequent attenders (33% vs. 17%; OR, 1.6; 95% CI, 1.3–1.9) (Table 3, model 3).

Discussion

In this vignette experiment involving a patient with mild depression, primary care physicians' treatment strategies were similar to what psychiatrists would recommend for a patient in a primary care setting. But when psychiatrists assumed management, treatment was more aggressive. Half of primary care physicians (56%) would prescribe an antidepressant, while two-thirds of psychiatrists (68%) were very likely to prescribe one. Half of primary care physicians (54%) would promote counseling, while 86% of psychiatrists would do so. One-third of primary care physicians (30%) would combine antidepressants and counseling, while 61% of psychiatrists would combine them. And while only 15% of primary care physicians would refer to a psychiatrist, 44% of psychiatrists would recommend it.

Our findings suggest psychiatrists treat mild depression more aggressively than primary care physicians, with a majority combining antidepressants and counseling. Some of the difference might be an artifact of the survey design, which asked psychiatrists what they would do if the patients were referred to them (perhaps implying a sicker patient, although the patient's symptoms were the same for both physicians). Nevertheless, the combination of antidepressants and counseling is more aggressive than American Psychiatric Association Guidelines recommend. The guidelines advise medication *or* psychotherapy for a patient whose mild depression does not improve after a few weeks of exercise (26). Psychiatrists' aggressive approach is notable, because patients with mild depression are believed to have a high natural recovery rate (6, 23, 40). However, a small study in 2005 observed that 32 of 46 primary care patients with subsyndromal/minor depression had a history of Major Depressive Episode (41), which may support aggressive treatment.

Our results suggest most primary care physicians and psychiatrists seriously consider prescribing antidepressants even when patients do not have major depression. This is notable, given the ongoing debate over whether antidepressants are useful in mild depression (5, 10–17). Several high-profile articles openly questioned their efficacy for mild depression (18–22), while others raise concerns about treatment cost (8) and the potential for adverse effects (8, 15). Despite the controversy, physicians perhaps see little harm in trying an antidepressant.

Psychiatrists were more likely than primary care physicians to promote psychiatric referrals. This echoes one family physician's lament that 'our health care system... has become less collaborative in regard to mental health problems' (42). It is unclear whether primary care physicians view patients as unwilling to see psychiatrists, whether they view psychiatrists as too busy to treat mild depression, or whether they doubt treatment by a psychiatrist would offer significant advantages over primary care treatment. On the other side, psychiatrists

have every reason to want referrals, but they also have an incentive to want *appropriate* referrals (i.e. patients who actually need psychiatric care).

Nearly half of psychiatrists were very likely to see the patient for counseling themselves, suggesting psychiatrists have not abandoned talk therapy (cf. the recent New York Times headline, 'Talk doesn't pay, so psychiatry turns instead to drug therapy') (43). Nevertheless, it is striking that a large percentage of psychiatrists were not 'very likely' to provide counseling to this patient for whom 'all strategies are available and financially feasible'.

Religion had some effect on treatments for mild depression. Religious primary care physicians were less likely to refer to a psychiatrist; they were more likely to encourage involvement in meaningful relationships and activities; they were more likely to encourage the patient to be involved in his religious community. This parallels an earlier finding where religious physicians were less likely to refer a grieving patient to a psychiatrist or psychologist, and more likely to refer to clergy or a religious counselor (34). Importantly, the current study found that religious physicians were generally not opposed to medication or counseling, but recommended a greater variety of treatment pathways.

This survey has limitations. Vignettes cannot reproduce clinical encounters. Significant differences may exist between what physicians recommend and what patients accept. No information was provided about the patient's past medical and psychiatric history, in particular whether he had a prior mood disorder or response to treatment. For the patient in the vignette, 'all strategies [were] available and financially feasible', but for many patients in the real world, options are substantially limited by insurance, personal finances, and local mental health resources. Given the nature of the study (observational opinion survey on a topic with unclear guidelines), we cannot comment on what physicians *ought* to do for the patient. Non-responders may differ from responders in ways that bias our results.

In conclusion, in this vignette experiment of a patient with mild depression, psychiatrists tended to be more aggressive than primary care physicians in terms of promoting antidepressants, counseling, and psychiatric referrals. There also seems to be widespread approval of antidepressant use for patients with mild depression, even in the absence of demonstrated efficacy.

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Significant outcomes

- Psychiatrists would treat mild depression more aggressively than primary care physicians.
- More than half of primary care physicians and psychiatrists would recommend an antidepressant for mild depression.

Limitations

- Survey results do not directly measure clinical practices.
- Vignettes provide limited patient information.

Treating depression in primary care

Fig. 1.

Elements of a vignette of a depressed patient. Three patient characteristics were experimentally varied (variations 1–3). The eight possible vignettes were randomly distributed across all potential respondents.

Table 1

Respondent demographic characteristics

	<u>Primary care physicians*</u>		<u>Psychiatrists†</u>	
	<i>N</i>	%	<i>N</i>	%
Sex				
Female	324	36	133	43
Male	572	64	179	57
Race				
White, non-Hispanic	625	71	198	64
Black, non-Hispanic	53	6	23	7
Asian	142	16	64	21
Hispanic/Latino	41	5	17	5
Other	22	2	8	3
Age				
25–36	226	25	80	26
37–44	224	25	42	13
45–53	225	25	92	29
54–65	221	25	98	31
Region				
South	295	33	89	29
Northeast	198	22	102	33
Midwest	216	24	61	30
West	187	21	60	19
Immigration history				
US born	637	72	214	69
Immigrant	249	28	96	31
Education				
US medical school	678	76	220	71
International medical school	218	24	92	29
Board certified (yes)	639	71	187	59.9
Religious affiliation				
Non-evangelical protestant	227	26	71	23
Evangelical protestant	95	11	20	7
Catholic‡	212	24	68	22
Muslim	60	7	8	3
Jewish	97	11	41	13
Hindu	42	5	24	8
Other religion§	39	5	27	9
No religion	96	11	48	16
Attendance at religious services				
Never	118	14	53	17
Once a month or less	413	48	162	52

	Primary care physicians[*]		Psychiatrists[†]	
	<i>N</i>	%	<i>N</i>	%
Twice a month or more	338	39	94	30

Percentages are not adjusted for survey design. They reflect the percentages in our sample.

^{*} Primary care physician response rate by stratum: 53% with Arabic surnames (85/162), 56% with South Asian surnames (63/112), 70% with Jewish surnames (59/84), and 64% of remaining physicians (689/1069). Overall response 63% (896/1427). Seventy-seven persons were excluded because their addresses were invalid or they were no longer practicing. Mean age, 44.7; standard deviation, 10.2; range, 25–65.

[†] Response rate for psychiatrists: 64% (312/487). Twenty-five persons were excluded because their addresses were invalid or they were no longer practicing. Mean age, 46.5; standard deviation, 10.9; range, 26–65.

[‡] Includes 27 Eastern Orthodox Christians.

[§] Includes 24 Buddhists.

Table 2

Table reports primary care physicians' and psychiatrists' overall responses, across all experimental manipulations. Table also compares psychiatrists' responses with primary care physicians' responses

	<u>Not very likely/not at all likely</u>		<u>Somewhat likely</u>		<u>Very likely</u>		<u>Multivariable logistic regression *</u>
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	OR (95% CI)
(Primary care physicians) Given this limited information, how likely would you be to do each of the following for this patient?							
Prescribe an antidepressant medication	90	10	301	34	498	56	Referent
See the patient regularly for counseling yourself	519	60	251	28	104	12	Referent
Refer to a psychiatrist	479	53	269	32	130	15	Referent
Refer to a psychologist or other licensed counselor	145	16	379	44	354	40	Referent
Encourage the patient to get more involved in meaningful relationships and activities	141	15	355	40	387	45	Referent
Encourage the patient to get more involved in his religious community	330	35	345	41	209	24	Referent
(Psychiatrists) Given this limited information, if the primary care physician asked your opinion, how likely would you be to recommend that the primary care physician do each of the following?							
Prescribe an antidepressant medication	37	12	102	33	168	55	1.0(0.9–1.1)
See the patient regularly for counseling	184	62	59	20	54	18	1.3(1.1–1.6)
Refer to a psychiatrist	59	20	107	36	133	44	2.1 (1.8–2.5)
Refer to a psychologist or other licensed counselor	45	15	116	38	144	47	1.1 (0.99–1.3)
Encourage the patient to get more involved in meaningful relationships and activities	83	27	99	33	121	40	0.9(0.8–1.03)
Encourage the patient to get more involved in his religious community	134	44	108	36	61	20	0.9(0.7–1.1)
(Psychiatrists) If the primary care physician referred this patient to you, how likely would you be to do each of the following for this patient?							
Prescribe an antidepressant medication	16	5	81	27	205	68	1.3 (1.1–1.5)
See the patient regularly for counseling	69	23	95	32	131	44	2.4 (2.1–2.9)
Refer to a psychologist or other licensed counselor	52	18	124	42	119	40	1.0(0.8–1.1)

Percentages are adjusted for survey design and estimate the percentage of practicing US primary care physicians and psychiatrists.

* Odds ratios and 95% confidence intervals from multivariable logistic regression analyses comparing psychiatrists to primary care physicians (referent) with respect to their odds of being 'very likely' to recommend each intervention. Models include all experimental variables (whether or not the patient reports problems, whether the patient is Jewish or Christian, whether the patient attends services rarely or regularly), the two-way interactions (problems × Christian, Christian × regular attendance, problems × regular attendance), and physician demographic characteristics (sex, race, region, and age). This is described as 'model 4' in the text.

Table 3

Unsaturated analysis of the vignette, showing main effects and two-way interactions from the experimentally varied patient characteristics. The table models the effects for primary care physicians and psychiatrists and also models the effect of primary care physician attendance at religious services. Number and percent are shown only when a predictor variable has a significant effect. Variables that are not significant are reported as NS

	<u>Very likely to advise anti depressant</u>	<u>Very likely to advise counseling in primary care setting</u>	<u>Very likely to refer to a psychologist</u>	<u>Very likely to refer to a psychiatrist</u>	<u>Very likely to encourage meaningful relationships/ activities</u>	<u>Very likely to encourage involvement in religious community</u>
	OR (95% CI), N, %	OR (95% CI), N, %	OR (95% CI), N, %	OR (95% CI), N, %	OR (95% CI), N, %	OR (95% CI), N, %
Model 1: primary care physicians						
Patient has no problems	NS	NS	NS	NS	NS	1.0 Referent, 81, 19%
Patient has problems	NS	NS	NS	NS	NS	1.3 (1.1–1.5), 128, 28%
Christian × regular	NS	NS	NS	NS	NS	NS
Model 2: Psychiatrists						
Patient has no problems	NS	Referent, 18, 13%	NS	Referent, 54, 38%	NS	NS
Patient has problems	NS	1.4 (1.03–1.9), 36, 23%	NS	1.3 (1.01–1.6), 79, 50%	NS	NS
Christian × regular	NS	NS	NS	NS	NS	NS
Model 3: PCP Attendance at services						
1/month or less	Referent, 291, 55%	NS	NS	Referent, 88, 18%	Referent, 211, 41%	Referent, 89, 17%
2/month or more	1.0 (0.9–1.2), 194, 57%	NS	NS	0.8 (0.6–0.97), 37, 12%	1.2 (1.04–1.4), 167, 50%	1.6 (1.3–1.9), 115, 33%
Pt reports no problems	NS	NS	NS	NS	NS	Referent, 81, 19%
Pt reports problems	NS	NS	NS	NS	NS	1.3 (1.1–1.6), 128, 28%
Christian × regular	NS	NS	0.9 (0.7–1.0) *	NS	NS	NS
PCP attendance × pt regular attend	1.2 (1.03–1.4) *	NS	NS	NS	NS	NS

Additional variables were included in each model, but are not shown in the table because they were not statistically significant. These are whether the patient is Christian or Jewish, whether the patient rarely or regularly attends services, the two-way interaction of the patient reporting problems (or not) and being Christian (or Jewish), and the two-way interaction of the patient reporting problems (or not) and attending services regularly (or rarely).

* The interaction was marginally significant in the full model. But in a test of simple main effects, it was not significant.