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Menopausal Symptoms in Hispanic Women and the Role of Socioeconomic Factors

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The objective of this study was to assess differences in menopausal symptoms between postmenopausal (PM) Hispanic (H) and PM Caucasian (C) women. This was a prospective survey. Data from a convenience sample of 404 PM women (50% H, 50% C) were evaluated. Comparing H with C women, statistically significant differences ($P < 0.05$) in symptoms were noted with mood changes (76% H, 54% C), a decrease in energy (56% H, 36% C), palpitations (54% H, 26% C), breast tenderness (39% H, 28% C), memory loss (34% H, 22% C), and vaginal dryness (34% H, 44% C). When controlling for education and income, there were differences in mood changes, a decrease in energy and palpitations between the groups. Consistent with previous data, hot flashes (80% H, 75% C) and night sweats (67% H, 64% C) were the most common symptoms in the PM C women, and there were no significant differences compared with PM H women. Symptoms reported by PM C women in this sample are consistent with rates in the literature, but PM H women reported several symptoms at a higher rate. These differences remain when socioeconomic factors are considered, suggesting ethnicity may be an independent variable in menopausal symptomatology.

Target Audience: Obstetricians & Gynecologists, Family Physicians

Learning Objectives: After completion of this article, the reader should be able to state that the symptoms of menopause affect all women independently of race/ethnicity, recall that Hispanic and Caucasian women did differ in the frequency of some common symptoms, and explain that when socioeconomic factors were considered the differences remained suggesting that ethnicity may be an independent variable in menopausal symptomatology.

Menopause marks the phase in a woman's life when reproductive hormonal secretion decreases and reproductive ability stops. The physical changes and symptoms of menopause have been extensively studied. Medical professionals are educated and trained to be familiar with the common menopausal symptoms to offer the best possible care to women entering this transitional phase of their lives. Clinicians also need to be familiar with specific symptoms that may not affect or impact all menopausal women equally.

The most commonly reported symptom of the perimenopause is menstrual irregularity (1). In addition, psychologic symptoms such as fatigue, nervousness, loss of memory, sleep deprivation, decrease in energy, decrease in sexual desire, irritability, and depression may begin during perimenopause and extend well into the menopausal years (2). Seventy-five

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percent to 85% of women report hot flashes, making it second only to menstrual irregularity in frequency of reported occurrence (2). Women also may experience dyspareunia, urinary urgency, and incontinence as a result of urogenital atrophy (2).

Although much data on menopausal symptoms exist, they have been obtained predominantly from Caucasian women. Previous studies have suggested that different ethnic groups may have variations in menopausal symptoms (3–7) as well as differences in quality of life (8,9). In 1998, the North American Menopause Society (NAMS) conducted a survey of 752 women. The survey found that the average age of the last menstrual period was 49, that hot flashes were the most frequently discussed topic in 42% of menopausal women, and that paradoxically, 51% reported being happiest during menopause as compared with other times in their lives. In the NAMS study, however, 85% of the women were Caucasian, whereas 2% were Hispanic (3).

The SWAN study (Study of Women's Health Across the Nation), in contrast, has produced the largest analysis to date of menopausal symptoms in a large, multiethnic population of pre- and postmenopausal women (4,5). Although the proportion of Hispanic women was small, 11% and 12%, respectively, these percentages corresponded with large numbers of Hispanic respondents, 1712 and 1859, respectively. Although some differences were noted between Hispanic and Caucasian women, the low frequency of hot flashes (24.2%) and night sweats (20.9%) in Caucasians was not consistent with prior data (4).

Aside from ethnicity, studies have suggested that women in different socioeconomic classes may experience menopausal symptoms in various ways (5). It is not known, however, whether ethnicity is an independent variable in the experience of menopausal symptoms or whether socioeconomic factors can account for the majority of differences seen (7). The SWAN study suggested that socioeconomic factors were independent variables in menopause symptomatology, but ethnic variations within different income and education groupings were not separately reported (5–7). Differences seen between ethnic groups, therefore, may be a factor of varying socioeconomic parameters.

Another analysis of the SWAN data did control for socioeconomic factors; however, this study looked at health-related quality of life (HRQL) using the SF-36 domains. In this study, Hispanic women were significantly more likely to have impaired HRQL than Caucasians in all SF-36 domains except the Role–Emotional domain and socioeconomic factors only explained the ethnic differences in the Role–Physical domain (9). From computerized searches, we could not find a similar analysis of ethnic variations while controlling for socioeconomic variables in menopausal symptomatology.

This study was designed to compare Hispanic with Caucasian women. The objectives of this study were to expand on the limited amount of information on menopausal symptoms experienced by Hispanic women and to determine if that information varies from literature reports based primarily on data from Caucasian women. The final objective was to determine whether any differences in menopausal symptoms could be explained by controlling for socioeconomic factors.

MATERIALS AND METHODS

This study was reviewed and approved by the Hartford Hospital Institutional Review Board. It consisted of a prospective survey of perimenopausal and menopausal women. Menopause was defined as surgical removal of both ovaries or permanent cessation of menses for 12 months without another medical explanation. Women were excluded if they were surgically menopausal and received hormonal therapy (HT) throughout the first postoperative year or if they were naturally menopausal and received HT throughout the menopausal transition. To be eligible, menopause (surgical or natural) must have occurred within the preceding 30 years and women must have been from 40 to 90 years of age. Women who met these criteria were offered inclusion and asked to sign an informed consent.

Patients were recruited between June 2002 and March 2004, inclusive, in one of the following ways: 1) Hartford Hospital's inpatient database was searched for eligible patients. These patients were approached in their hospital rooms and offered participation; 2) patients presenting to the Women's Ambulatory Health Service clinic (10,11) or the Adult Primary Care clinic who met the inclusion criteria and consented to participate were administered the survey; and 3) women in nonclinical settings (health fairs and survey booths) were approached and those who met the inclusion criteria were offered participation in the study. Patients of all ethnocultural backgrounds were allowed to participate.

Study personnel administered the survey in English or Spanish according to each patient's preferred language. For the study personnel who were not fluent in Spanish, translators were present. Demographic variables, socioeconomic factors, and the prevalence of

menopausal symptoms were recorded. The demographic factors included ethnicity, primary and secondary language, highest level of education, and annual household income. The level of education was categorized as "higher," at least some college, or "lower," high school or below. Likewise, income was categorized as "higher," a household income greater than or equal to $25,000, or "lower," a household income less than $25,000. The survey included 13 commonly accepted menopausal symptoms: hot flashes, night sweats, mood changes, sleeping problems, decreased energy, weight change, heart palpitations, decreased libido, vaginal dryness, breast tenderness, urinary symptoms, memory loss, and dyspareunia (12). No additional ("other") responses were recorded.

For the purposes of this study, only data from Hispanic women were compared with Caucasian women. Caucasian women served as a type of control, because the majority of existing data have been collected from this population. The data were analyzed for frequencies of menopausal symptoms, the most common symptoms reported, women's perceptions of which symptoms affected them the most, and their level of understanding about menopause.

Student's *t* test was used to compare means of ages between the normally distributed racial/ethnic groups. Chi-squared analyses were used to evaluate equality of distributions between the categorical variables. All differences at $P < 0.05$ were considered statistically significant. All statistical analyses were performed with SPSS version 11.5 (SPSS Inc., Chicago, IL; 2003).

RESULTS

Of the 434 postmenopausal (PM) women who met the inclusion criteria and were surveyed, 404 (93.1%) of them were self-identified as Hispanic (50%) and Caucasian (50%). Table 1 shows the demographics and other characteristics of the sample.

For Hispanic participants, approximately 50% were from the inpatient setting, 30% from the ambulatory setting, and 20% from nonclinical settings. For Caucasian participants, approximately 45% were inpatients, 22% were ambulatory, and 33% were from nonclinical settings. The distribution of patients agreeing to participate was not appreciably different between Hispanics

TABLE 1
Demographics

	Hispanic (n = 202)	Caucasian (n = 202)	Total (n = 404)
Age (mean ± standard deviation)	59.8 ± 8.8	62.6 ± 10.0	61.2 ± 9.5
Onset of menopause	44.6 ± 7.7	46.4 ± 7.8	45.5 ± 7.8
Place of birth			
USA	2 (1.0%)	184 (91.5%)	186
Puerto Rico	150 (74.6%)	0 (0.0%)	150
Peru	19 (9.5%)	0 (0.0%)	19
Columbia	12 (6.0%)	0 (0.0%)	12
Western Europe	2 (1.0%)	8 (4.0%)	8
Brazil	5 (2.5%)	1 (0.5%)	6
Dominican Republic	4 (2.0%)	0 (0.0%)	4
Eastern Europe	0 (0.0%)	4 (2.0%)	4
Cuba	4 (2.0%)	0 (0.0%)	4
Canada	0 (0.0%)	2 (1.0%)	2
Bolivia	2 (1.0%)	0 (0.0%)	2
Other*	1 (0.5%)	2 (1.0%)	3
Total	201	201	402
Primary language			
English	4 (2.0%)	191 (95.0%)	195
Spanish	191 (95.0%)	1 (0.5%)	192
Portuguese	5 (2.5%)	0 (0.0%)	5
Russian	0 (0.0%)	3 (1.5%)	3
French	0 (0.0%)	3 (1.5%)	3
Italian	0 (0.0%)	2 (1.0%)	2
German	0 (0.0%)	2 (1.0%)	2
Other†	0 (0.0%)	2 (1.0%)	2
Total	200	202	402

*Other includes one each for Jordan, Sri Lanka, and Venezuela.
†Other includes one each for German and Arabic.

and Caucasians; overall, approximately 60% of inpatients, 70% of ambulatory patients, and 50% of those in nonclinical settings agreed to participate.

Among women in this sample, hot flashes, night sweats, and mood changes were the most frequently reported symptoms with more than 60% of women responding that they had experienced these symptoms. Fewer than 50% of women reported each of the other 10 symptoms (Fig. 1).

Figure 2 shows the symptoms that had statistically significant differences in the reported frequencies between the Caucasian women (gray columns) and the Hispanic women (black columns). Six of the 13 individual symptoms had significant differences ($P < 0.05$ by chi-square) in prevalence by race/ethnicity. Hispanic women reported 5 of the 6 symptoms more frequently: mood changes (76% H, 54% C), decreased energy (56% H, 36% C), palpitations (54% H, 26% C), breast tenderness (39% H, 28% C), and memory loss (34% H, 22% C). Vaginal dryness was the only symptom reported more frequently by Caucasian women (44% C, 34% H).

When levels of self-reported income and education were dichotomized into "low" and "high," 4 symptoms (mood changes, a decrease in energy, palpitations, and memory loss) maintained significant differences ($P < 0.05$) between the postmenopausal Caucasian and Hispanic groups (Figs. 3A and 3B, respectively).

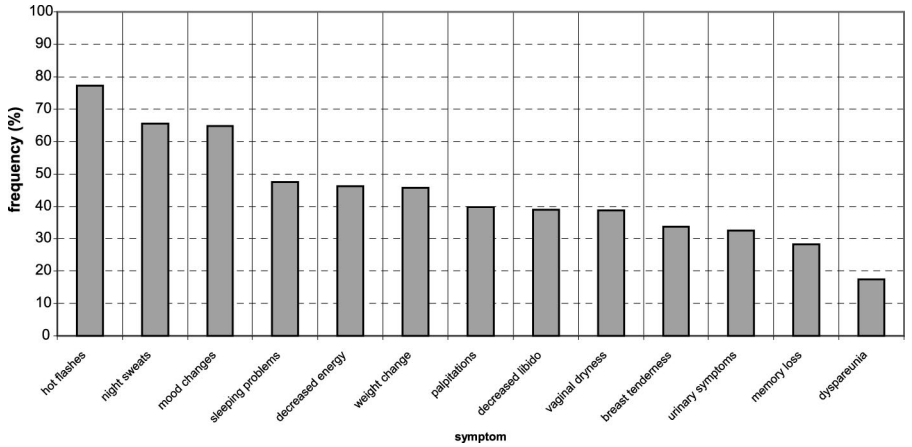

Fig. 1. The frequency of menopausal symptoms among the entire sample (n = 404) in decreasing order.

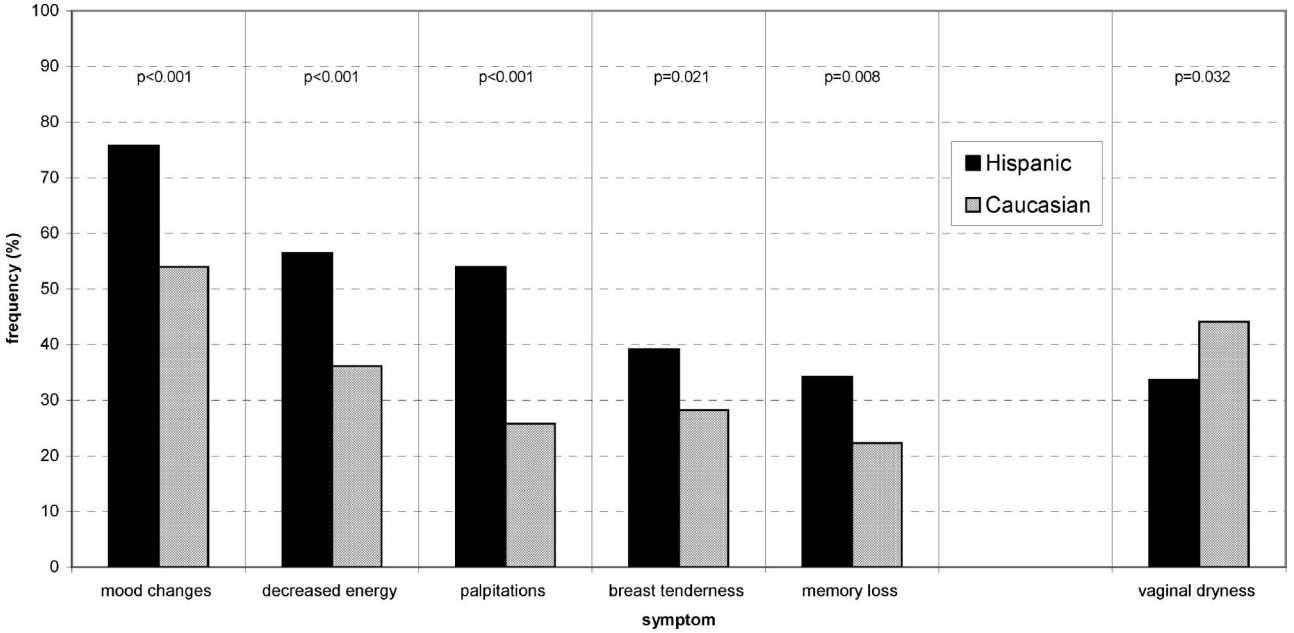

Fig. 2. The frequency of menopausal symptoms with statistically significant differences between Caucasian and Hispanic women. The symptoms reported more frequently by Hispanic women are depicted on the left.

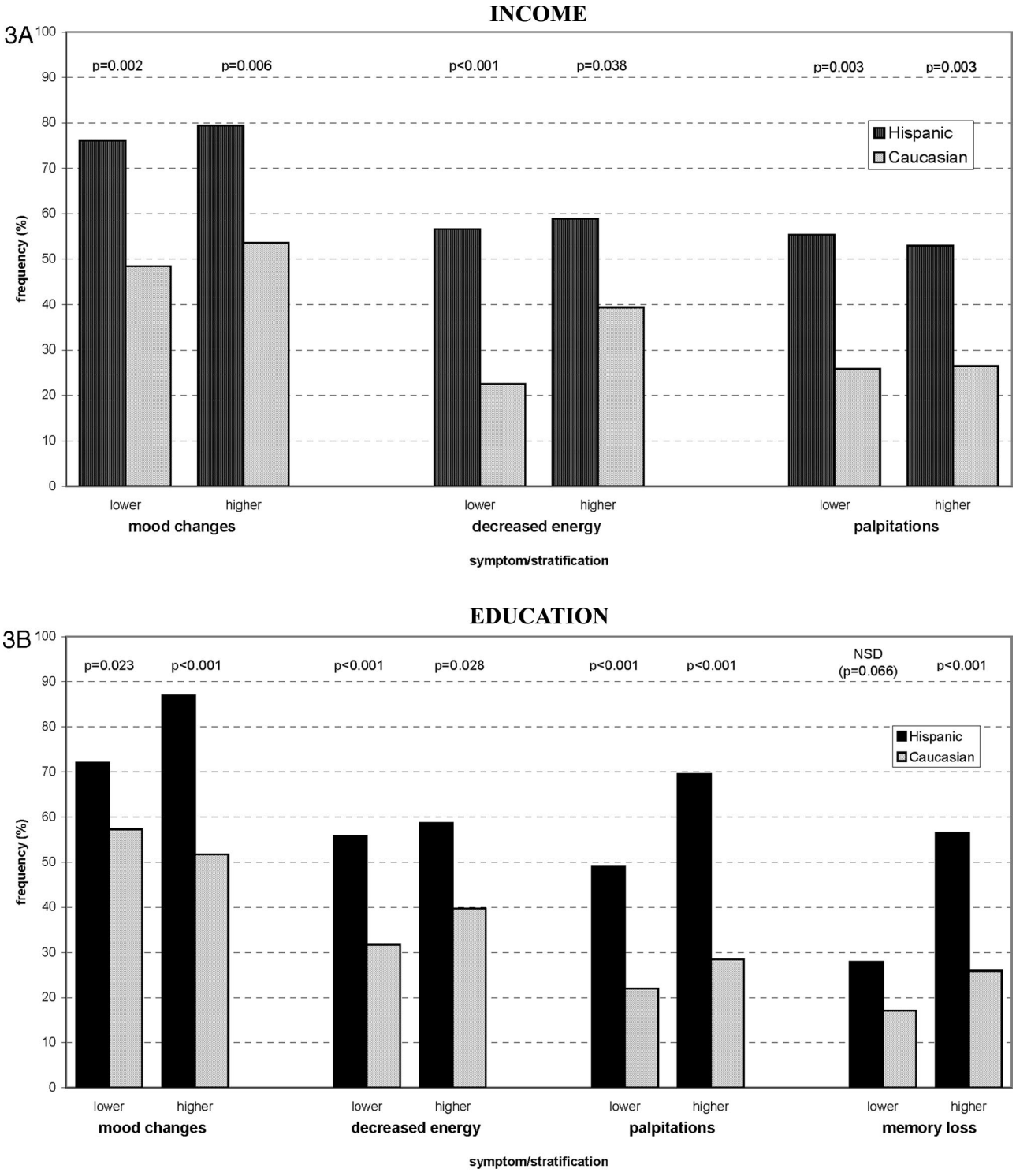

Fig. 3. Above are the menopausal symptoms with significant differences stratified by income and education. (**3A**) depicts the symptoms that continued to show a significant difference after controlling for income, whereas (**3B**) depicts the symptoms that continued to show a significant difference after controlling for education.

DISCUSSION

The nation's ethnic distribution is rapidly changing with Hispanics being the fastest-growing minority group. The Hispanic population in the United States grew by 58% over the past decade, and if the current growth rate continues, the U.S. population is estimated to comprise approximately 20% Hispanics by the year 2025 (13). Despite this projection, most of the literature on menopausal symptomatology has been acquired from Caucasian women.

The results of this study demonstrate that 6 of 13 common menopausal symptoms had significant differences in reported frequency by race/ethnicity. Although both Caucasian and Hispanic patients experienced the common symptoms of hot flashes and night sweats with the same frequency, Hispanic patients experienced several other symptoms more frequently. Vaginal dryness was the only symptom reported more frequently in Caucasian women, although mood changes, decreased energy, palpitations, breast tenderness, and memory loss had a significantly higher rate in Hispanic patients.

Aside from determining the frequency of symptoms in Hispanic versus Caucasian women, the current study determined that differences between ethnic groups would persist when comparing similar socioeconomic groupings. The results did show a difference in symptoms between Hispanic and Caucasian women even when controlling for these socioeconomic variables.

Consistent with previous data (14–16), hot flashes (80% H, 75% C) and night sweats (67% H, 64% C) were the most common symptoms in the postmenopausal Caucasian women, and these frequencies were not statistically different between the Caucasian and Hispanic groups. Contrary to the findings in postmenopausal Caucasian women, mood changes were the second most common symptom among the postmenopausal Hispanic women. When controlling for education as well as income, mood changes, palpitations, and a decrease in energy had statistically significant differences ($P < 0.05$) between the Caucasian and Hispanic groups. Although the symptoms reported by Caucasian women in this sample reflect what has been reported in the literature, the Hispanic cohort reported several other symptoms at a higher frequency. Other studies concur and highlight that Hispanic patients may have different perceptions about a similar menopause experience (17). However, it still has not been shown whether the differences in menopausal symptoms between Hispanic and Caucasian women can be explained by socioeconomic factors. In our analysis, the differences remained even when socioeconomic factors were considered, similar to the SWAN data addressing quality of life (9), suggesting that ethnicity may be an independent variable in the menopausal symptomatology.

Although patients were recruited prospectively, menopausal symptoms were reported from retrospective recall. Therefore, the responses to questions are based on the memory of the experience each participant had with menopause. It is possible that cultural variation or length of time from the menopause could account for a recall bias. It also is possible that a different proportion of surgical menopause versus natural menopause between the Caucasian and Hispanic groups could cause a bias. Another potential limitation is the subjective nature of the menopausal symptoms based on each participant's individual interpretation of severity or presence of a symptom. However, the patient sample in this study was drawn from a mixture of Hispanic and Caucasian populations. The clinic-based populations, and some of the health fairs, were heavily weighted toward Hispanic patients (10), which allowed us to collect an equal number of both populations. Patients were recruited from several different locations to help diversify the population, and the decline rates were similar. As evidenced by the minimal data in the literature, along with the cultural and language barriers, it is clear that acquiring data from this population is challenging. Currently, there is no validated menopausal symptom questionnaire. Therefore, we used 13 symptoms commonly associated with menopause (12). Although some data suggest that weight gain may predispose women to more frequent or severe vasomotor symptoms, this information was not obtained (18). Further analysis of this population, and subanalysis by country of origin, may help delineate other important differences.

CONCLUSIONS

The symptoms of menopause affected all women in this sample independent of race/ethnicity. The 2 most common symptoms in Caucasian women, hot flashes and night sweats, had a similar frequency in Hispanic women. This study demonstrated that the frequency of other common symptoms, however, might vary as a function of racial/ethnic categorization. These differences remain when socioeconomic factors are considered, suggesting that ethnicity may be an independent variable in menopausal symptomatology. The findings in Hispanic women may not be generalizable to all minorities and may differ among Hispanics of various descents (eg, Puerto Rican, Mex-

ican, Cuban). The symptomologic differences may emphasize a need to tailor education and care for specific menopausal symptoms that affect different groups with varying severity. Although this study has limitations, we feel it highlights several important findings and hypothesis-generating concepts. The development of a validated menopause symptom scale would also be helpful, enhancing further prospective data to confirm these findings. Although it is important to recognize that such differences exist, the reasons for these differences, whether genetic, cultural, or multifactorial, will require further clinical and social research to elucidate.

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