Ethnic Differences in Clinical Presentation of Depression in Adult Women

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This study examined ethnic differences in self-report and interviewer-rated depressive symptoms and estimated the contributions of sociodemographic and psychosocial factors in predicting severity of depression. One hundred twenty-five clinically depressed African American \((n = 46)\), Caucasian \((n = 36)\), and Latina \((n = 43)\) women were recruited. After controlling for differences in socioeconomic status, African American women reported more symptoms of distress and Latinas were rated as significantly more depressed than the other groups. However, these ethnic differences were not moderated by either education or employment. Finally, hierarchical regression analysis indicated that severity of depression was predicted by low education, being single, being Latina, high perceived stress, and feelings of hopelessness. Additional research is needed to validate these results and to investigate their clinical significance.

There has been increasing interest in the role ethnicity and culture play in psychiatric illness, especially in depression (Lu, Lim, & Mezzich, 1995). However, relatively few studies have systematically investigated ethnic differences in the experience and expression of depression and related psychological distress or the implications that such differences might have for diagnosis, treatment, and treatment outcome (Lawson, Hepler, Holladay, & Cuffle, 1993; Myers, 1993; Zhang & Snowden, 1999). As the U.S. society becomes progressively more multiethnic, there is an increased need for well-designed studies that can help improve diagnostic accuracy, quality, and effectiveness of treatment and prevention services for clinically depressed patients from diverse backgrounds (Neighbors et al., 1992). Thus, the present study investigated possible ethnic differences in reported depressive symptoms, as well as in the relative contributions of socioeconomic status (SES), sociodemographic, and psychosocial risk and protective factors in predicting severity of depression in a multiethnic community sample of clinically depressed women.

In the United States and worldwide, depressive disorders account for a significant proportion of psychiatric disorders, with women, the poor, young adults, the unemployed, the unmarried, and Latinos experiencing a disproportionate burden of morbidity (Blazer, Kessler, McGonagle, & Swartz, 1994; Culbertson, 1997; Kessler, 2000; Merikangas, 2000). One of the most consistent findings in this literature is the greater prevalence of major depression among women in the United States and other developed countries, with most studies reporting a 2:1 female-to-male ratio (Culbertson, 1997; Kessler, 2000). Various explanations have been offered to account for this gender difference, including socioeconomic, biological, personality, differential exposure to chronic stresses, cognitive and coping styles, and differential patterns of expression of distress (Abramson et al., 1999; McGrath, Keita, Strickland, & Russo, 1990; Nolen-Hoeksema, 1995). However, fewer studies have investigated the role that ethnicity might play in accounting for differences in the experience and expression of depression in general, and specifically in women.

All of the evidence to date indicates that although there are ethnic differences in the expression of depressive symptoms across ethnic groups, these differences are relatively minor, and that there is remarkable consistency in the core features of depression across countries and ethnic groups (Ballenger et al., 2001; Weissman et al., 1996). Nevertheless, these studies have reported a greater tendency among depressed Caucasians and African Americans to report cognitive-affective symptoms, with African Americans reporting more anxiety, anger, and hostility than Caucasians (Fabrega, Mezzich, & Ulrich, 1988; Raskin, Crook, & Her-
There is also evidence suggesting that African Americans are more likely to report suspiciousness or paranoia than Caucasians and that this can affect the quality of counselor-client relationship and likelihood of early treatment termination (Terrell & Terrell, 1984; Watkins & Terrell, 1988; Whaley, 1998). However, most of this latter work has been conducted on college students and on patients suffering from schizophrenic disorders rather than on patients with depression.

Somewhat less consistent is evidence suggesting that African Americans and Latinos are also more likely to report somatic complaints than Caucasians (Compton & Jones, 1991; Escobar, Rubio-Stipec, Canino, & Karno, 1989; Kirmayer & Young, 1998; Roberts, 1992; Wohl, Lesser, & Smith, 1997). This tendency to somatize distress is generally associated with lower SES, female gender, older age, monolingual Spanish speakers, immigrants, and low-acculturated individuals (Escobar et al., 1989; Guernaccia, Angel, & Worohey, 1989; Kolody, Vega, Meinhart, & Bensussen, 1986; Noh, Avison, & Kaspar, 1992; Swenson, Baxter, Shetterly, Scarbro, & Hamman, 2000).

It is not clear what accounts for these group differences, although cultural factors have been implicated (Ballenger et al., 2001; Weissman et al., 1996). It is also not clear what effect these differences in the expression of depressive symptoms might have on diagnostic decisions and on estimates of disease prevalence. However, Neighbors and colleagues (Neighbors, Jackson, Campbell, & Williams, 1989), Whaley (1998), and others have argued that such differences in symptom expression, however minor, are one factor that might account for the apparent greater risk of psychiatric misdiagnosis experienced by African Americans and might complicate treatment decisions (Lawson, 1996).

There is also extensive evidence of the complex interplay of psychosocial risk factors such as stress and cognitive appraisal associated with chronic and episodic life events, childhood adversity, deficits in social support systems, and psychiatric risk factors such as personal and family psychiatric and medical history in risk for depression (Gotlib & Hammen, 1992; Kessler & Magee, 1993). However, relatively little attention has been given to testing the contribution of these factors in conferring risk for depression in people of color. Nevertheless, some research indicates that people of color, especially women of color, face a disproportionate burden of psychosocial risk from a variety of sources, including chronic and episodic life events, SES, acculturation, ethnic/minority pressures, family, and environmental stresses, and that these risks are associated with a disproportionate burden of psychiatric morbidity and mortality (Chisholm, 1996; Clark, Anderson, Clark, & Williams, 1999; Crittle, 1996; Hovey, 2000; Rogler, Cortes, & Malgady, 1991; Roycears-Sodowsky & Maestas, 2000; Salgado de Snyder, 1987; D. R. Williams, Yu, Jackson, & Anderson, 1997). However, little is known about the contribution that psychosocial and psychiatric risk factors make in accounting for severity of depression or in shaping the expression of depression in women of color (Myers, 1993; Nolen-Hoeksema, 1995).

Studies have also shown that social undermining and low social support are related to depression and psychological distress in African American women (Gant et al., 1993) and in Latina immigrants (Salgado de Snyder, 1987). However, studies examining the role of social support as a moderator of the effects of stress on distress have yielded mixed results. Some studies confirm that social support moderates the stress-distress relationship in Latino and African American adults and youths (Leadbeater & Linares, 1992; Padilla, Cervantes, Maldonado, & Garcia, 1988; Warren, 1997), whereas other studies fail to confirm this relationship (Crittle, 1996; Snapp, 1992). These findings suggest a need to investigate the interplay of social undermining, stress, and social support in depression among women from different ethnic groups.

Although there is suggestive evidence of
Ethnic differences in the experience and expression of depression, this research is of mixed quality, often fails to distinguish between minor syndromal differences and differences in core features of the disorder, often fails to control for demographic or other potentially confounding variables, and relies exclusively on self-report symptom measures in nonclinical samples (Myers, 1993). Furthermore, it is unclear whether the observed ethnic differences in symptom expression are attributable to social class. For instance, research by Aneshensel, Clark, and Frerichs (1983) found greater depressive symptoms among Latinos in comparison with Caucasians and African Americans; however, once SES was controlled, the group differences disappeared. It is also unclear whether social class serves as a moderator, such that within a given ethnic group, the greatest differences in distress and depression are observed among the lower SES, but few or no differences are found among the more affluent. It is also of interest to pursue this moderation effect among ethnically diverse, yet economically similar, populations to investigate whether ethnicity interacts with SES under these circumstances (Betancourt & Lopez, 1993). Therefore, research is still needed to investigate whether there are stable and consistent ethnic differences in reported symptoms of depression and in severity of the disorder in clinically depressed people.

The purpose of this study, therefore, was to investigate ethnic differences in self-reported and interviewer-rated depressive symptoms, to explore the role SES plays in explaining such differences, and to estimate the relative contributions of sociodemographic and psychosocial factors in predicting severity of depression. These questions were investigated in a sample of depressed adult African American, Caucasian, and Latina women who sought treatment at one of two Los Angeles public mental health clinics. We hypothesized, consistent with some previous studies (Brown, Schulberg, & Madonia, 1996; Malgady & Rogler, 1993; Raskin et al., 1975), (a) that depressed African American and Latina women would report more depressive symptoms and be rated as more severely depressed than Caucasian women; (b) that the pattern of symptoms would differ such that compared with Caucasian women, African American women would report more hostility, suspiciousness, and somatic complaints (Raskin et al., 1975; Whaley, 1998) and Latinas would report more phobic anxiety and somatic complaints (Aneshensel et al., 1983; Roberts, 1992); and (c) that some of these differences are expected to be evident even after controlling for SES. However, we also expect that SES will moderate the relationships between ethnicity and severity of depression, such that the greatest differences are observed among the most economically disadvantaged women. Finally, and consistent with prevailing evidence, we hypothesized (d) that SES, psychosocial, and psychiatric risk and protective factors will predict severity of depression independent of ethnicity.

Method

Participants

Clinically depressed African American, Caucasian, and Latina women between the ages of 18–65 years who sought treatment at one of two public psychiatric outpatient clinics were recruited to participate in this study of ethnic differences in clinical depression. A total of 461 women were identified as potentially eligible and were screened by telephone to determine if they met the following study criteria: self-identified as African American, Caucasian, or Latina; had parents and grandparents of the same ethnic group; sought treatment for current depression; had no history of mania or psychosis; and reported no alcohol or illicit drug abuse in the past year. One-hundred and thirty-six women met these screening criteria and were invited for a formal assessment interview with a trained, ethnically and linguistically matched interviewer. Eleven partici-
pants were excluded because they met criteria for Bipolar I or II, evidenced current psychotic symptoms or had a history of psychosis, met criteria for drug or alcohol abuse or dependence, or had a physical illness that might account for their depression (e.g., severe anemia, thyroid dysfunction). Thus, the final sample consisted of 125 women (46 African American, 36 Caucasian, and 43 Latina).

As seen in Table 1, participants across the three ethnic groups were similar in age ($M = 42.03$ years, $SD = 11.03$) and reported comparably low annual incomes ($M$ income = $7,934/annum, $SD = $5,942). However, Latinas reported significantly lower education than African Americans and Caucasians, $F(2, 122) = 45.98, p = .000$, and were primarily non-U.S. born ($84\%, n = 36$). Although the non-U.S. born Latinas reported an average of 22.8 years of residency in the United States (range = 4–51 years), all spoke Spanish as their primary language. Latinas also reported consuming significantly less alcohol per week, $F(2, 122) = 3.51, p = .03$, than the Caucasian women.

As seen in Table 2, Latinas were also more likely to be employed, $\chi^2(2, N = 125) = 18.77, p = .000$, although they were earning less income and were more likely to be married/cohabiting, $\chi^2(2, N = 125) = 7.21, p = .03$, than either the African American or Caucasian women. As a group, the women reported a substantial burden of psychiatric and medical morbidity; 71% ($n = 89$) reported a history of psychiatric disorders, 58% ($n = 73$) reported a family history of psychiatric disorders, and 50% ($n = 62$) reported a history of other medical problems. However, there were no ethnic differences in psychiatric or medical history.

Given the extensive amount of time required for the interview and the fact that data were collected entirely for research purposes with no specific benefits to the participants, participants were paid $75 for the interview and $25 for lab samples, for a total of $100. All participants were treated in accordance with the American Psychological Association ethical guidelines and principles.

### Measures

**Demographic and Background Characteristics.** Age, marital status, years of education, occupational status and history, monthly income, place of birth, number of years in the United States (if non-U.S. born), primary language, and English proficiency (if nonnative English speaker) were obtained from participants.

**Interviewer-Rated Symptom Severity Measures.** The Structured Clinical Interview for DSM–IV (SCID–IV; First, Spitzer, Gibbon, & Williams, 1997) was used to assess whether patients met DSM–IV criteria for major depression or dysthymia. The majority of the women enrolled in the study met criteria for

### Table 1: Means and Standard Deviations of Demographic Variables by Ethnic Group

<table>
<thead>
<tr>
<th>Variable</th>
<th>African Americans ($n = 46$)</th>
<th>Latinas ($n = 43$)</th>
<th>Caucasians ($n = 36$)</th>
<th>Total ($n = 125$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Age</td>
<td>43.67</td>
<td>10.84</td>
<td>41.77</td>
<td>11.41</td>
</tr>
<tr>
<td>Education</td>
<td>12.40</td>
<td>1.82</td>
<td>7.71</td>
<td>3.86</td>
</tr>
<tr>
<td>No. drinks weekly</td>
<td>0.22</td>
<td>0.59</td>
<td>0.09</td>
<td>0.37</td>
</tr>
<tr>
<td>No. of cigarettes daily</td>
<td>3.91</td>
<td>7.08</td>
<td>2.48</td>
<td>4.95</td>
</tr>
</tbody>
</table>

*Note.* Means in the same row that share the same subscripts differ significantly at $p < .05$.

*Yearly income is reported in thousands.*
major depression \((n = 120)\), and 5 met criteria for dysthymia. No differences between these groups were noted on any of the variables of interest, therefore the analyses were run on the entire sample.

Severity of depressive symptoms was evaluated using the structured interview guide for the Hamilton Rating Scale for Depression (HRSD-24; Hamilton, 1960; J. B. W. Williams, 1988). This scale includes 24 symptoms of depressive illness rated on either a 3-point or 5-point scale that ranges from 0 = absent to 2 or 4 = severe \((\alpha = .85; \kappa = .78)\). Only patients whose depression was rated as at least of mild severity \((\text{HRSD} > 11)\) were included in the study.

**SELF-REPORT SYMPTOM SEVERITY MEASURES.** Depressive symptoms were assessed using the Beck Depression Inventory (BDI; Beck, 1972), a 21-item self-report measure that assesses cognitive, affective, and somatic symptoms of depression. Participants were asked to rate the degree of severity of each symptom on a 4-point scale from 0 = no symptoms to 3 = severe symptoms. Consistent with previous research (Hemmings, Reimann, Madrigal, & Velasquez, 1999; Skilbeck, Acosta, Yamamoto, & Evans, 1985), the BDI evidenced good internal consistency in this sample \((\alpha = .83)\).

Psychological distress was assessed using the Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983), a 53-item self-report symptom measure that uses a 5-point scale of distress ranging from 0 = not at all to 4 = extremely. The BSI has been shown to be reliable and valid with a variety of populations (Hemmings et al., 1999; Skilbeck et al., 1985). The BSI yields three global scores, but for the purposes of this study, only the Global Severity Index (GSI), which is the sum of all items responded to \((\alpha = .94)\), was used as a measure of overall level of psychological distress. The BSI also yields nine symptom subscale scores: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. However, to avoid redundancy with the BDI and to reduce testing burden, we omitted the items on the depression subscale from the subscale comparisons. Subscale scores of the BSI were found to have moderate to high reliability in the present sample (alphas ranged from .59 to .85).

**LAB TESTS.** Blood and urine samples were taken and assayed to assess participants’ overall health and nutritional status and current substance use. Lab results were made available to participants, and those with acute and untreated conditions (e.g., thyroid dysfunction, anemia) were excluded from the study and referred for treatment.

**PSYCHIATRIC RISK FACTORS.** Participants were queried about their history of use of alcohol

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**TABLE 2 Percentages and Sample Sizes of Demographic Variables by Ethnic Group**

<table>
<thead>
<tr>
<th>Variable</th>
<th>African Americans ((n = 46))</th>
<th>Latinas ((n = 43))</th>
<th>Caucasians ((n = 36))</th>
<th>Total ((n = 125))</th>
</tr>
</thead>
<tbody>
<tr>
<td>% employed</td>
<td>19.6, 9</td>
<td>62.8, b, 27</td>
<td>30.6, b, 11</td>
<td>37.6, 47</td>
</tr>
<tr>
<td>% married/cohabiting</td>
<td>10.9, 5</td>
<td>30.2, b, 13</td>
<td>11.1, b, 4</td>
<td>17.6, 22</td>
</tr>
<tr>
<td>% using recreational drugs</td>
<td>4.3, 2</td>
<td>4.7, 2</td>
<td>11.1, 4</td>
<td>6.4, 8</td>
</tr>
<tr>
<td>% with psychiatric history</td>
<td>71.7, 33</td>
<td>69.8, 30</td>
<td>72.2, 26</td>
<td>71.2, 80</td>
</tr>
<tr>
<td>% with family psychiatric history</td>
<td>69.6, 32</td>
<td>46.5, 20</td>
<td>58.3, 21</td>
<td>58.4, 73</td>
</tr>
<tr>
<td>% with history of medical illnesses</td>
<td>56.5, 26</td>
<td>46.5, 20</td>
<td>44.4, 16</td>
<td>49.6, 62</td>
</tr>
</tbody>
</table>

Note. Percentages in the same row that share the same subscripts differ significantly at \(p < .05\).
and illicit drugs, whether they had ever been diagnosed or received treatment for any psychiatric disorders, whether any member of their immediate family had ever been diagnosed or treated for a psychiatric disorder, and their history of medical problems. The number of drinks in an average week was computed, as well as the number of cigarettes smoked daily. Affirmative responses on drug use, on personal and family psychiatric history, and on medical history were scored 1 and negative responses 0, and separate scores were computed for each variable.

**Psychosocial Risk Factors.** Chronic stress was assessed with a 21-item revised self-report Role Strain Questionnaire (Myers, 1985) that assesses on a 4-point scale (1 = not a problem to 4 = a major problem) the amount of difficulty participants experienced in the past month from a number of sources, including economic, employment, crime, legal problems, discrimination, housing, transportation, child care, personal conflicts, and illness or accidents. A total chronic stress score was calculated by summing across all items responded to. Although this score was only modestly reliable (α = .56), this is most likely attributable to the fact that strains in one domain (e.g., family conflict) need not be related to stresses in other domains (e.g., living in a high crime area), yet an overall chronic strain score provides a meaningful index of differences in stress burden that each participant carries.

Perceived stress was assessed with the 14-item Perceived Stress Scale (Cohen, Kamarck & Merelstein, 1983) that measures the degree to which life events are evaluated as uncontrollable, emotionally overwhelming, and unpredictable (e.g., "In the last month, how often have you felt nervous or stressed" and "In the last month, how often have you found that you could not cope with all the things you had to do"). Respondents rated each item on a 5-point scale from 1 = not at all to 5 = a great deal, with higher scores reflecting higher levels of interpersonal stress. The SUS was found to be moderately reliable (α = .77).

Finally, social support, which is conceptualized as a protective resource that may moderate stress to reduce the severity of depression or facilitate recovery (Brugha et al., 1987; Brugha et al., 1990; McLeod, Kessler, & Landis, 1992), was assessed with a short five-item version of the Social Support Questionnaire (Sarason, Levine, Basham, & Sarason, 1983). The measure asks participants to identify and rate the four most important people in their lives on the degree to which they provide advice, emotional support, and instrumental support. Ratings are made on a 5-point scale from 1 = not at all to 5 = a great deal. An overall sum score was calculated (α = .91), with higher scores reflecting higher levels of support.

**Procedure**

At the interview, trained and ethnically and linguistically matched female interviewers...
described the purpose of the study and study procedures and requirements, written consent to participate was obtained, biological samples were collected, the diagnostic interview and interviewer-rated assessments were conducted, and self-report measures were administered. All interviewers were trained and supervised in the administration of the diagnostic interviews and in rating the range and severity of depressive symptoms by one of the coauthors (Ira Lesser), with periodic reviews of diagnostic procedures and consultation on the more difficult cases.

All of the instruments were originally developed in English and subsequently translated into Spanish by a certified translator. The Spanish version of each instrument was then back-translated by an English/Spanish bilingual individual familiar with psychological research, and discrepancies between the English and Spanish versions of the protocol were resolved, thus “decentering” the original English version (Brislin, 1993). Thirty-six (84%) of the Latina women chose to be interviewed in Spanish, and the remaining 7 (16%) were interviewed in English. Both the English and Spanish protocols were pretested on a subsample of patients and non-patients, and minor additional changes were made to improve the clarity and comprehensibility of the measures.

Results

A series of univariate analyses tested for ethnic group differences at entry into treatment on demographic characteristics. Subsequently, we used a series of multivariate analyses of covariance (MANCOVA), controlling for education, employment, and marital status to test for ethnic differences in clinical status, symptom expression, and psychosocial factors. Next, we conducted a hierarchical regression analysis to investigate whether SES moderates the observed ethnic differences in severity of depression. Finally, we ran a hierarchical regression analysis to identify which of the factors studied were the best predictors of severity of depression.

An a priori alpha level of .05 was used for all of the statistical analyses reported.

Because Latinas were significantly less educated but were more likely to be employed and married or cohabiting than African American and Caucasian women, these variables were treated as covariates in subsequent analyses. These covariates were dichotomized into the following values: education: <12 years of education or >12 years of education; employment status: full/part time or unemployed; and marital status: married/cohabiting or single/unattached. Although Latinas also consumed significantly less alcohol than the other women, the quantities of alcohol were so small and unlikely to have a significant role in depression that this variable was omitted from subsequent analyses to save degrees of freedom.

Differences in Clinical Status

A MANCOVA controlling for education, employment, and marital status was run testing for group differences on severity of depression as measured by the HRSD-24, depressive symptoms as measured by the BDI, and psychological distress as measured by the BSI–GSI.

As shown in Table 3, there was a significant main effect of ethnicity on clinical status, Wilks’s lambda $F(6, 234) = 4.74, p = .000$. Between-subjects tests indicated that there were significant group differences on interviewer-rated severity of depression (HRSD-24), $F(2, 119) = 10.69, p = .000$, and on self-reports of psychological distress (GSI), $F(2,119) = 3.04, p = .05$. Pairwise comparisons indicated that Latinas were rated as more severely depressed than both African American ($p = .000$) and Caucasian ($p = .001$) women and that African American women reported significantly more psychological distress than Caucasian women ($p = .05$) but not more than Latinas. There was also a strong trend ($p = .06$) on the BDI, with Latinas reporting more symptoms of depression than Caucasian women ($p = .05$) but not more than African American women.
Differences in Symptom Expression

To test the hypothesis of ethnic differences in symptom expression, we included all of the BSI subscales except the depression subscale in a MANCOVA controlling for education, employment, and marital status. As shown in Table 4, a significant overall difference was obtained, Wilks’s lambda $F(16, 224) = 2.32, p = .003$; however, only partial support for this hypothesis was obtained. More specifically, between-subjects tests indicated that significant differences were only apparent on paranoid symptoms, $F(2, 119) = 7.57, p = .001$, and on somatization, $F(2, 119) = 4.54, p = .01$. Pairwise comparisons indicated that African American women reported more paranoid symptoms ($p = .001$) than Caucasian women, and both African American women ($p = .02$) and Latinas ($p = .05$) reported significantly more somatic symptoms than Caucasian women. Strong trends ($p = .06$) were also observed on paranoid symptoms and anxiety, with Latinas reporting more of these symptoms than Caucasian women. However, the expected differences on symptoms of hostility (African American > Caucasian) and phobic anxiety (Latina > Caucasian) were not observed.

### TABLE 3 Adjusted Means and Standard Errors of Clinical Status at Entry Into Treatment by Ethnic Group

<table>
<thead>
<tr>
<th>Variable</th>
<th>African Americans (n = 46)</th>
<th>Latinas (n = 43)</th>
<th>Caucasians (n = 36)</th>
<th>Total (n = 125)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SE</td>
<td>M</td>
<td>SE</td>
</tr>
<tr>
<td>Interviewer-rated HRSD</td>
<td>23.34$^a$</td>
<td>1.31</td>
<td>32.79$^a$, $^b$</td>
<td>1.50</td>
</tr>
<tr>
<td>Self-report BDI total</td>
<td>31.01</td>
<td>1.37</td>
<td>34.12</td>
<td>1.57</td>
</tr>
<tr>
<td>BSI Global Score GSI</td>
<td>58.73$^a$</td>
<td>3.71</td>
<td>56.36</td>
<td>4.26</td>
</tr>
</tbody>
</table>

Note. Means that share the same subscript differ at $p < .05$. HRSD = Hamilton Rating Scale for Depression; BDI = Beck Depression Inventory; BSI = Brief Symptom Inventory; GSI = Global Severity Index.

### TABLE 4 Adjusted Means and Standard Errors of Symptom Expression of Depression at Treatment Entry by Ethnic Group

<table>
<thead>
<tr>
<th>Brief Symptom Inventory</th>
<th>African Americans (n = 46)</th>
<th>Latinas (n = 43)</th>
<th>Caucasians (n = 36)</th>
<th>Total (n = 125)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SE</td>
<td>M</td>
<td>SE</td>
</tr>
<tr>
<td>Obsessive–compulsive</td>
<td>9.37</td>
<td>.73</td>
<td>9.73</td>
<td>.83</td>
</tr>
<tr>
<td>Interpersonal sensitivity</td>
<td>5.57</td>
<td>.64</td>
<td>5.74</td>
<td>.74</td>
</tr>
<tr>
<td>Anxiety</td>
<td>7.32</td>
<td>.64</td>
<td>8.93</td>
<td>.73</td>
</tr>
<tr>
<td>Hostility</td>
<td>4.93</td>
<td>.54</td>
<td>3.26</td>
<td>.62</td>
</tr>
<tr>
<td>Phobic anxiety</td>
<td>5.51</td>
<td>.64</td>
<td>5.34</td>
<td>.74</td>
</tr>
<tr>
<td>Paranoid ideation</td>
<td>6.20$^a$</td>
<td>.49</td>
<td>5.40</td>
<td>.56</td>
</tr>
<tr>
<td>Psychotic</td>
<td>5.75</td>
<td>.46</td>
<td>4.59</td>
<td>.53</td>
</tr>
<tr>
<td>Somatization</td>
<td>7.10</td>
<td>.67</td>
<td>7.15$^b$</td>
<td>.78</td>
</tr>
</tbody>
</table>

Note. Means that share same subscript differ at $p < .05$. 
**Differences on Psychosocial Factors**

A MANCOVA controlling for years of education, employment, and marital status were run testing for ethnic differences on feelings of hopelessness, chronic stress, perceived stress, social support, and social undermining. As shown in Table 5, results indicated that there was a significant overall ethnic difference, Wilks’s lambda $F(10, 230) = 1.85$, $p = .05$; however, between-subjects tests indicated that only one significant group difference on social support was obtained, $F(2, 119) = 3.01$, $p = .05$. African American women reported receiving more social support than Caucasian women. There was also a trend on social undermining ($p = .08$), with Latinas reporting less social undermining than Caucasian women. No differences on feelings of hopelessness, chronic stress, or perceived stress were obtained.

**SES as a Moderator of Ethnic Differences**

Studies of ethnic differences in mental health often fail to adequately account for the possible effects of SES. It is very likely, for example, that SES may exert its effects on clinical outcomes either independent of ethnicity or as a moderator of ethnicity. In the previous analyses, the independent effects of SES were statistically controlled before testing for ethnic differences. In the next analyses, we investigate whether SES moderates the observed ethnic differences in severity of depression (HRSD-24).

In each analysis, education and employment served as the indicators of SES, and following the procedures suggested by Baron and Kenny (1986), variables were entered in sets and in three steps. In Step 1, education and employment were entered. In Step 2, ethnicity was dummy coded into Ethnic 1 (African American compared with Caucasian) and Ethnic 2 (African American compared with Latina) and entered. African Americans were chosen as the referent group because of its larger sample size, which would yield greater stability in the results. In Step 3, four interaction terms were entered: Education $\times$ Ethnic 1, Education $\times$ Ethnic 2, Employment $\times$ Ethnic 1, and Employment $\times$ Ethnic 2.

**Moderation of Ethnicity on Severity of Depression by SES**

As seen in Table 6, the regression equation testing SES as a moderator on severity of depression accounted for 20% of the variance, $F(8, 116) = 4.75$, $p = .000$. In Step 1, education was significantly and negatively related to the severity of depression, accounting for 16% of the total variance explained, $F_{\text{change}}(2, 122) = 11.84$, $p = .000$. This effect indicated that low education contributes significantly to the severity of depression. In Step 2, although the step was

**TABLE 5 Adjusted Means and Standard Errors of Psychosocial Factors at Entry Into Treatment by Ethnic Group**

<table>
<thead>
<tr>
<th>Variable</th>
<th>African Americans (n = 46)</th>
<th>Latinas (n = 43)</th>
<th>Caucasians (n = 36)</th>
<th>Total (n = 125)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SE</td>
<td>M</td>
<td>SE</td>
</tr>
<tr>
<td>Hopelessness</td>
<td>28.32</td>
<td>0.89</td>
<td>26.81</td>
<td>1.02</td>
</tr>
<tr>
<td>Chronic stress</td>
<td>41.70</td>
<td>1.05</td>
<td>39.86</td>
<td>1.20</td>
</tr>
<tr>
<td>Perceived stress</td>
<td>37.42</td>
<td>0.97</td>
<td>39.86</td>
<td>1.11</td>
</tr>
<tr>
<td>Social support</td>
<td>74.86</td>
<td>2.43</td>
<td>70.24</td>
<td>2.79</td>
</tr>
<tr>
<td>Social undermining</td>
<td>23.46</td>
<td>1.18</td>
<td>20.93</td>
<td>1.35</td>
</tr>
</tbody>
</table>

*Note.* Means that share the same subscript differ at $p < .05$. 
not significant, ethnicity made a marginal additional contribution, $F_{\text{change}}(2, 120) = 2.78, p = .07$, indicating that being Latina as opposed to African American predicted more severe depression. In Step 3, none of the interaction terms were significant, which indicates that neither education nor employment moderated ethnicity in accounting for differences on severity of depression.

**Predictors of Severity of Depression**

We conducted a hierarchical regression analysis to determine which psychosocial factors predict severity of depression as indexed by HRSD-24 scores and controlling for SES, ethnicity, and psychiatric risk factors. Variables were entered in sets and in seven steps: Education, marital status, and employment were entered in Step 1; ethnicity was entered in Step 2 as dummy variables Ethnic 1 (African American compared with Caucasian) and Ethnic 2 (African American compared with Latina); personal and family psychiatric history were entered in Step 3; perceived stress was entered in Step 4; hopelessness as an index of psychological vulnerability was entered in Step 5; social support was entered in Step 6; and a Perceived Stress × Social Support interaction term was entered in Step 7 to test whether social support moderates stress in predicting severity of depression.

As shown in Table 7, the regression equation predicting severity of depression accounted for 32% of the variance, $F(11, 113) = 6.21, p = .000$. In Step 1, low education and being single were significant independent predictors of severity of depression, $F_{\text{change}} = 9.43, p = .000$, and the entire step accounted for 19% of the total variance. In Step 2, ethnicity was significantly related to depression and accounted for an additional 5% of the variance, $F_{\text{change}} = 3.70, p = .03$. This effect indicated that after controlling for differences in demographic characteristics, Latinas were rated as more severely depressed than African Americans. Personal and family psychiatric history in Step 3 was not significant. In Step 4, perceived stress was positively and significantly associated with severity of depression, $F_{\text{change}} = 11.10, p = .001$, and accounted for an additional 6% of the variance. In Step 5, after controlling for all previous steps, hopelessness accounted for an additional 7% of the variance, $F_{\text{change}} = 4.77, p = .03$, indicating that the greater the feelings of hopelessness, the greater the severity of depression. Contrary to expectations, however, social support in Step 6 and the Perceived Stress × Social Support interaction term in

### Table 6: Hierarchical Regression Analysis of Moderation of Ethnicity on Hamilton Rating Scale for Depression by Socioeconomic Status (N = 125)

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>$R^2$ change</th>
<th>$F_{\text{change}}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Socioeconomic status</td>
<td>0.16</td>
<td></td>
<td></td>
<td>0.04</td>
<td>1.81</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>−3.80</td>
<td>0.82</td>
<td>−0.41</td>
<td>***</td>
<td>11.84</td>
</tr>
<tr>
<td></td>
<td>Employment</td>
<td>−0.35</td>
<td>1.68</td>
<td>−0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ethnic 1</td>
<td>1.68</td>
<td>1.90</td>
<td>0.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ethnic 2</td>
<td>5.38</td>
<td>2.29</td>
<td>0.28</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Education &amp; Employment × Ethnicity Interaction Terms</td>
<td></td>
<td></td>
<td></td>
<td>0.05</td>
<td>1.81</td>
</tr>
<tr>
<td></td>
<td>Education × Ethnic 1</td>
<td>−1.26</td>
<td>5.80</td>
<td>−0.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Education × Ethnic 2</td>
<td>−4.95</td>
<td>3.32</td>
<td>−0.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Employment × Ethnic 1</td>
<td>0.44</td>
<td>1.24</td>
<td>0.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Employment × Ethnic 2</td>
<td>2.89</td>
<td>1.71</td>
<td>0.31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. $R^2 = 0.25$ (adjusted $R^2 = 0.20$). $F(8, 116) = 6.75, p < .000$. Ethnic 1 was coded 0 = African American, 1 = Caucasian, and Ethnic 2 was coded 0 = African American, 1 = Latina.

*p < .05. ***p < .001.
Step 7 were unrelated to severity of depression, which indicated that social support had no direct protective effect and did not moderate stress in predicting severity of depression.

**Discussion**

This study was conducted to investigate ethnic differences in self-report and interviewer-rated depressive symptoms, to explore the role SES plays in explaining such differences, and to estimate the relative contributions of sociodemographic and psychosocial factors in predicting severity of depression in a multiethnic sample of clinically depressed adult women. Results from this study provided partial support for previous findings that ethnic groups differ in the expression of clinical depression assessed through self-report and interviewer-rated measures (Ballenger et al., 2001; Fabrega et al., 1988; Neff, 1984; Raskin et al., 1975; Wohl et al., 1997). As expected, Latinas and African American women reported more somatic complaints than their Caucasian counterparts. It is also worth noting, however, that no substantive differences in core symptoms of the disorder were observed, which is consistent with previous findings of no differences in core features of depression across ethnic or national groups (Ballenger et al., 2001).

Although we hypothesized that African American and Latina women would be rated as more severely depressed than Caucasian women, our results indicated that only Latinas were rated as more severely depressed, after controlling for differences in education, employment, and marital status. The greater severity ratings of Latinas are consistent with previous evidence of more severe depression among less-educated, immigrant, and monolingual Spanish speakers (Malgady & Rogler, 1993; Skilbeck et al., 1985; Swenson et al., 2000). We considered the possibility that this finding was an artifact of measurement, but this is unlikely because of the congruence between self-report symptoms of distress and depression and the interviewer ratings of symptom severity. Thus, perhaps, the Latinas were more severely depressed because of greater willing-
ness to report symptoms of distress or because of delay in seeking professional care compared with the African American and Caucasian women. However, it is also possible that this difference could be due, at least in part, to a tendency of the clinical interviewer to rate the Latinas more severely. A report by Malgady and Costantino (1998) indicated that Latino clinicians rated psychiatric symptoms in bilingual Hispanics more severely than Caucasian clinicians, and this was especially evident for bilingual and monolingual Spanish interviewers. Unfortunately, this hypothesis could not be tested in this study because only trained, bilingual–bicultural Latinas interviewed the Latina patients, and thus, no comparisons by ethnicity of interviewer could be made. Nevertheless, these results await replication in future studies, and the competing hypotheses of greater symptom reporting versus delayed treatment seeking versus ethnicity of the interviewer merit further investigation.

Epidemiological studies indicate lower rates of depression among recent Latino immigrants compared with their U.S.-born counterparts (Vega, Kolody, Aguilar-Graxiola, & Catalano, 1998). Unfortunately, because our Latina sample primarily consisted of immigrants, we were not able to compare them with their U.S.-born counterparts. However, it is important to note that although low in acculturation (i.e., 84% were monolingual Spanish speakers), the Latina women in our sample were not recent immigrants, with an average of 23 years of residency in the United States. Thus, as reported in other studies, pressures of acculturation, persistent socioeconomic disadvantage in a country of considerable wealth, exposure to anti-immigrant and racial prejudice, and other noxious social processes may accumulate to erode whatever protections these immigrants bring and contribute to increased psychiatric vulnerability over time (Vega et al., 1998).

Although the African American and Latina women reported more depressive symptoms in the self-report measures than the Caucasian women, after controlling for differences in education, employment, and marital status, only the comparison between the Latinas and Caucasian women approached significance (p = .06). Nevertheless, the self-report data in conjunction with the interviewer ratings suggest that the Latinas, in particular, experience greater levels of depressive symptomatology compared with the other two groups. This higher level of depressive symptoms might be attributed to the additional sociocultural burdens (e.g., acculturation) they face, as well as their postponing seeking professional mental health services. It is worth reinforcing, however, that this is not a difference in the core symptoms of depression but mainly a difference in symptom reporting.

Consistent with our expectations and controlling for differences in education, employment, and marital status, depressed African American women also reported greater psychological distress than Caucasian women. These results confirm previous reports from community surveys (D. R. Brown & Gary, 1985; Dressler & Badger, 1985) and clinical studies (C. Brown et al., 1996; Raskin et al., 1975) that indicate a tendency for African American women to report more psychological distress than Caucasian women. It is interesting to note, however, that the African American women rated themselves as more psychologically distressed than the ratings given by the interviewers would suggest. This apparent discrepancy may reflect the fact that the range of symptoms available on the self-report measure is greater and more diverse than the symptoms that are the focus of attention on the interviewer assessment of severity of depression. Therefore, their overall level of distress may be more related to the fact that they are slightly older, more likely to be unemployed, less likely to be married or cohabiting, somewhat more likely to have a psychiatric history, and to carry a higher burden of medical morbidity than the Caucasian and Latina women, rather than any substantive difference in core symptoms of depression.

As shown in previous research (Terrell & Terrell, 1984; Whaley, 1998), our results also
indicated that African American women reported more distrust than Caucasian women and that these differences were not related to SES. This greater cultural mistrust on the part of African Americans has been shown to influence their interactions with health and mental health care providers (Terrell & Terrell, 1984) and may increase the risk for clinicians to overinterpret the psychiatric significance of these symptoms rather than seeing them as nonpathological idioms of distress (Whaley, 1998).

Although not significant, Latinas also reported more mistrust than Caucasian women, and along with the African American women’s reported levels of mistrust comparable with the adult psychiatric outpatient sample used in the norming of the BSI (Derogatis & Melisaratos, 1983). The Caucasian women, in contrast, reported levels of mistrust more comparable with the adult nonpatient norming sample of the BSI. It is reasonable to expect greater mistrust among residents in high-stress, high-crime communities, such as those who participated in this study. What is interesting, however, is that the same level of mistrust was not evident in the Caucasian women in our sample. This difference in distrust is not attributable to SES and suggests that it is likely to be culturally mediated, as suggested by Watkins and Terrel (1988) and Whaley (1998). Additional exploration is warranted to examine whether higher levels of mistrust is a culturally congruent way of expressing distress among women of color and whether lower social class exacerbates these feelings of mistrust.

The expected greater tendency toward expressing somatic symptoms of distress among women of color (C. Brown et al., 1996; Escobar et al., 1989; Kolody et al., 1986; Noh et al., 1992) was confirmed, with both the African American and Latina women reporting significantly more somatic complaints than the Caucasian women, after controlling for differences in SES. Although not statistically significant, the African American women reported more somatic complaints than the Latina women, which is contrary to previous reports that found higher rates of somatic complaints among Latinos (Compton & Jones, 1991; Golding, Aneshensel, & Hough, 1991; Roberts, 1992; Sylva, 1997). This finding was also somewhat unexpected given that the Latinas were significantly less educated and low acculturated. Nevertheless, the elevated levels of somatic complaints by the African American women may simply be reflective of their overall greater psychological distress.

Contrary to expectations, there were no differences in hostility between African American women and the other women. Previous studies reporting these differences were based on more severely depressed hospitalized patients (Raskin et al., 1975) or on samples that included men (Fabrega et al., 1988) rather than on moderately depressed women. Similarly, the expected differences on phobic anxiety between the Latina and the Caucasian women were not observed (Karno et al., 1987). Additional research is needed to determine whether ethnic differences in phobic anxiety are likely to be moderated by severity of depression, gender, or age.

As suggested by several authors (Betancourt & Lopez, 1993; Myers, 1993; Williams et al., 1997), it is important to disentangle the effects of ethnicity from SES, so that observed group differences are not erroneously attributed to ethnicity. In the present study, SES, as indexed by education, employment, and marital status, either was statistically controlled or its independent effects and its role as a possible moderator of ethnicity were tested. The results indicated that there were ethnic differences in symptom reporting after controlling for differences on SES and that SES did not moderate ethnicity in accounting for differences in severity of depression. Therefore, other sociocultural factors that were not examined in these analyses may be implicated in accounting for the group differences observed.

Finally, we also investigated what role psychosocial factors play in accounting for differences in severity of depression. We initially investigated ethnic group differences
in the psychosocial factors, controlling for SES. These initial comparisons yielded ethnic differences only on social support, with African American women reporting more social support than Caucasian women. Nevertheless, when these psychosocial factors were entered into a regression equation, severity of depression was associated with feelings of hopelessness and higher perceived stress along with low education, being single, and being Latina in comparison with being African American. The significance of the strong association of feelings of hopelessness and perceived stress with depression should not be overinterpreted because the tendency to overrate life difficulties is confounded with severity of depression (Gottlieb & Hammen, 1992), which precludes disentangling the direction of the stress–depression relationship.

The results also indicated that social support was not an independent predictor of depression, nor did it serve as a moderator of stress. These findings are consistent with previous studies that failed to support the hypothesized moderating effect of social support (Crittle, 1996; Snapp, 1992). However, these results are not entirely surprising because all of the women are clinically depressed. Therefore, whatever protective or moderating effect their social resources might have provided has already proven inadequate.

In summary, the results of this study provide additional, although somewhat limited support, of ethnic differences in the expression of depression among clinically depressed women but not in the core symptoms of the disorder. These differences are not attributable to differences in SES and need to be replicated in larger and more socioeconomically diverse samples. The results also suggest the need to explore possible ethnocultural and psychosocial explanations for these differences. Our results also confirm that depressed women, irrespective of their ethnic background, experience high chronic strain. However, whether this greater stress burden is a contributor to their depression or a consequence of their depression cannot be determined from these data. Subsequent analyses will explore this question using independent ratings of chronic and episodic stress as predictors of severity of depression.

Finally, these results are based only on low-income and working-class women seeking psychiatric care at public outpatient clinics. It would be useful to determine whether these results are replicated with comparable samples of men and with men and women of higher SES. It would also be useful to determine whether these minor syndromal differences observed at entry into treatment are associated with differences in diagnostic decisions or predict treatment received, treatment response, and treatment outcome over time. All of the participants were in treatment, and subsequent articles will address this issue.

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