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Patient ethnicity and perceptions of families and friends regarding depression treatment

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Abstract

Objective—Black Americans are less likely than white Americans to seek professional treatment for depression. Whether treatment recommendations are sought and implemented by patients will be influenced by the role families and friends play in diagnostic acceptance and treatment decisions. We investigated the association of ethnicity with the perceived need for treatment of depression by family and friends of older primary care patients.

Design—Cross-sectional survey of 355 older adults with and without significant depressive symptoms was conducted. At the baseline visit, family and friends' ratings of apathy and need for depression treatment were obtained on 314 of the 355 patients (88% response rate) and examined according to ethnicity. Participants were interviewed using standardized measures of chronic medical conditions, functional status, and psychological status.

Results—Older black patients compared to older white patients were less likely to be rated as needing depression treatment by their family and friends (odds ratio (OR) = 0.34; 95% confidence interval (CI) = [0.18, 0.64]) adjusting for depressive symptoms, cognition, functional status, and other potentially influential characteristics.

Conclusions—Our study suggests that patient ethnicity may play a role in a family member's or friend's perceived need for depression treatment of older adults who present in the primary care setting. Further study of attitudes, expectations, and values of patients and family members or friends in primary care settings may help elucidate the interplay of physician, patient, and family member or friend.

Keywords

ethnicity; aged; depression; mental health services; primary health care

Introduction

Epidemiologic and clinical studies over the past two decades have provided ample evidence that the primary care setting is pivotal to improving depression treatment over a population

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level (Gallo *et al.* 1995, Gallo *et al.* 1997, Gallo and Lebowitz 1999). Primary care occupies a strategic position for the evaluation and treatment of depression in late life (Rabins 1992). Black patients are more likely than white patients to seek mental health services in a primary care setting (Gallo *et al.* 1995, Cooper-Patrick *et al.* 1999, Wang *et al.* 2000, Snowden and Pingitore 2002). However, in primary care, depression among black patients is less likely to be appropriately diagnosed (Gallo *et al.* 1998, Gallo *et al*. 2005a). In addition, black patients are less likely than white patients to receive effective treatment for depression (Wang *et al.* 2000, Young *et al.* 2001). Once depression treatment is initiated, black patients have been reported to be less likely than whites to adhere to medication (Melfi *et al.* 2000, Bogner *et al.* 2006), even though black patients respond as well as whites to guideline-based treatments for depression (Brown *et al.* 1999). Differences in identification and management of depression according to ethnicity have been found to be related to both patient and provider factors (Das *et al.* 2006). Important barriers to mental health care for black patients include perceptions of stigma, beliefs that life experiences are the cause of depression, that problems should not be discussed outside one's family, mistrust of health care professionals, and concerns about the effects of psychotropic medication (Millet *et al.* 1996, Cooper-Patrick *et al.* 1997, Alvidrez 1999, Bogner *et al.* in press). Black patients may be more likely to exhibit somatic symptoms of depression, which may complicate detection and diagnosis (Fabrega *et al.* 1988, Bogner *et al.* 2005). Furthermore, physician communication style, including the tendency of physicians to minimize emotional expression by blacks, relative to whites, may contribute to lower prescribing of antidepressants (Sleath *et al.* 1998).

Studies have shown that families play an important role in help seeking for minorities (Lin *et al.* 1982, Rogler and Cortes 1993, Shin 2002). The use of mental health services by family or friends is a predictor of making a mental health visit (Alvidrez 1999). In a large community sample, researchers found a link between a perception that family members would not approve if an individual sought mental health treatment and lower service use among women with psychiatric disorders (Leaf *et al.* 1987). There also appear to be ethnic and cultural differences with regard to beliefs that the family shares responsibility for an individual's problems (Sabogal *et al.* 1987) or that mental illness is best treated within the family (Edgerton and Karno 1971). However, to date no studies have focused on the association of ethnicity with the perceived need for treatment of depression by family members and friends of older adults.

In the caregiver literature, family caregivers' reactions and beliefs have been found to influence patients' level of symptoms, functioning, and depression (Kurtz *et al.* 1995), and patient and caregiver report of symptoms may not always be in agreement (Kurtz *et al.* 1996). Research has shown that caregivers' perceptions of patient's ability to control depressive symptoms are predictive of recovery from major depression among geriatric inpatients (Casten *et al.* 1999). Family members play an influential role in management of illness, including adherence to a treatment regimen and adopting other health behaviors that promote function and recovery (Burg and Seeman 1994, Lyons *et al.* 1995). It follows that how treatment recommendations are received and implemented by patients will be influenced by the role families play in diagnostic acceptance and treatment decisions.

Consistent with current publications of the National Institutes of Health (Office of Research on Women's Health 2000), we use the term 'black' to include individuals of African, African-American, and African-Caribbean descent and 'white' to include individuals of European descent. Ethnicity refers to a common heritage shared by a particular group (Zenner 1996). We recognize that designations of ethnic status imply a homogeneity within groups, which is a simplification (Cooper and David 1986, Osborne and Feit 1992). Any differences we observe across ethnic groups are likely to represent measured and unmeasured differences in social class, exposures, health beliefs and practices, and other characteristics (Kaplan and Bennett 2003).

The aim of this investigation was to examine the association of ethnicity with the perceived need for treatment of depression by friends and family of older primary care patients. Our hypothesis was that friends and family of black patients would be less likely to perceive black patients as needing depression treatment. The influence of family and friends on patients' acceptance of a depression diagnosis and treatment has received little attention in descriptive or intervention research. Yet, patients live in social contexts and expectations, values, and preferences of family and friends may drive acceptance of depression treatment. A focus on family members and friends of older patients from primary care settings is an advantage in designing an intervention appropriate to primary care settings.

Methods

Participants and methods

The Spectrum Study—The objective of the Spectrum Study was to characterize how depression presents among older primary care patients. Primary care practices recruited from the community provided the venue for sampling older patients. Trained lay interviewers were instructed in screening and study interviews by the study investigators working with Battelle Memorial Institute's Center for Public Health Research and Evaluation, Baltimore, Maryland. In all, 3459 patients aged 65 years and older were approached and 2560 participated in the screening questionnaire (74% participation rate). The eligible sample was 30% African-American which was not significantly different from 33% in the recruited sample ($p = 0.51$). Participants who agreed to be part of the study were scheduled for an in-home interview which consisted of a 90-minute survey questionnaire. In-home interviews were obtained for 357 people, but two persons broke off the interview before it was completed, leaving a sample of 355 persons. At the baseline visit, patients designated a family member or someone who knows them well to be interviewed over the telephone. Details of the study design of the Spectrum Study are available elsewhere (Bogner *et al.* 2004, Gallo *et al.* 2005b, Bogner *et al.* 2006a). The study protocols were approved by the Institutional Review Board of the University of Pennsylvania School of Medicine.

Measurement strategy

Family member or friend assessment: At the index visit, a family member or friend designated by the patient was asked to complete a brief assessment. We obtained information from the family member or friend on age, marital status, and the number of hours the family member or friend helped the patient per week. The family member or friend was asked to rate the patient's functional status with questions from the physical functioning component of the Medical Outcomes Study Short Form (SF-36) (Stewart and Ware 1993, McHorney 1996). The SF-36 has been employed in studies of outcomes of patient care (Stewart *et al.* 1988, Stewart *et al.* 1989, Wells *et al.* 1989, Stewart and Ware 1993, McHorney 1996), and appears to be reliable and valid even in frail elders (Stadnyk *et al.* 1998). Cognitive status of patients was rated by the family member or friend using the Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE) (Jorm and Jacomb 1989, Jorm *et al.* 1991). The IQCODE has been examined among persons from differing ethnic groups (Jorm 2004). The family member or friend rated older patient apathy using the Apathy Evaluation Scale which has been shown to accurately evaluate motivation in older people (Marin *et al.* 1991, Resnick *et al.* 1998, Robert *et al.* 2002) and cross-culturally (Al-Adawi *et al.* 2004). During this assessment, the family member or friend was asked 'Do you think that, (PATIENT) needs to be treated for depression?' For this investigation, a response of 'yes' was considered as a family member or friend rated patient's need for depression treatment.

Patient assessment: We obtained information from the older patients on age, gender, ethnicity, level of educational attainment, marital status, and living arrangements. Patients who did not

self-identify as Hispanic or Latino/a were asked to select from choices read to them; namely, 'American Indian or Alaska Native', 'Asian', 'Black or African-American', 'Native Hawaiian or Other Pacific Islander', 'White', or 'Other'. Patients who responded that they belonged to another ethnic group were excluded from this analysis. Persons who self-identified as African-American were classified as black for the purposes of this investigation. The Centers for Epidemiologic Studies Depression (CES-D) Scale was developed for use in studies of depression in community samples consisting of persons from different ethnic groups (Comstock and Helsing 1976, Radloff 1977, Eaton and Kessler 1981). The standard CES-D questionnaire contains 20 items and has been employed in studies of older adults (Newmann *et al.* 1991, Gatz *et al.* 1993). The CES-D appears to be a valid measure of depressive symptoms among persons from differing ethnic groups (Foley *et al.* 2002, Miller *et al.* 2004, Nguyen *et al.* 2004). The Beck Anxiety Inventory (BAI) was developed in order to measure the severity of anxiety symptoms (Beck *et al.* 1988). The BAI is a 21-item, self-report instrument designed to minimize the relationship of symptoms of anxiety and depressive symptoms. Total scores range from 0 to 63. The BAI has been widely used to assess symptomatology in culturally diverse samples (Carr *et al.* 1996, Greco *et al.* 1996, Wetherell and Arean 1997, Bjork *et al.* 1999, Gutierrez *et al.* 2001, Norasakkunkit and Kalick 2002). Designed to avoid confounding with depression, the BAI has been shown to be an appropriate instrument for measuring symptoms of anxiety in the elderly (Steer *et al.* 1994). The Mini-Mental State Examination (MMSE) is a short standardized mental status examination that has been widely employed for clinical and research purposes (Folstein *et al.* 1975) and for which US general population-based norms are available (Crum *et al.* 1993). The MMSE has been extensively studied, as reviewed by Tombaugh and McIntyre (1992) and by Crum and her colleagues (1993). Questions from the Medical Outcomes Study Short Form (SF-36) were used to assess functional status (Stewart and Ware 1993, McHorney 1996). The CES-D, BAI, MMSE, and SF-36 were used as continuous scores. Baseline medical comorbidity was measured by summing the lifetime presence of 12 chronic diseases or conditions. The following chronic diseases or conditions were included: myocardial infarction, angina, congestive heart failure, high blood pressure, diabetes, osteoarthritis, stroke, cancer, Parkinson's disease, hip fracture, vision, and hearing problems. Participants were asked 'During the past six months, how many visits did you make to primary care or family doctors, internists, surgeons or other medical specialists? This question refers only to office visits or clinic visits'. Participants were asked to gather the bottles of their prescription medications before the interview. The interviewer wrote down the medications and dosages directly from the bottles. For the purpose of these analyses, we examined whether or not an antidepressant medication was on the list of medications.

Analytic strategy—The family member or friend ratings of apathy and need for depression treatment were obtained on 314 of the 355 patients who completed the in-home interviews (88% response rate). We compared the persons who self-identified as black to persons who self-identified as white according to characteristics of the family members or friends and the family member or friend rating of patient functional status, cognitive status, apathy, and need for depression treatment, using the *t*-test for independent samples or the χ^2 test for continuous or categorical data as appropriate. Second, we compared the characteristics of persons rated by a family member or friend as 'not needing treatment for depression' vs. 'needing treatment for depression', stratified according to self-identified patient ethnicity, using *t*-tests or χ^2 tests for continuous or categorical data as appropriate. We set alpha at 0.05 recognizing that tests of statistical significance are approximations that serve as aids to interpretation and inference. Third, we examined the family member or friend ratings of need for depression treatment, using the odds ratio (OR) as a measure of association. We introduced terms in the multivariate models to represent age, sex, living arrangements, level of educational attainment, functional status, cognition, chronic medical conditions, depressive and anxiety symptoms, whether or not the family member or friend was a spouse, the family member or friend rating of functional

status of the older adult, and the family member or friend rating of apathy of the older adult. Data analysis was performed using SPSS version 12 (SPSS Corporations, College Station, TX).

Results

Baseline characteristics of patients

The mean age±standard deviation of our study sample was 75.2±6.0 years with a range of 65–86 years. Of the 314 participants, 238 (75.8%) were women. The self-identified ethnic groups of the participants consisted of 205 (65.3%) white and 109 (34.7%) black patients. Of the 314 persons designated by patients as a family member or someone who knows them well, 78 (24.8%) were a spouse, 116 (36.9%) were an adult child, 45 (14.3%) were a relative, 70 (22.2%) were a friend, and 5 (1.5%) were other. All 314 persons designated by patients as a family member or someone who knows them well were included in our analyses. The self-identified ethnicity of the family member or friend was the same as the older patient.

Family member and friend characteristics and ratings of patients

Table 1 shows persons who self-identified as black compared to persons who self-identified as white according to characteristics of the family member or friend and the family member or friend rating of patient functional status, cognitive status, apathy, and need for depression treatment. Proportionately fewer family members of black patients were a spouse.

The family members or friends of black patients were significantly more likely than the family members or friends of white patients to report poorer patient physical functioning. Fewer black patients were rated as needing depression treatment by family members or friends.

Characteristics of patients according to family and friend ratings of need for depression treatment

Table 2 shows a comparison of patients rated by a family member or friend as ‘not needing treatment for depression’ vs. ‘needing treatment for depression’, stratified according to self-identified patient ethnicity. Proportionally more black patients were women and unmarried. Black patients were more likely than white patients to report poorer physical and social functioning. However, no clear patterns emerged to explain differences in the family member or friend ratings of need for depression treatment according to ethnicity. Regardless of ethnicity, older patients who were rated as needing depression treatment by a family member or friend were significantly more likely to be currently taking antidepressant medications when compared to older patients who were rated as not needing depression treatment.

Family member or friend rated need for depression treatment adjusted models

A family member or friend of black patients was less likely than a family member or friend of white patients to rate older patients as needing depression treatment (OR = 0.34; 95% confidence interval (CI) [0.18, 0.64]) adjusting for age, sex, living arrangements, level of educational attainment, functional status, cognition, chronic medical conditions, depressive and anxiety symptoms, whether or not the family member was a spouse, the family member or friend rating of functional status of the older adult, and the family member or friend rating of apathy of the older adult.

Discussion

We studied a family member or friend rated need for depression treatment in white vs. black patients and characteristics associated with the perceived need for depression treatment. Black patients were less likely than white patients to have been rated as needing treatment for

depression. This association persisted even after controlling for potentially influential variables, including severity of depressive symptoms and level of functioning. Our results are consistent with our hypothesis that friends and family of black patients would be less likely to perceive black patients as needing depression treatment. Regardless of ethnicity, older patients who were rated as needing depression treatment by a family member or friend were significantly more likely to be currently taking antidepressant medications when compared to older patients who were rated as not needing depression treatment. Our study builds on previous work (Gallo *et al.* 2005a) and suggests that patient ethnicity may play a role in the perceived need for depression treatment by family members and friends of older adults who are present in the primary care setting.

Before discussing our findings, the results must first be considered in the context of some potential study limitations. First, we obtained our results only from primary care sites in Maryland whose patients may not be representative of most primary care practices. However, these practices were not academically affiliated and are probably similar to other practices in the country. Second, there is a potential for all the sources of error associated with retrospective interview data including imperfect recall and response bias (e.g., socially desirable responding). Third, selection bias is a potential limitation because, although the larger project was based on a random sample of primary care patients, the data on family member or friend ratings consisted of all the older adults who were selected for the larger project, agreed to participate, and had complete baseline interviews of a family member or friend. Fourth, our ability to assess the characteristics of the family members or friends who participated was limited. Fifth, we focused on the use of antidepressants for depression treatment and not psychotherapy. Although literature supports the effectiveness of psychotherapy, other data suggest that physicians are five times more likely to use pharmacotherapy than to provide counseling or refer for psychotherapy (Harman *et al.* 2001). This discrepancy is even greater in older patients (Gallo *et al.* 1999). Many older depressed patients, in particular African-American patients, may be reluctant to be referred to mental health professionals outside of the practice (Cooper-Patrick *et al.* 1999).

Nonetheless, despite limitations our results deserve attention because we examined the association of ethnicity with the perceived need for treatment of depression by a family member or friend of older primary care patients. Despite the observed variation in recognition and treatment of psychiatric disturbances according to ethnicity (Gallo *et al.* 1998), empirical studies have not typically focused on the perspectives of family members and friends. However, the attitudes and preferences of family members and friends are important and may have a large influence on discussing a mental health problem with a primary care physician, patient adherence, and subsequent recovery. In our findings, the family member or friend ratings of need for depression treatment were associated with the current antidepressant use.

In addition, family members or friends of black patients may encourage black patients to seek more informal sources of support. Among black Americans, a strong tradition of mutual support and participation in services outside of the mainstream exists (Jones 2000). Other research has found black Americans may use more informal support than formal services (or, indeed, seek no help at all) when confronted with a problem perceived to be of an ‘emotional’ nature as compared to a ‘physical’ problem. There is a high utilization of family, friends, churches, and informal community groups for emotional support (Neighbors and Jackson 1984, Wilson 1991). Black Americans have been found to be more likely than white Americans to rate spirituality as an extremely important aspect of care for depression (Cooper *et al.* 2001). ‘Positive spirituality’ as was set forth by Crowther and colleagues (2002) may promote overall wellness and health among elders may foster active engagement in life, through religious and/or community activities, prayer, meditation, and other practices. African-Americans with strong spiritual relationships with God may experience a heightened capability

or self-efficacy to manage difficult health situations and overcome barriers to health promoting activities (Pizarro and Salovey 2002, Holt *et al.* 2005). Based on responses from 1292 participants aged 18 years and older in the National Survey of Black Americans (NSBA), 41% reported that they sought only informal support for an emotional problem, 9% reported the use of formal support only, and 33% reported that they had used both informal and formal support. Older black Americans in the NSBA were more likely to seek help from informal rather than from formal sources, with the use of help decreasing with advancing age (Greene *et al.* 1993). Older community-dwelling black adults from Brooklyn, NY visited their primary care physician at least three times annually; however, only 11% reported using these physicians for help with mental health problems (Cohen *et al.* 2005). A further understanding of reliance on mutual aid and informal sources of support may help explain the under-use of mental health services among older black adults (Lin *et al.* 1982, Rogler and Cortes 1993).

Attitudes toward mental illness, including stigma, may negatively impact mental health utilization patterns among ethnic minorities. Previous studies have suggested that negative attitudes regarding mental health and mental health treatment may be more pervasive among certain ethnic minorities. Silva de Crane and Spielberger found that compared to whites, African-Americans and Latinos held more negative views of mental illness (Silva de Crane and Spielberger 1981). In focus group discussions, black patients made more comments than white patients on the influence of spirituality and stigma on their help-seeking behavior and preferences for treatment (Cooper-Patrick *et al.* 1997).

Our findings may assist primary care physicians in overcoming barriers to the diagnosis and treatment of depressive disorders in older black patients. Several previous studies have shown that patients want physicians to consider their spiritual needs and discuss them in the clinical encounter (Anderson *et al.* 1993, King and Bushwick 1994, Ehman *et al.* 1999). For African-Americans, discussion of spirituality appears to be particularly important in the context of depression care (Cooper *et al.* 2001). In a study that examined reasons for seeking non-medical therapy for health conditions (including spiritually based therapies) Astin found that people who chose to use non-medical therapies instead of medical treatments did so not because of dissatisfaction with medical treatments but because they found non-medically based therapies to be more congruent with their own values, beliefs, and philosophical orientations toward health and life (Astin 1998). Furthermore, patients live in a social context and incorporating patients' family members or friends into treatment discussions and decisions may be particularly important for depression. The ability of practitioners to deliver effective treatment for depression among older patients may be improved by incorporating not only patient but also family member or friend perspectives. Treatment decisions could therefore be individualized to the social context as well as to patient characteristics. Furthermore, it is of interest to understand when patients and family members or friends conceptualize depressive symptoms in a similar vs. divergent way because a family member or friend may facilitate or impede adherence to depression treatment among older primary care patients. Further research on factors influencing access to treatment and outcomes for different ethnic groups is needed (Dougherty 2004).

We are performing analyses of open-ended interviews of older patients and their family members or friends to understand what older adults and a family member or friend think about the nature, treatment, and outcome of depression. Further study of attitudes, expectations, and values of patients and a family member or friend in primary care settings may help elucidate the interplay of physician, patient, and family member or friend. Approaches to improving depression treatment among older adults should include an understanding of ways that shared experiences, shared histories, and shared life circumstances might affect the ways that family members or friends might view aspects of health and illness. Therefore, interventions designed to improve depression treatment, to be sustainable and acceptable to patients and family

members or friends, must account for both the patients' and families' or friends' views about health care and about illness, including depression. Family and friend attitudes regarding the causes of depression and the stigma associated with depression aid our understanding of mental health utilization patterns among black Americans. Clinicians should consider patients' desires for mutual and informal sources of support when negotiating treatment decisions for depression.

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Table 1

Characteristics of a family member or friend and family member or friend rating of patient, stratified by patient self-identified ethnicity.

	Black patients (*n*=109)	White patients (*n*=205)	*p*-Value
Characteristics of family member or friend			
Age, mean (s.d.)	59.4 (13.7)	61.6 (14.1)	0.202
Spouse, *n* (%)	17 (16%)	61 (30%)	0.006*
Hours helping patient per week, mean (s.d.)	6.9 (12.9)	4.3 (14.7)	0.117
Family member or friend rating of patient functional status			
Physical function score, mean (s.d.)	53.9 (31.9)	64.6 (27.0)	0.002*
Family member or friend rating of patient cognitive status			
IQCODE, mean (s.d.)	47.3 (6.4)	47.6 (4.9)	0.597
Family member or friend rating of patient apathy			
Apathy Evaluation Scale, mean (s.d.)	51.5 (7.7)	50.6 (8.1)	0.276
Family member or friend rated need for depression treatment			
Says patient needs treatment for depression, *n* (%)	18 (17%)	64 (31%)	0.005*

Note: Data is from the Spectrum Study (2001–2003). IQCODE, Informant Questionnaire on Cognitive Decline in the Elderly; s.d., standard deviation;

* $p < 0.05$.

Table 2

Comparison of patients rated by family member or friend as 'not needing treatment for depression' vs. 'needing treatment for depression', stratified according to self-identified patient ethnicity.

	Rated by family member or friend as 'not needing treatment for depression'		Rated by family member or friend as 'needing treatment for depression'	
	Black patients (*n*=91)	**White patients (*n*=141)**	**Black patients (*n*=18)**	**White patients (*n*=64)**
Sociodemographic				
Age, mean (s.d.)	74.6 (5.6)	76.0 (6.2)[a]	77.1 (5.8)[b]	73.4 (5.4)[a,b]
Women, *n* (%)	77 (85%)[c]	96 (68%)[c]	18 (100%)[b]	47 (73%)[b]
Education less than high school, *n* (%)	49 (54%)[c]	40 (28%)[c]	13 (72%)[b]	20 (31%)[b]
Married, *n* (%)	25 (28%)[c]	77 (55%)[a,c]	4 (22%)	25 (39%)[a]
Living alone, *n* (%)	35 (39%)	45 (32%)	9 (50%)	22 (34%)
Psychological				
CES-D score, mean (s.d.)	14.5 (11.6)	12.6 (9.9)[a]	20.1 (12.4)	18.3 (12.6)[a]
BAI score, mean (s.d.)	8.6 (8.2)	7.5 (7.7)[a]	10.2 (7.5)	11.6 (8.9)[a]
Cognition				
MMSE, mean (s.d).	25.9 (3.5)[c]	27.9 (1.9)[a,c]	25.8 (3.5)	27.1 (2.6)[a]
Physical health				
Physical function score, mean (s.d.)	55.6 (31.4)[c]	66.4 (25.5)[a,c]	45 (27.0)	53.6 (28.5)[a]
Role physical score, mean (s.d.)	38.5 (42.9)[c]	53.8 (38.9)[a,c]	33.3 (40.2)	35.2 (34.7)[a]
Role emotional score, mean (s.d.)	75.8 (38.5)[d]	81.4 (34.9)[a]	48.2 (46)[d]	66.2 (42.2)[a]
Social function score, mean (s.d.)	68.5 (30.6)[c]	77.9 (25.1)[a,c]	62.5 (31.2)[b]	65.8 (25.6)[a,b]
Bodily pain score, mean (s.d.)	52.0 (26.6)[c]	58.6 (22.9)[a,c]	47.4 (29.5)	47.7 (23.0)[a]
General health perception score, mean (s.d.)	55.2 (20.1)	55.8 (19.1)[a]	43.9 (20.6)	43.9 (19.4)[a]
Chronic medical conditions, mean (s.d.)	7.5 (3.4)[c]	6.6 (3.3)[c]	8.1 (3.1)	8.2 (4.2)
Number of visits within six months, mean (s.d.)	3.0 (1.8)[c]	3.8 (2.9)[c]	3.0 (1.4)	4.6 (4.2)
Antidepressant use, *n* (%)	8 (9%)[c,d]	34 (24%)[a,c]	8 (44%)[d]	33 (52%)[a]

Note: Data is from the Spectrum Study (2001–2003). BAI, Beck Anxiety Inventory; CES-D, The Centers for Epidemiologic Studies Depression Scale; MMSE, Mini-Mental State Examination; s.d., standard deviation.

[a] $p < 0.05$ for comparison of white patients who were rated as not needing depression treatment with white patients who were rated as needing depression treatment.

[b] $p < 0.05$ for comparison of patients rated as needing depression treatment.

[c] $p < 0.05$ for comparison of patients rated as not needing depression treatment.

[d] $p < 0.05$ for comparison of black patients who were rated as not needing depression treatment with black patients who were rated as needing depression treatment.