

## Relationship of Ethnicity to Psychiatric Diagnosis

JACQUELYN H. FLASKERUD, Ph.D.,<sup>1</sup> and LI-TZE HU, Ph.D.<sup>2</sup>

The purpose of this study was to determine the relationship of ethnic identity to psychiatric diagnosis in white, black, Latino, and Asian clients of the Los Angeles County mental health system. The sample ( $N = 26,400$ ) consisted of adult inpatient and outpatient clients seen in county mental health facilities between January 1983 and August 1988. Logistic regression analysis was used to determine the relationship of ethnicity to diagnosis in both outpatient and inpatient samples. The covariates included in the analysis were age, gender, socioeconomic status, and primary language. Ethnicity had a significant and consistent relationship to diagnosis in both outpatient and inpatient samples, with black and Asian clients having a greater proportion of psychotic diagnoses than whites, and Latinos a lesser proportion than whites. None of the covariates included in the analysis had a consistent relationship to diagnosis. Whites and Asians received more diagnoses of major affective disorders than blacks or Latinos; blacks and Asians received more diagnoses of schizophrenia and other psychoses than whites, and Latinos received fewer of these diagnoses than whites. Substance abuse was lower for Asians than for the other three groups. Based on the findings, it was concluded that there continues to be a difference in psychiatric diagnosis that is related to ethnicity. Clinical practice issues and recommendations for further research are considered in relationship to these findings.

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The question of how psychiatric morbidity is distributed among ethnic groups in the United States is addressed frequently in the research and clinical literature. In answering this question, many investigators study psychiatric diagnoses related to ethnic or racial groups; others study the symptoms usually associated with particular diagnoses and relate these to ethnicity. Despite methodological and conceptual limitations, research in this area is extremely important. Psychiatric diagnosis often influences the clinical treatment and prognosis of patients. For this reason alone, it is important to be aware of the factors that may contribute to its formulation. The race or ethnicity of the patient is one factor that has been suggested frequently as influencing diagnosis. This study adds to the literature in the area. It examines the relationship of psychiatric diagnosis to the ethnic identity of black, white, Latino, and Asian clients of the Los Angeles County mental health system.

### Review of Literature

Studies of the relationship of ethnicity and diagnosis report conflicting findings which appear to group in three categories: those that find a difference in psychi-

atric diagnosis based on ethnic identity; those that find no difference; and those that find that the evidence is inconclusive and confusing and that no judgment can be made about psychiatric diagnosis and ethnicity.

### *Ethnic Difference*

Several studies of Mexican American and non-Hispanic whites using DSM-III-defined disorders have reported cross-cultural differences. Many of these have found few differences in prevalence of specific diagnoses between U.S. born whites and Mexican Americans, but a lower prevalence for most disorders between these two groups and Mexico-born Mexican Americans (Escobar et al., 1988; Golding and Lipton, 1990; Golding et al., 1990; Karno et al., 1989). Other variables related to specific diagnoses were gender and age. Higher rates of psychoneurotic disorders among Mexican Americans than among whites were reported frequently (Burnham et al., 1987; Karno et al., 1987, 1989; Vega et al., 1985a).

Early studies of black Americans reported higher rates of schizophrenia and alcoholism and lower rates of affective disorders than whites (Baskin et al., 1981; Jones and Gray, 1986). More recent studies have focused on schizophrenia symptoms and have suggested that differences occur not in diagnosis but in symptoms or expression of illness (Fabrega et al., 1988; Velasquez and Callahan, 1990). Brown and colleagues (1990) found recent higher prevalence of phobic disorders among black than white respondents and both Allen

<sup>1</sup>School of Nursing, UCLA, 10833 Le Conte Avenue, Los Angeles, California 90024-1702. Send reprint requests to Dr. Flaserud.

<sup>2</sup>Department of Psychology, UCLA, Los Angeles, California.

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(1986) and Penk and associates (1989) reported higher rates of posttraumatic stress disorder among black Vietnam veterans than among white.

Several studies of Asian Americans compared the prevalence of depression in various Asian groups to that of whites and found it to be greater (Aldwin and Greenberger, 1987; Kuo, 1984; Yamamoto et al., 1985; Ying, 1988). However, there was a distinction among the various Asian ethnic groups: The depression score for Koreans was notably higher than those for the other Asian groups and the pattern of depression expression for Filipinos differed from that of the other groups (Kuo, 1984).

The majority of the studies reviewed here noted the presence of intervening variables in the findings of difference among ethnic groups. The most commonly reported intervening variables were socioeconomic status, education, sex, age, and therapist ethnicity (Baskin et al., 1981; Brown et al., 1990; Burnham et al., 1987; Golding and Lipton, 1990; Vega et al., 1985b; Williams, 1986; Ying, 1988). Other factors contributing to ethnic differences in diagnosis have been mentioned frequently: misdiagnosis, or attribution of the symptoms of one disorder to that of another disorder; stereotyping, or associating a typical diagnosis or set of symptoms with a particular group; bias in diagnostic tools against non-English-speaking clients; failure of some clients to use mental health services until illness is severe; differences in expression of psychopathology; and misdiagnosis of cultural phenomena as illness (Adebimpe and Cohen, 1989; Escobar et al., 1986; Fabrega et al., 1988; Jones et al., 1983; Lopez, 1989; Mukherjee et al., 1983; Sue, 1988; Wilson et al., 1980).

#### *No Ethnic Difference*

Several investigators found no differences among ethnic groups in psychiatric diagnoses studied. Often the findings of no difference were related to controlling in the analysis for various confounding variables, such as age, sex, socioeconomic status, and expression of psychopathology. Griffith (1985) and Hoppe and colleagues (1989) found no differences between Mexican and Anglo-Americans in the specific disorders they studied. However, despite similar rates of psychosocial dysfunction, Mexican Americans utilized mental health services proportionately less than Anglos. This finding has been supported by other investigators (Hough et al., 1987; Lawson et al., 1982).

Several investigators using different methods and instruments found no differences between white and black subjects in rates of depression, schizophrenia, anxiety, and personality disorders (Armstrong et al., 1984; Somervell et al., 1989; Vernon and Roberts, 1982). However, Fabrega and colleagues (1988) found significant differences in the symptoms associated with

schizophrenia and depression between black and white patients. They attributed these differences to alternate forms of expression of psychopathology. They also raised the issue of comorbidity (substance abuse) as a confounding, but unacknowledged, variable in many studies.

#### *Inconclusive Evidence of Difference*

A third position taken is that the epidemiologic literature is confusing and inconclusive in its assessment of how various forms of psychiatric morbidity are distributed in the U.S. population (Neighbors, 1984). Reasons for the inconclusive evidence are methodological problems such as sample selection bias, inferring diagnoses from questionnaires, and the use of lay interviewers. A second methodological problem is the failure to control for confounding variables such as socioeconomic status, sex, and age. Another concern is the validity of the instruments in use for measuring psychopathology cross-culturally, including questions concerning the validity of the National Institute of Mental Health's Diagnostic Interview Schedule. A final reason for confusion is that often findings of one study conflict with others, even when similar methods and instruments are used (Golding et al., 1990; Griffith, 1985; Hoppe et al., 1989; Karno et al., 1989).

In a continuing attempt to clarify the relationship of ethnicity and diagnosis, this study examined white, black, Latino, and Asian ethnicity of clients in the Los Angeles County mental health system as it related to psychiatric diagnosis. The relationship of age, gender, socioeconomic status, and primary language to psychiatric diagnosis were examined also.

#### **Method**

##### *Sample*

The sample consisted of adult (18 years and older) outpatient and inpatient white, black, Latino, and Asian clients seen in Los Angeles County mental health facilities between January 1983 and August 1988. Approximately equal size samples of each ethnic group made up the total sample. The total sample was composed of all Asian client episodes during this time period and a random sample of Latino, white, and black client episodes that approximated the size of the Asian sample. A total of 26,400 (74.6% outpatient and 25.4% inpatient) unduplicated client episodes made up the sample. A client episode refers to a discrete time period of treatment from admission to termination of therapy. The percentage of client episodes in each of the ethnic groups in the entire Los Angeles County mental health system during the 5-year period (1983-1988) was 43% white, 20.5% black, 25.5% Latino, and 3.1% Asian. The population of Los Angeles County according to 1985

census data was 44.2% white, 12.8% black, 33.7% Latino, 8.7% Asian, and 0.6% all others.

The mean age of the outpatient sample was 34.7 years; the mean age of whites was 36 years, blacks 33.7 years, Latinos 33.2 years, and Asians 35.1 years. Tukey's HSD test was used to determine significant differences in age between the ethnic groups. All pairwise comparisons were significant, except between blacks and Latinos. The mean age of inpatients in all ethnic groups was younger by 3 to 4 years.

The gender of the outpatient sample was 51.8% female and 48.2% male. Whites were 52.5% female, blacks 47.5% female, Latinos 52.3% female, and Asians 54.7% female. Comparisons of each of the ethnic groups to one another on this and other sample characteristics were made using a test of proportions. For these analyses, the Bonferroni adjusted alpha level of .008 was used to control for the simultaneous error rate that occurs when multiple comparisons are made. Significant differences in gender occurred between blacks and each of the other ethnic groups. A greater percentage of inpatients in all ethnic groups were male than in the outpatient sample. Males accounted for about 5% to 6% more of inpatients than outpatients.

A measure of socioeconomic status of the sample was based on the MediCal eligibility index. The MediCal index is determined by the monthly family income and the number of dependents. This variable was dichotomized as MediCal eligible and not eligible. The outpatient sample was 77.8% MediCal eligible (or low income) and 22.2% not eligible. Among whites, 74% were MediCal eligible, among blacks 84.9%, among Latinos 79.6%, and among Asians 73.4%. Tests of proportions revealed significant differences between all of the possible pairwise comparisons except whites and Asians. Inpatients did not differ from the outpatient sample among blacks, whites, and Asians; among Latinos, more inpatients were MediCal eligible (87.1%).

Language of the sample was categorized as primary language English or other language. For this variable, there were missing data for about 20% of the sample; the missing data were distributed proportionately for each of the ethnic groups. There were 21,234 clients with complete information on this variable. Among outpatients, the primary language of whites was English for 98.4%, among blacks 97.5%, among Latinos 55%, and among Asians 36.5%. There were significant differences in all the possible pairings except between blacks and whites. For inpatients, whites and blacks did not differ from the outpatient sample in primary language. For both Latinos and Asians a greater proportion of inpatients than outpatients spoke English as their primary language (61.3% for Latinos and 42.5% for Asians).

### *Data Set*

Data for the study originated from the Automated Information System (AIS) currently in use by the Los Angeles County Department of Mental Health. The purposes of the AIS data are for management information, revenue collection, clinical management, and monitoring with the potential for research. Data are collected routinely on each client that accesses the County mental health system. Client information is collected on standardized forms by the therapist and then transferred to a computerized file by a clerk. Client files consist of demographic information, clinical information, type and extent of services used, and agency or service provider information.

The validity of the AIS data is controlled through a variety of mechanisms. All data are entered into the AIS through fixed format screen. Out of range values and certain logical and substantive inconsistencies are not allowed entry. Both the State and the County conduct program audits and program evaluations. Finally, the Department of Mental Health also monitors and reviews AIS operations and data entry. Variables of interest to this study are routinely monitored through these means.

Reliability of the AIS data has not been assessed systematically by the Department of Mental Health. The reliability of diagnosis has been discussed in the literature: the stability of diagnosis over time and the variability of diagnosis related to its use have been questioned (Coryell et al., 1980; Schwartz et al., 1980). It is possible also that reliability may be lower in clinical than in experimental settings. However, in this study, client diagnosis was dichotomized as psychotic and nonpsychotic; reliability would be expected to be high in this situation.

### **Results**

A logistic regression model was used to test the relationship of ethnicity and four covariates to psychiatric diagnosis. Racial or ethnic group identity was designated by the client as white/non-Hispanic, black/non-Hispanic, Latino/Hispanic; and Asian/Pacific Islander. Ethnicity was categorized for analysis as white, black, Latino, and Asian. Diagnoses were made on standardized forms by clinicians following an admission interview using DSM-III criteria. Clinicians making the diagnoses were trained in the use of DSM-III diagnostic criteria and included psychiatric social workers (34%), psychiatrists (26%), psychiatric nurses (13%), psychologists (13%), and others (including residents and students in these disciplines). The admission primary diagnosis as designated by the clinician was used in the analysis. Diagnoses are routinely categorized three different ways in the county AIS data: a) into multiple

TABLE 1  
*Relationship of Ethnicity and Covariates to Diagnosis for Outpatient Samples (N = 16,105)*

Variables	N	Odds Ratio	p-Value	95% Confidence Interval
White	4454	1 (baseline)		
Asian	4510	1.42	.0001	(1.28, 1.57)
Black	3828	1.34	.0001	(1.23, 1.46)
Latino	3313	.73	.0001	(.66, .80)
Age		1.00	.3096	(.99, 1.00)
Sex		.74	.0001	(.70, .79)
SES		1.07	.0538	(.99, 1.15)
Language		1.05	.2985	(.96, 1.15)

TABLE 2  
*Relationship of Ethnicity and Covariates to Diagnosis for Inpatient Samples (N = 5129)*

Variables	N	Odds Ratio	p-Value	95% Confidence Interval
White	1450	1 (baseline)		
Asian	1307	2.70	.0001	(2.01, 3.64)
Black	1577	1.45	.0003	(1.18, 1.77)
Latino	795	1.16	.2745	(.89, 1.50)
Age		1.01	.0208	(1.00, 1.02)
Sex		.97	.6900	(.82, 1.14)
SES		.72	.0022	(.58, .89)
Language		.86	.2876	(.65, 1.14)

specific diagnostic categories; b) into nine compressed categories; and c) into dichotomized categories of psychotic and nonpsychotic. Psychotic disorders include paranoid disorders, schizophrenic disorders, psychotic affective disorders, and other psychotic disorders. For the regression analysis, the dichotomized categories psychotic and nonpsychotic disorders were used. The covariates included in the analysis were age, sex, socioeconomic status, and language. For the regression analyses, the samples used were those with complete information on all the variables (notably, primary language).

The relationships of ethnicity, age, gender, socioeconomic status, and language to diagnosis are displayed in Table 1 (outpatient sample) and Table 2 (inpatient sample). For example, in Table 1, for the outpatient sample compared with the baseline group (line 1), the relationship of Asian ethnicity (line 2) to diagnosis was to increase the odds of a psychotic diagnosis by 1.42-fold with a 95% confidence interval (1.28, 1.57); the *p*-value indicates the statistical significance as it differs from 1.00 (the baseline group).

Ethnicity for the black and Asian groups significantly increased the odds of a psychotic diagnosis. For the Latino group, ethnicity significantly decreased the odds of a psychotic diagnosis. Of the covariates included in the analysis, only gender was significantly related to diagnosis. Being female significantly decreased the odds of a psychotic diagnosis. Age, socioeconomic sta-

tus, and primary language were not significantly related to diagnosis.

The magnitude of the relationship between ethnicity and diagnosis for the inpatient sample differed from the outpatient sample. Ethnicity for the black and Asian groups continued to be significantly related to the odds of a psychotic diagnosis. However, for the Asian group, the odds almost doubled (from 1.42 to 2.70), and, for the black group, the odds increased somewhat. For Latinos, the relationship was not significant, although the magnitude of the relationship was in the direction of increasing the odds of a psychotic diagnosis. Of the covariates in the analysis, age and socioeconomic status were significantly related to diagnosis. Being older significantly increased the odds of a psychotic diagnosis, and being MediCal eligible (lower socioeconomic status [SES]) significantly decreased the odds of a psychotic diagnosis. Gender and language were not significantly related to diagnosis.

To provide more descriptive detail, bivariate analyses were used to explore more specific categories of ethnicity and diagnosis. Both chi-square and Cramer's *V* are reported to show the significance and magnitude of the relationships. Ethnicity was further categorized as white, black, Latino, and as six Asian groups (Chinese, Korean, Japanese, Pilipino, and other Asian/Pacific). Diagnoses were further examined based on five compressed categories specific to adults in the AIS data: schizophrenia, other psychosis, major affective disorder, other psychiatric disorders, and substance abuse. Second, comorbidity or dual diagnosis was examined for all clients with an identified secondary diagnosis of substance abuse.

Table 3 shows the frequency and percentage of psychotic and nonpsychotic diagnoses for each ethnic group in the outpatient and inpatient samples. Table 3 includes the percentage of each diagnosis for the Asian group as a whole and for the various Asian subgroups. Using whites as a comparison group, in the outpatient sample, more black clients and all Asian clients (especially Southeast Asians) were given a greater proportion of psychotic diagnoses and Latinos were given a lesser proportion of psychotic diagnoses. Tests of proportions revealed significant differences in all pairwise comparisons, except between blacks and Asians. In the inpatient sample, again using whites as a comparison group, Asians were most dramatically different, with Pilipinos, Koreans, and Southeast Asians having especially high percentages of psychotic diagnoses. Tests of proportions showed Asians to be significantly different in comparison with all other ethnic groups.

Diagnoses were examined also using more specific classifications. There was a significant relationship between specific diagnoses and ethnicity for both the outpatient sample ( $\chi^2 = 669.47$ , *df* = 12, *p* = .000;



TABLE 3  
*Ethnicity and Psychotic/Nonpsychotic Diagnosis*

	White	Black	Latino		Chinese	Japanese	Asian Pilipino	Korean	SE Asian	Other A/P*
Outpatient ( <i>N</i> = 19,688)										
f	5322	4976	4146	5244	958	616	749	1327	636	958
%	(27)	(25.3)	(21)	(26.7)						
Nonpsychotic										
f	2776	2313	2520	2332	436	307	323	593	237	426
%	52.2	46.5	60.8	44.3	45.5	49.8	43.1	44.7	37.3	44.5
Psychotic										
f	2546	2663	1626	2922	522	309	426	734	399	532
%	47.8	53.5	39.2	55.7	54.5	50.2	56.9	55.3	62.7	55.5
Inpatient ( <i>N</i> = 6,662)										
f	1783	2095	1137	1647	290	175	236	304	219	423
%	(26.8)	(31.5)	(17)	(24.7)						
Nonpsychotic										
f	313	315	201	129	30	20	12	19	13	35
%	17.6	15.0	17.7	7.8	10.3	11.4	5.0	6.3	6.0	8.3
Psychotic										
f	1470	1780	936	1518	260	155	224	285	206	388
%	82.4	85.0	82.3	92.2	89.7	88.6	95.0	93.7	94.0	91.7

\*Other Asians, e.g., Chinese living in Southeast Asia and Pacific Islanders.

TABLE 4  
*Ethnicity and Specific Diagnoses*

	White f(%)	Black f(%)	Latino f(%)	Asian f(%)
Outpatient ( <i>N</i> = 19,688)	5322 (27)	4976 (25.3)	4146 (21)	5244 (26.7)
Substance abuse	432 (25.7)	519 (30.9)	471 (28)	258 (15.4)
Other psychiatric	2344 (28.4)	1794 (21.7)	2049 (24.8)	2064 (25)
Schizophrenia	752 (21.3)	1241 (35.2)	512 (14.5)	1020 (28.9)
Major affective disorder	1325 (31.7)	860 (20.6)	704 (16.8)	1292 (30.9)
Other psychotic	469 (22.9)	562 (27.4)	410 (20)	610 (29.7)
Inpatient ( <i>N</i> = 6,662)	1783 (26.8)	2095 (31.5)	1137 (17)	647 (24.7)
Substance abuse	72 (20.3)	173 (48.9)	89 (25.1)	20 (5.7)
Other psychiatric	241 (39.9)	142 (23.5)	112 (18.5)	109 (18.1)
Schizophrenia	504 (23.7)	782 (36.8)	299 (14.1)	540 (25.4)
Major affective disorder	544 (30.5)	458 (27.5)	255 (15.3)	408 (24.8)
Other psychotic	422 (22.1)	540 (28.2)	383 (20)	570 (29.8)

Cramer's  $V = .11$ ) and the inpatient sample ( $\chi^2 = 290.68$ ,  $df = 12$ ,  $p = .000$ ; Cramer's  $V = .12$ ). Table 4 shows the frequency and percentage of specific diagnoses for each ethnic group in both the outpatient and inpatient samples. As may be noted, substance abuse was highest in blacks and lowest in Asians. Blacks and Asians had higher percentages of schizophrenia diagnoses than whites or Latinos. Whites and Asians had higher percentages of diagnoses of major affective disorder than blacks and Latinos.

The relationship of dual diagnosis (a secondary diagnosis of substance abuse) to ethnicity was examined also. The relationship was significant for both the outpatient sample ( $\chi^2 = 170.22$ ,  $df = 3$ ,  $p = .000$ ;  $V = .09$ ) and the inpatient sample ( $\chi^2 = 13.36$ ,  $df = 3$ ,  $p = .004$ ;  $V = .05$ ). Tests of proportions revealed significant differences in all the possible pairwise comparisons, ex-

cept between blacks and Latinos. For both samples, whites, blacks, and Latinos received this diagnosis more often than Asians, with blacks having the highest proportion of this diagnosis.

In addition to ethnicity, the relationships of age, gender, socioeconomic status, and language to specific diagnoses were examined. Age was further categorized as young (18 to 30 years), middle (31 to 50 years), older (51 to 64 years), and senior age (65 years and older). When diagnosis was dichotomized into psychotic and nonpsychotic categories, there was a significant relationship between age and diagnosis ( $\chi^2 = 20.8$ ,  $df = 3$ ,  $p = .000$ ;  $V = .06$ ), with seniors receiving this diagnosis more often in the inpatient sample. The relationship was not significant for the outpatient sample. When more specific categories of diagnosis were used, the same relationship was significant ( $\chi^2 = 92.81$ ,  $df = 12$ ,

$p = .000$ ;  $V = .07$ ), with seniors receiving a diagnosis of schizophrenia more often. In the outpatient sample, the younger and middle age groups received higher percentages of diagnoses of substance abuse, schizophrenia, and other psychosis; the older age group and seniors received more diagnoses of major affective disorder ( $\chi^2 = 425.04$ ,  $df = 12$ ,  $p = .000$ ;  $V = .09$ ). Examination of dual diagnosis revealed a significant relationship between age and diagnosis for the outpatient sample ( $\chi^2 = 25.33$ ,  $df = 3$ ,  $p = .000$ ;  $V = .04$ ), with both the younger and the middle age groups receiving this diagnosis more often.

Gender was significantly related to diagnosis in the outpatient sample. When specific diagnoses were examined, there was a significant relationship in both the outpatient ( $\chi^2 = 857.95$ ,  $df = 4$ ,  $p = .000$ ;  $V = .21$ ) and the inpatient ( $\chi^2 = 278.00$ ,  $df = 4$ ,  $p = .000$ ;  $V = .20$ ) samples. In both samples, men had more diagnoses of substance abuse, schizophrenia, and other psychosis; women had more diagnoses of major affective disorder and other psychiatric disorders.

Socioeconomic status (MediCal eligibility) was significantly related to specific diagnoses in both the outpatient ( $\chi^2 = 283.95$ ,  $df = 4$ ,  $p = .000$ ;  $V = .12$ ) and inpatient ( $\chi^2 = 39.88$ ,  $df = 4$ ,  $p = .000$ ;  $V = .08$ ) samples. The results were similar. In both samples, MediCal eligible (low SES) patients received a greater proportion of diagnoses of substance abuse and other psychosis; not eligible (high SES) patients received a higher percentage of diagnoses of major affective disorders and other psychiatric disorders.

The relationships between primary language and specific diagnoses were significant for both the inpatient ( $\chi^2 = 56.73$ ,  $df = 4$ ,  $p = .000$ ;  $V = .11$ ) and outpatient ( $\chi^2 = 77.40$ ,  $df = 4$ ,  $p = .000$ ;  $V = .07$ ) samples. In both samples, patients whose primary language was English received more diagnoses of substance abuse and schizophrenia. In the outpatient sample, those whose primary language was another language received more diagnoses of other psychiatric disorders. In the inpatient sample, conversely, patients whose primary language was English received more diagnoses of other psychiatric disorder; additionally, inpatients whose primary language was another language received more other psychosis diagnoses.

### Summary and Discussion

Ethnicity had a significant and consistent relationship to diagnosis with both blacks and Asians having a greater proportion of psychotic diagnoses and Latinos a lesser proportion than whites. When more specific diagnoses were examined, blacks and Asians received more diagnoses of schizophrenia and other psychosis than whites, and Latinos received fewer of these diag-

noses than whites; whites and Asians received a greater percentage of diagnoses of major affective disorder than blacks or Latinos. Substance abuse was lower for Asians than for the other three groups.

None of the covariates included in the analyses was consistently related to a diagnosis of psychosis in either the outpatient or inpatient samples. For specific categories of diagnosis, the young age group received more diagnoses of substance abuse. Men received more diagnoses of substance abuse and schizophrenia; women received more major affective disorder diagnoses. Lower SES patients received more diagnoses of substance abuse and higher SES patients received more of major affective disorders. Finally, patients whose primary language was English received more diagnoses of substance abuse and schizophrenia.

Some of the findings of this study support those reported in the literature, but others do not. Of those findings which support the literature, higher rates of schizophrenia among blacks than whites and lower rates of affective disorders have been reported frequently in the literature and were found here (Baskin et al., 1981; Jones and Gray, 1986). High rates of depression and psychosis have been associated with Asian ethnicity and were found here (Aldwin and Greenberger, 1987; Sue, 1988; Ying, 1988). Major affective disorders and schizophrenia were specific disorders found in the Asian sample.

Latinos have been reported to be underutilizers of mental health services and to have lower rates of psychosis and higher rates of psychoneurosis than whites (Golding and Lipton, 1990; Hough et al., 1987; Vega et al., 1985a). In this study, Latino ethnicity was associated with lower rates of psychosis than whites. Furthermore, Latinos were underrepresented in the County mental health system based on their percentage of the County population; Asians were also underrepresented and blacks were overrepresented.

Differences in the results of this study compared with those reviewed in the literature include those findings concerning substance abuse. Higher rates for blacks than whites (Fabrega et al., 1988) and lower rates for Latinos (Karno et al., 1989) were not supported here. Blacks, whites, and Latinos had similar percentages of diagnoses of substance abuse; Asians had significantly lower percentages.

Lower socioeconomic status has been reported to be associated with higher rates of depression, schizophrenia, and mental illness in general (Adebimpe and Cohen, 1989; Vega et al., 1985b; Williams, 1986; Ying, 1988). In this study, approximately equal percentages of schizophrenia diagnoses were found for both high and low socioeconomic status clients; high SES clients had more diagnoses of major affective disorders.

A final difference between this study and those re-

ported in the literature was the finding concerning language. The effect of non-English language on diagnosis has been reported to increase the chances of a more severe diagnosis (Leong, 1986; Marcos, 1988). In this study, primary language was not related significantly to a diagnosis of psychosis.

The findings of this study are limited by the sample selection bias that occurs when a cases-under-treatment approach is used. Other limitations are its retrospective design and the use of data collected more for clinical than research purposes. However, generalizability is enhanced by the large sample size and the collection of data over several years and from all County facilities.

Several implications and considerations for clinical practice and research can be drawn from the findings. The findings should alert clinicians to the continued presence of a difference in psychiatric diagnosis based on ethnic identity. Awareness of this phenomenon may serve to make clinicians sensitive to the possibilities that they might be assigning stereotypical diagnoses, attributing the symptoms of one disorder to that of another based on ethnicity, or misdiagnosing cultural phenomena as illness. There is also the possibility that there may be differences in the expression of psychopathology for a particular diagnosis from one ethnic group to another. Researchers involved in prospective studies should try to use instruments that are sensitive to diagnostic bias, true cross-cultural differences in the expression of psychopathology, and a differential tolerance of psychopathology among ethnic groups.

Other clinical and research concerns are the underrepresentation of some groups in the mental health system (e.g., Latinos and Asians). Are they going without services? Or, are Asians and Latinos obtaining mental health services predominantly in other service systems? Do these groups need community education about the mental health system so that they might avail themselves of its services? Or do these groups have fewer mental disorders, and if so, why? If Asians are using the system only for severe disorders, do they need information on treatment available for mild and moderate disorders?

Finally, there is a need for further research using other methods (e.g., community surveys), but using the same or similar variables. Looking at possible confounding variables such as age, gender, socioeconomic status, and language should be part of any study of the relationship of diagnosis and ethnicity.

### Conclusions

Based on the findings, it may be said that there is a relationship between ethnic identity and psychiatric diagnosis. The relationship is similar to that reported

frequently in the literature and it is possible that ethnic stereotyping and bias may occur in the assignment of diagnosis. Both black and Asian clients received more diagnoses of psychosis than did whites, and Latinos received fewer such diagnoses. Black clients were more frequently diagnosed with schizophrenia than were whites and whites were more frequently diagnosed with major affective disorder. Asians frequently received diagnoses of psychosis, schizophrenia, and major affective disorder. Latinos were diagnosed with nonpsychotic disorders. These differences could not be accounted for by socioeconomic status. None of the covariates was consistently related to diagnosis.

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