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Late-Life Depression Among Black and White Elderly Homecare Patients

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Abstract

Objectives—The authors compared the prevalence of major depressive disorder (MDD) and the prescription rates of antidepressant medication, by race, among frail older homecare patients.

Methods—A random sample of 56 black and 458 white newly admitted homecare patients age 65 and over were assessed for MDD with structured interviews and medical records, and antidepressant prescription rates were tallied.

Results—The prevalence of MDD did not differ significantly across racial groups. Only 16.7% of black patients and 32.0% of white patients were prescribed antidepressant medication.

Conclusions—Prevalence of MDD was similar among black and white elderly homecare patients. In both groups, depression is undertreated and contributes to the burden of this frail, older patient group.

This study investigated the extent to which older black and white recipients of home healthcare nursing services differ in their prevalence of major depressive disorder (MDD) and specific depressive symptoms. Previous evidence about racial disparities in late-life depression is mixed. Some studies have demonstrated higher prevalence rates of depression in older white adults than in older black adults,^{1,2} whereas other studies reported contrary results.³ Still other studies have found no differences by racial group.^{4,5} Similar discrepant findings have been reported in studies of symptom profiles across racial groups. For example, it has been suggested that older black adults report more somatic complaints than older white adults;⁶ however, these results are not consistently observed across studies.^{4,7} Elderly whites have been found to report more dysphoria and anhedonia than their black counterparts in some,^{7,8} but not other studies.⁴

One explanation for these seemingly contradictory results is that the relative distribution of key factors that may influence the prevalence of depression differs across racial groups. Medical illness and functional disability are of particular importance because they

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consistently demonstrate a strong association with late-life depression among both black and white older adults.^{6,9-11} Similarly, most evidence suggests that sociodemographic factors, such as income, education, and marital status also influence late-life depression among older black and white adults.⁴⁻⁷ Commonly observed racial variation in the prevalence of these sociodemographic factors in different types of samples may result in differential risk for depression.³

Home health care provides nursing services in the homes of patients who are too medically ill or disabled to leave the home without assistance. Unlike many previous studies, the current study has the advantage of examining racial disparities in late-life depression among patients who are comparably compromised by medical illness and functional impairment. By investigating the prevalence and symptomatology of depression in an older population characterized by substantial medical burden and functional disability, the current study offers the opportunity to compare the rates and characteristics of depression among a high-risk group of older adults who are similar in these two areas.

METHODS

The data were collected as part of a larger study of depression in newly admitted elderly home health-care patients.

Sample

Over a 2-year period (12/97 to 12/99), a 40% random sample of home healthcare patients was drawn on a weekly basis from new admission logs of the Visiting Nurses Service in Westchester (a not-for-profit certified home health agency serving a 450-square-mile county north of New York City).¹² Patients were identified weekly from intake logs and medical records based on the following criteria: 1) age 65 and over; 2) new admission, defined as not receiving medical homecare from this or any other home health agency in the month preceding the current admission; 3) able to provide informed consent; 4) able to speak and understand English or Spanish; 5) not aphasic; 6) able to use the telephone; and 7) life expectancy of 6 months or more. The primary reasons for ineligibility were termination from home care (by death, institutionalization, or recovery) and inability to give informed consent. Among 889 eligible patients, 539 patients (61%) consented and were interviewed in their homes. Of these, 514 patients were included for the current analyses: 56 (11%) black and 458 (89%) white. The racial composition of the remaining 25 patients was too heterogeneous for meaningful comparisons. Patients who refused to participate differed by age (participants' mean age: 78.4 years; standard deviation [SD]: 7.5; refusals' mean age: 80.2 years; SD: 7.3; $t_{[885]} = 3.58$; $p < 0.001$). Information about the race of these patients was not available. Detailed descriptions about the sampling strategies, including refusals, and socioeconomic information are reported in an earlier publication.¹²

Measures

A diagnosis of MDD was determined by a trained research assistant, using the Structured Clinical Interview for Axis I Diagnosis (SCID; Non-Patient Edition).¹³ Although informant data were available for many patients,¹² here we focus on patient reports of depressive

symptoms in order to examine potential racial differences in patients' subjective experience of depression. Information on antidepressant use was obtained from medical records and review of in-home prescriptions. The severity of depressive symptoms was assessed with the 17-item Hamilton Rating Scale for Depression (Ham-D)¹⁴ and the 15-item Geriatric Depression Scale (GDS).¹⁵ Cognitive functioning was assessed with the Mini-Mental State Exam (MMSE).¹⁶ Medical morbidity was rated by a physician using the Charlson Comorbidity Index (CCI).¹⁷ Patients' functional disability in activities of daily living (ADL), instrumental activities of daily living (IADL), and mobility was assessed with the Multilevel Assessment Instrument (MAI).¹⁹

Statistical Analyses

Chi-square, Fisher's exact test (when appropriate), and two group unequal-variance *t*-tests were used in comparisons of demographics, clinical, medical, and functional status between black and white homecare patients. The same analyses were also applied to comparisons between black and white homecare patients who met criteria for MDD. Logistic regressions were used to test significant differences in diagnosis and depressive symptoms, adjusting for the severity of depression and controlling for potentially confounding variables. Descriptive statistics are reported in terms of percentages, means, and SDs.

RESULTS

Among the 514 homecare patients, the racial groups differed in only a few sociodemographic and clinical features. Black and white homecare patients were similar in age (mean: 77.1, SD: 7.5 and mean: 78.7, SD: 7.5, respectively; $t_{[69.1]} = 1.53$; $p = 0.13$), medical co-morbidity (mean: 2.9, SD: 2.1 and mean: 2.6, SD: 2.1, respectively; $t_{[69.1]} = -0.96$, $p = 0.34$) and functional frailty (ADL disabilities: mean: 1.1, SD: 1.2, and mean: 1.1, SD: 1.3, respectively; $t_{[69.4]} = -0.02$, $p = 0.99$; IADL disabilities: mean: 3.4, SD: 1.5, and mean: 3.3, SD: 1.5, respectively; $t_{[68.2]} = -0.65$, $p = 0.52$). Black homecare patients, as compared with white homecare patients, scored lower on the MMSE (mean: 24.6, SD: 3.2, and mean: 26.5, SD: 3.3, respectively; $t_{[70.2]} = 4.2$, $p < 0.001$), were less likely to complete high school (black patients: 51.8%; white patients: 72.5%; $\chi^2_{[1]} = 10.3$, $p = 0.001$) and more likely to live in poverty (black patients: 48.7%; white patients: 21.8%; $\chi^2_{[1]} = 13.4$, $p < 0.001$).

Similar prevalence rates of MDD were found across black patients (10.7% [6/56]) and white patients (10.9% [50/458]). The prevalence rates did not differ significantly across the racial groups ($\chi^2_{[1]} < 0.01$; $p = 0.96$). A multivariate logistic regression showed no significant racial differences in the prevalence of MDD ($\chi^2_{[1]} = 0.03$; $p = 0.87$), after controlling for potential confounding variables, including, MMSE, education, and poverty level.

Similarly, the percentage of patients reporting each of the DSM-IV depressive symptoms did not differ by race (Table 1). Additional logistic regressions revealed no significant difference by race in any of the symptoms, after adjusting for the overall severity of depression as measured by the Ham-D score.

The number of black patients with MDD ($N = 6$) was too small for a meaningful statistical comparison of the clinical features of major depression. Descriptive data on depressed patients, however, suggest many similarities. Among patients with MDD, black and white homecare patients had similar GDS scores (mean: 7.2, SD: 3.1, and mean: 7.9, SD: 3.2, respectively; $t_{[6.4]} = 0.52$; $p = 0.62$), Ham-D scores (mean: 16.0, SD: 4.4, and mean: 16.9, SD: 4.3; $t_{[6.4]} = 0.45$, $p = 0.66$), and duration of episodes (mean: 13.5 months, SD: 12.6, and mean: 13.8 months, SD: 17.5; $t_{[7.6]} = 0.06$; $p = 0.96$). Age at onset ranged from 27 to 88 years for black patients (mean: 57.3, SD: 30.2) and 49 to 86 years for white patients (mean: 67.4, SD: 18.8), but was not significantly different ($t_{[5.5]} = 0.8$; $p = 0.46$). Patients did not differ significantly in early (<60 years) and late- (≥ 60 years) onset across racial groups (Fisher's exact test: $p = 0.62$). Fifty percent of black patients (3/6) and 26% of white patients (13/50) reported a history of depression (Fisher's exact test: $p = 0.34$).

Less than one-third of depressed homecare patients (17/56; 30.4%) were receiving antidepressant treatment at the time of their interview or when admitted to home care. Only one of the six depressed black patients (16.7%) received antidepressant medications, versus 32.0% (16/50) of the white depressed patients (Fisher's exact test: $p = 0.66$).

DISCUSSION

The aim of this study was to examine potential racial disparities in depression among older homecare patients. In contrast to data from other samples,¹⁻³ the prevalence of MDD and specific symptoms of depression did not differ significantly among elderly black and white homecare patients. Other clinical features of depression, such as severity, duration, and past history, were similar across black and white depressed patients.

One possible explanation for the lack of observed differences between groups is that the findings are a methodological artifact. For example, the study was limited by its small sample size, particularly the small number of depressed black homecare patients; consequently, we may not have sufficient power to demonstrate statistical difference across racial groups. Furthermore, although MDD was assessed by rigorous clinical diagnostic measures, interviewers may have still missed the possibly culturally diverse ways in which patients express emotional distress. Also, the results may be confounded by unmeasured differences between black and whites. We did observe significant differences in poverty level, education, and MMSE scores that are consistent with findings of Murden et al.¹⁹ and other previous studies;^{20,21} our findings indicate that controlling for these variables did not change the observed similar prevalence of MDD in black and white patients. Finally, the results reflect patients from a single agency serving a specific region of the country. In that context, it is important to note that the agency is a typical not-for-profit Visiting Nurse Association that serves the entire county. The racial/ethnic composition of Westchester County mirrors the nation; the relatively large number of patients living in poverty is consistent with the wide variation in the economic status of county residents.¹²

On the other hand, these findings may reflect a true "shared burden" of MDD among black and white homecare patients. Although black and white patients may differ in psychosocial risk factors, cultural background, or attitudes that can influence either the risk of depression

or its identification, the severe medical burden and functional frailty of this patient population may overwhelm the potential influence of these other factors in this setting.

The study also provides useful preliminary data suggesting that black and white homecare patients differ in their use of antidepressant treatment. Although these results were not statistically significant and the number of depressed patients is small, the data are consistent with significant treatment differences observed in other settings.^{22–24} Such differences may reflect differential access to treatment or patient and family preferences for treatment. Future studies will investigate these issues further.

The problem of untreated depression in home health care reflects the confluence of multiple systemic, organization, provider, and patient-level factors. Certain aspects of these factors may also explain, in part, racial differences in treatment. A useful place to start may be more thorough patient interviews regarding perceptions of depression and its treatment. These data may identify personal, attitudinal, and, possibly, cultural contexts that influence the acceptability and accessibility to depression treatment among racially diverse homecare patients. Also, this information can be used to improve the quality and efficacy of clinical care of depression at multiple levels within the home healthcare system.

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TABLE 1

Prevalence of DSM-IV major depressive disorder (MDD) symptoms in the total sample of elderly homecare patients, by race

MDD Symptoms	Black Patients% (Case/Total)	White Patients% (Case/Total)	p
Depressed mood	12.5 (7/56)	15.4 (70/456)	0.57
Anhedonia	8.9 (5/56)	12.9 (59/458)	0.40
Agitation/Retardation	3.6 (2/56)	5.3 (24/455)	1.00 ^a
Concentration/Indecisiveness	8.9 (5/56)	10.0 (46/458)	0.79
Worthlessness/Guilt	8.9 (5/56)	9.0 (41/457)	0.99
Suicidal ideation	10.7 (6/56)	11.1 (51/458)	0.92
Weight change	35.7 (20/56)	39.8 (182/457)	0.55
Loss of energy/fatigue	39.3 (22/56)	42.1 (193/458)	0.68
Insomnia/Hypersomnia	28.6 (16/56)	37.6 (172/458)	0.19

Note: p values were obtained from χ^2 tests with 1 degree of freedom, unless otherwise indicated.

^aFisher exact p value.

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