

Ethnicity and the Use of Outpatient Mental Health Services in a National Insured Population

ABSTRACT

Objectives. Factors affecting ethnic differences in the use of outpatient mental health services are analyzed in an insured, nonpoor population to determine if lower use by Blacks and Hispanics persists when socioeconomic and other factors are controlled.

Methods. To identify significant predictors of the probability and amount of use, insurance claims data for a population of 1.2 million federal employees insured by Blue Cross/Blue Shield in 1983 were analyzed with the Andersen and Newman model of health service utilization. Logistic and ordinary least squares regression models were estimated for each ethnic group.

Results. Blacks and Hispanics had lower probabilities and amounts of use when compared with Whites after controlling for a number of variables.

Conclusions. Since ethnic differences in the use of outpatient mental health services exist even in an insured, nonpoor population, factors other than lower socioeconomic status or insurance coverage—for example, cultural or attitudinal factors and service system barriers—are likely responsible. Such findings have policy implications in the current climate of health care reform to increase access to care for the underserved. (*Am J Public Health*. 1994;84:222–226)

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Introduction

National priorities supporting mental health research on ethnic minorities were set forth in the 1978 report of the President's Commission on Mental Health.¹ However, most studies of ethnic use of mental health services have been confined to public sector institutions such as state and federal psychiatric hospitals and community mental health clinics; use of private sector mental health services is rarely captured.

While information on all forms of mental health services use by ethnic groups is critical to establishing sound policies in financing and services delivery, relatively little is known about how members of ethnic groups use outpatient mental health services, especially when comprehensive insurance coverage is available to them. A review of the literature on ethnicity and the use of outpatient mental health services reveals two consistent patterns. First, all ethnic/racial groups (including Whites) underuse mental health services relative to need, as indicated by the Epidemiologic Catchment Area studies sponsored by the National Institute of Mental Health in the early 1980s,^{2–6} which were instrumental in documenting gaps between need for and use of mental health services in the general US population.^{3,5,6} Second, findings from these and other studies have consistently shown that the gap between need and use is greatest for members of ethnic minority groups.^{7–11} Thus, rates of outpatient mental health services use tend to be lower among Blacks and Hispanics than among Whites.

Ethnic differences in the amount of mental health services used have also been noted, although findings are not always consistent. While Blacks, Asian Americans, and Hispanics generally make

fewer outpatient visits than Whites,^{8,12–15} Wells et al.¹⁰ and Hu et al.¹⁶ report no significant ethnic differences in the amount of use once treatment has begun.

Some researchers have noted that interethnic differences in mental health services use are the result of socioeconomic differences and are minimized when these factors are controlled.^{10,15,17} However, little is known about how factors such as insurance coverage and service availability affect the likelihood of seeking outpatient mental health treatment among different ethnic groups and to what extent the influence of such factors differs across ethnic groups.

The first goal of this study is to assess factors influencing the use of outpatient mental health services among ethnic groups in an insured, nonpoor population. Our database of more than 1.2 million federal employees and their family members insured by Blue Cross/Blue Shield in 1983 offered a rare opportunity to examine and compare service use by Whites, Blacks, and Hispanics in a large national population.

The second goal is to discuss the policy implications of this study's findings with regard to the financing and delivery of mental health services to ethnic minority groups in the 1990s. The past decade has brought enormous increases in health

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care costs along with renewed calls for national health insurance.¹⁸ We argue that this study's findings can provide insight into ethnic patterns of use under a system of national health insurance.

Methods

Database

The study used insurance claims and related enrollment data from federal employees and their family members who were insured by the Blue Cross and Blue Shield Association's Federal Employees Plan in 1983. For outpatient mental health care, the high-option plan copayment was 30% with a \$200 deductible and a 50-visit maximum, and the low-option plan copayment was 25% with a \$250 deductible and a 25-visit maximum. The deductible included all medical claims, not just those for mental health treatment. It is likely that usage below the deductible is included in these data since Blue Cross/Blue Shield encouraged enrollees to file claims even when those claims did not exceed the deductible.

The study sample comprised all persons who had at least one outpatient mental health visit in 1983 and random samples of approximately 5000 nonusers selected within each ethnic group. In subsequent analyses, these samples were weighted to estimate the total number of persons who did not have outpatient mental health treatment. The preexisting structure of the database required that only families enrolled for 5 or more years were included.

Predictors of Probability and Amount of Use

Following the Andersen and Newman model of health service use,¹⁹ three sets of independent variables were developed: predisposing, enabling, and need factors. Most of the predisposing variables are self-explanatory (e.g., age, sex, etc.). However, the rationale for using the percentage of the county that was Black, Hispanic, or White as a measure of ethnic congruity was as follows: Tweed et al.²⁰ found that persons residing in areas characterized by the numerical dominance of own-group members manifested lower levels of psychological distress when compared with persons living in racially "dissonant" areas. We reasoned that the level of ethnic congruence in a person's geographic area might also influence that person's decision to seek mental health care.

TABLE 1—Outpatient Mental Health Visits and Mean Total Visits (for Those with at Least One Visit) in 1983

	Blacks (n = 137 936)			Hispanics (n = 30 623)			Whites (n = 809 000)		
	% in Group	% with Visit	Mean No. of Visits	% in Group	% with Visit	Mean No. of Visits	% in Group	% with Visit	Mean No. of Visits
Sex									
Male	42.4	1.95	9.5	47.0	2.51	8.5	47.5	3.16	13.1
Female	57.6	2.48	9.9	53.0	3.00	8.7	52.5	4.12	12.9
Age, y									
0-17	17.3	1.68	9.6	21.5	1.88	9.7	15.5	3.08	12.7
18-45	29.1	3.47	11.5	24.9	3.78	11.6	24.9	5.82	16.7
46 or more	53.6	1.77	7.9	53.6	2.66	6.3	59.6	2.92	9.9
Region									
DC area	42.3	2.42	11.9	4.3	4.61	22.1	22.6	4.99	17.4
Northeast	9.8	1.72	11.9	3.1	2.35	15.4	17.9	3.48	14.3
North central	19.9	2.22	8.9	3.7	3.05	7.8	19.1	3.10	10.6
West	6.1	2.84	8.4	34.5	2.70	7.2	12.7	3.80	12.0
South	21.9	2.04	5.4	54.5	2.68	7.4	27.8	3.03	8.3
Option									
Low option	23.6	1.98	6.7	23.5	1.93	5.8	41.6	2.59	9.0
High option	76.4	2.34	10.6	76.5	3.03	9.2	58.4	4.42	14.6
Years of employee education									
<12 y	27.9	1.73	7.3	35.5	2.42	6.2	11.7	2.55	7.0
High school graduate	49.3	2.27	9.1	43.4	2.57	7.6	49.7	2.96	10.4
Some college	12.2	2.44	11.6	10.4	3.22	10.6	10.6	4.00	12.6
College graduate	10.6	3.27	13.8	10.7	3.96	14.6	28.0	5.40	17.0
Overall	100.00	2.26	9.7	100.00	2.77	8.6	100.00	3.66	13.0

Enabling factors included region, salary of the employee, and high- or low-option plan. Region of country was considered an enabling factor since the availability of mental health services varies considerably.²¹ For analyses predicting the number of visits, the setting of the first visit and the type of mental health practitioners sought were included. As classified in the claims data, such practitioners included physicians, psychologists, and mental health workers who were clinical social workers and psychiatric nurses. Physician specialty was not available from the Federal Employees Plan data and may have included either psychiatrists or general practitioners. Two enabling variables from the Bureau of Health Professions Area Resource File provided county-level measures of the relative availability of outpatient mental health services: the percentage that was urban and the ratio of psychiatrists to physicians.

Although specific mental diagnoses were unavailable, several variables were useful as indices of need for mental health treatment: the individual's and the rest of the family's annual medical expenses, prior inpatient psychiatric treatment during the year by anyone else in the family, and the total number of mental health vis-

its made by all other family members. For the amount-of-use analyses, whether the individual also had inpatient mental health treatment during the year was included as a dichotomous yes/no variable. (In analyses predicting any use of outpatient mental health services, the term "individual" refers to any member of the study population; in analyses predicting the amount of use, it refers to the user of outpatient mental health services.)

Dependent Variables

Following previous analyses of mental health services use,²²⁻²⁴ probability of use and amount of use constituted the two dependent variables. The first was coded "1" if the individual had a visit claim coded "nervous and mental" during the year, and "0" otherwise. The second variable was the number of mental health visits made during the year given any use.

Data Analysis

Weighted logistic regression models were developed separately for each ethnic group to calculate odds ratios (ORs) and 95% confidence intervals (CIs) to predict the probability of use. For predicting the amount of use, ordinary least squares regression was used. Variables were en-

TABLE 2—Prediction of Probability of Having at Least One Outpatient Mental Health Visit in 1983

	Blacks		Hispanics		Whites	
	Odds Ratio	95% CI	Odds Ratio	95% CI	Odds Ratio	95% CI
Predisposing factors						
Females vs males ^a	1.28	0.94, 1.74	1.20	0.87, 1.65	1.32*	1.10, 1.58
Age 0–17 vs 46 or more ^a	0.78	0.58, 1.04	0.71*	0.52, 0.95	0.82*	0.69, 0.98
Age 18–45 vs 46 or more ^a	1.40*	1.19, 1.64	1.19*	1.00, 1.42	1.43*	1.30, 1.57
Education of employee	1.07*	1.00, 1.14	1.05	1.00, 1.11	1.11*	1.07, 1.14
Family size	1.04	0.86, 1.25	1.05	0.89, 1.25	0.98	0.88, 1.08
% ethnic in county ^b	1.00	0.99, 1.00	1.00	0.99, 1.00	1.00	0.99, 1.00
Enabling factors						
Northeast vs DC ^a	0.74	0.40, 1.35	0.50	0.16, 1.61	0.82	0.62, 1.09
North central vs DC ^a	0.93	0.60, 1.43	0.65	0.24, 1.77	0.70*	0.53, 0.93
West vs DC ^a	1.16	0.62, 2.17	0.65	0.31, 1.34	0.79	0.58, 1.07
South vs DC ^a	0.87	0.58, 1.32	0.68	0.31, 1.50	0.69*	0.54, 0.90
% urban in county	1.00	1.00, 1.01	1.01	1.00, 1.01	1.00*	1.00, 1.01
Salary ^c	1.04	0.86, 1.26	1.01	0.84, 1.22	1.05	0.97, 1.14
High vs low option ^a	1.33	0.91, 1.93	1.70*	1.10, 2.63	2.11*	1.72, 2.59
Psychiatrist–physician ratio ^c	1.08	0.64, 1.80	0.87	0.46, 1.64	1.16	0.89, 1.51
Need factors						
Medical dollars spent on individual ^c	1.01	1.00, 1.02	1.03*	1.01, 1.05	1.01*	1.00, 1.02
Medical dollars spent on others in family ^c	1.00	0.98, 1.03	1.02	0.99, 1.05	1.00	0.99, 1.02
Outpatient mental health visits by others in family ^c	1.30*	1.17, 1.44	1.37*	1.22, 1.53	1.27*	1.21, 1.33
Others in family, mental health inpatients (yes vs no) ^a	1.59	0.60, 4.22	2.10	0.83, 5.29	1.76	0.93, 3.33

^aThe first mentioned group was coded "1" and the second was coded "0."
^bIn the regression analysis for Blacks, this is the percentage of the county that is Black (and similarly, for Hispanics and Whites in their respective regression analyses).
^cOdds ratios for the continuous variables used in the model and their corresponding unit increases are as follows: (1) salary in units of \$10 000, (2) psychiatrist to physician ratio in units of 0.1, (3) total medical charges for the sampled individual and for the rest of the family in units of \$1000, (4) outpatient mental health visits for others in the family in units of five visits.
*Variables were statistically significant at $P = .05$.

tered into the regression equation following hierarchical procedures recommended by Cohen and Cohen.²⁵

Results

Characteristics of the Population

Men made up a slightly greater proportion of Whites and Hispanics than of Blacks (see Table 1). There were noticeable differences in regional distributions for the three groups. It is difficult to explain why three fourths of Blacks and Hispanics chose the high-option plan while only 58% of Whites chose this plan. Federal employee education was substantially higher for Whites.

Outpatient Mental Health Services Use

As shown in Table 1, Blacks had the lowest rate of outpatient mental health services use, followed by Hispanics and then Whites. Sociodemographic break-

downs resulted in similar patterns across the groups, with women, 18- to 45-year-olds, high-option enrollees, and the more educated having higher rates. For Whites and Hispanics, the highest rate of use was in the Washington, DC, area; for blacks, it was in the western states.

Hispanics averaged the fewest number of visits, followed by Blacks and then Whites (see Table 1). While there were few gender differences, 18- to 45-year-olds, those living in the Washington, DC, area and in the Northeast, the more educated, and high-option enrollees averaged more visits.

Predicting the Probability of a Mental Health Visit

Table 2 shows that, for each group, being aged 18 to 45 as compared with being older was statistically significant (for Blacks: OR = 1.40; CI = 1.19, 1.64; for Hispanics: OR = 1.19; CI = 1.00, 1.42; for Whites: OR = 1.43; CI = 1.30, 1.57), as

were the number of mental health visits made by other family members (for Blacks: OR = 1.30; CI = 1.17, 1.44; for Hispanics: OR = 1.37; CI = 1.22, 1.53; for Whites: OR = 1.27; CI = 1.21, 1.33). For Blacks, the only other significant predictor was education (OR = 1.07; CI = 1.00, 1.14). Education was also a significant predictor for Whites (OR = 1.11; CI = 1.07, 1.14) but not for Hispanics (OR = 1.05; CI = 1.00, 1.11).

Additional significant predictors for Hispanics were being over age 46 compared with being under age 18, having a high-option plan, and having higher medical costs for the individual. For Whites, these same variables were significant, with the addition of female gender, living in the District of Columbia area compared with living in the north central or southern states (odds ratios less than 1 require reversing the coding for these variables), and percentage urban population in the county of residence.

Predicting the Number of Mental Health Visits

Results in Table 3 reveal that, while many of the significant variables are predictably associated with higher levels of use, other predictors are lesser known. For example, ethnic congruence was significant for all three groups, although not in the same direction: it was positively associated with the number of visits for Blacks, but it was negatively associated for Hispanics and Whites.

Provider type and setting were also significant for all groups, with more visits associated with visiting an office (vs a clinic or hospital) and with visiting a psychologist (vs a physician). Medical costs of the individual and of others in the family were generally inversely related to the number of visits. Use of inpatient mental health services was positively and significantly related to the amount of outpatient use for Hispanics and Whites but not for Blacks.

Do Ethnic Groups Differ after Adjustment for All Covariates?

In a test of the overall hypothesis of whether statistically significant ethnic group differences remained after adjusting for all covariates in the study (comparing all three groups simultaneously), Whites had 1.7 times greater odds of making a visit compared with Blacks and Hispanics ($P < .004$). There was no significant difference between Black and Hispanic odds of making a visit. In the ordinary least squares regression model, Whites were

estimated to make 2.64 more mental health visits during the year than Hispanics and Blacks ($P < .001$). There was no significant difference found between Hispanic and Black users.

Discussion

This study has demonstrated that ethnic differences in the use of outpatient mental health services persist even in an insured population after a number of potentially confounding factors are controlled. The significance of enrollment in the high-option plan for Hispanics and Whites (but not for Blacks) is an indication that use of outpatient mental health services is responsive to insurance coverage in these groups. Although it is difficult to explain why plan option is not significant for Blacks in predicting the probability of use, it is easier to see how more generous coverage is significant for all groups in predicting higher amounts of use for those persons in treatment.

We also note that significantly higher levels of use are associated for all three groups with visiting an office-based practitioner and with visiting a psychologist. This effect of visiting a psychologist was also reported by Taube et al.²⁴

While few of the indices of need proved to be influential, use of outpatient mental health services by other members of the family and higher medical costs of the individual were significant. These variables might be seen as indicating the influence of stress within the family and of physical comorbidity for the person seeking mental health treatment.

The cumulative results of this and previous studies point to a clear pattern of lower use by Blacks and Hispanics compared with Whites. While this phenomenon is more noticeable among the ethnic minority poor,²⁶ it is discernible even in this study's nonpoor population for whom many socioeconomic and other differences are minimized or controlled. We also note that the influence of differential acculturation is minimized in this population since unacculturated and/or non-English-speaking persons are unlikely to be included.

The reader is cautioned that these analyses captured usage during a 1-year period. Persons who used outpatient mental health services may have begun treatment prior to January 1, 1983, or continued treatment after the end of the year. Thus, our database restricted our analyses to annual usage rather than to episodes of treatment. We also acknowledge that the

	Blacks (n = 3106)		Hispanics (n = 849)		Whites (n = 8889)	
	Coefficient	SE	Coefficient	SE	Coefficient	SE
Predisposing factors						
Females vs males ^a	0.40	0.48	0.26	0.80	-0.28	0.30
Age 0-17 vs 46 or more ^a	-0.07	0.46	0.55	0.73	-0.48	0.29
Age 18-45 vs 46 or more ^a	1.79**	0.24	2.65**	0.43	3.41**	0.16
Education of employee	0.73**	0.09	0.73**	0.12	1.05**	0.05
Family size	0.01	0.29	-0.58	0.43	-0.29	0.16
% ethnic in county ^b	0.04**	0.01	-0.05**	0.02	-0.02**	0.01
Enabling factors						
Northeast vs DC ^a	-0.07	0.91	-7.84**	2.64	-2.28**	0.43
North central vs DC ^a	-2.63**	0.65	-15.35**	2.25	-5.60**	0.44
West vs DC ^a	-3.16**	0.94	-14.05**	1.62	-4.64**	0.47
South vs DC ^a	-6.32**	0.62	-13.64**	1.80	-7.42**	0.40
% urban in county	0.01	0.01	0.09**	0.02	0.04**	0.00
Salary ^c	0.94**	0.27	0.74	0.39	0.24*	0.12
High vs low option ^a	4.22**	0.55	3.32**	0.97	5.76**	0.30
Psychiatrist-physician ratio ^c	1.47	0.76	4.02*	1.59	2.73**	0.40
Office vs hospital	6.89**	0.44	3.70**	0.95	5.84**	0.41
Physician vs psychologist	-2.41**	0.31	-2.92**	0.50	-1.45**	0.16
Physician/psychologist vs other	-1.49**	0.54	0.82	1.09	-1.40**	0.34
Need factors						
Medical dollars spent on individual ^c	-0.09**	0.03	-0.12*	0.05	-0.11**	0.02
Medical dollars spent on others in family ^c	0.00	0.04	-0.06	0.06	-0.05*	0.02
Outpatient mental health visits by others in family ^c	1.26**	0.12	0.82**	0.13	0.93**	0.05
Others in family, mental health inpatients (yes vs no) ^a	-1.49	1.35	-2.45	1.73	-3.14**	0.84
Individual a mental health inpatient (yes vs no) ^a	0.61	0.53	1.76*	0.87	1.70**	0.40
^a The first mentioned group was coded "1" and the second was coded "0." ^b In the regression analysis for Blacks, this is the percentage of the county that is Black (and similarly, for Hispanics and Whites in their respective regression analyses). ^c Regression weights for the continuous variables used in the model and their corresponding unit increases are as follows: (1) salary in units of \$10 000, (2) psychiatrist to physician ratio in units of 0.1, (3) total medical charges for the sampled individual and for the rest of the family in units of \$1000, (4) outpatient mental health visits for others in the family in units of five visits. *Variables were statistically significant at $P = .05$. **Variables were statistically significant at $P = .01$.						

absence of diagnostic data limited our understanding of the nature and severity of the mental problems. However, some researchers have argued that diagnostic data may be more suspect in cross-ethnic comparisons.²⁷ Insurance claims data do have an advantage over self-reported data in studies of ethnic groups, in which underreporting of embarrassing or socially stigmatizing events such as visiting a mental health specialist has been noted.²⁷

Given the enormous changes that have taken place in the delivery of mental health services since the early 1980s, this study's findings may at first glance appear to be of more historical value than current interest. Interestingly, there are no available sources of national data of more recent vintage. The most recent study allowing national estimates of rates and

amounts of use—the National Medical Expenditure Survey—took place in 1987, but usage data were not yet available as of this writing.

However, we would argue that this study's findings are applicable to the current and future situation in the United States. Concerns about spiraling health care costs and the rapidly growing number of uninsured persons have led to renewed calls for national health insurance,^{18,28} and several of the comprehensive proposals resemble the Federal Employee Plan's benefit structure.¹⁸ Under national health insurance, low-income Blacks and Hispanics may gain the same coverage and access to mental health care as their employed counterparts had in the federal plan. As noted by Weil,¹⁸ studies using resources such as the federal plan's database might provide

insight into how various ethnic groups use mental health services under a national plan. We acknowledge that Whites, Blacks, and Hispanics in the Federal Employee Plan population are not fully representative of their uninsured counterparts in the general US population, where the prevalence of severe mental disorders is reported to be higher⁴; differences in usage may be expected owing to a greater need associated with the lower socioeconomic status experienced by ethnic minorities. However, this study's primary finding that Whites use more mental health services even in an insured population points to the possibility that ethnic differences may persist even under national health insurance.

Clearly, the use of outpatient mental health services is governed by a number of factors related to the individual and the service delivery system. Many researchers suggest that cultural or attitudinal factors play a strong role in lower use by Blacks and Hispanics.^{9,10,26,29,30} Such factors can take many forms, from reluctance to use a health delivery system dominated by English-speaking Whites to preference for alternative healers or clergy more attuned to the culture of the individual. We recommend that future research examine perceptions of barriers as well as use of alternative healers. A more balanced and complete picture would also include attention to protective factors and coping resources related to ethnic identity³¹ rather than an exclusive focus on individual psychopathology.

Aspects of the service delivery system play a role as well. The absence of ethnic mental health practitioners is one of the most conspicuous barriers. Also, the intersection of lower social class status and ethnicity, combined with residential segregation, leads to inequities in service delivery that disproportionately affect Blacks and Hispanics. An inner-city resident who has insurance coverage will have more difficulty finding a clinic or mental health practitioner than will a resident of an affluent neighborhood. Finally, an ignorance of the more subtle aspects of cultural and social class differences may contribute to an appearance of insensitivity and thus inhibit the pursuit of care. Qualitative studies are needed to examine the process of mutual estrangement that can result from cultural misunderstandings.

As implied by this study, increasing equity and access under national health insurance will not necessarily close the gap in ethnic use of mental health services.

Whether this gap is due to lower availability of services, lower acceptability of services, or both, points to an intriguing point of departure for future research and for planning mental health policies that are effective as well as humane. □

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