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## The Prevalence of Postpartum Depression in Hispanic Immigrant Women

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THE PREVALENCE OF POSTPARTUM DEPRESSION IN  
HISPANIC IMMIGRANT WOMEN

by

Nissa Lucero

A thesis submitted to the faculty of

Brigham Young University

in partial fulfillment of the requirements for the degree of

Master of Science

College of Nursing

Brigham Young University

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GRADUATE COMMITTEE APPROVAL

of a thesis submitted by

Nissa Lucero

The thesis/project/dissertation of Nissa Lucero is acceptable in its final form including (1) its format, citations, and bibliographical style are consistent and acceptable and fulfill university and department style requirements; (2) its illustrative materials including figures, tables, and charts are in place; and (3) the final manuscript is satisfactory and ready for submission.

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## ABSTRACT

### The Prevalence of Postpartum Depression in Hispanic Immigrant Women

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College of Nursing

Master of Science

**Purpose:** The purpose of this study was to determine the prevalence of postpartum depression among Hispanic immigrant women seeking healthcare services at a community health clinic.

**Data Sources:** Hispanic immigrant women were recruited. Out of 116 study participants, 96 women were in the final sample. Using the Beck PDSS-Spanish version, women were screened for symptoms of postpartum depression.

**Conclusions:** The prevalence rate of significant symptoms of PPD was 54.2% for the entire sample of 96 women. Nearly 66% of women who screened positive for symptoms of PPD scored above the listed cutoff score for suicidal thoughts. Women were divided into four postpartum age groups from 2 to 48 weeks; prevalence rates of symptoms of PPD ranged from 50% to 60.9% among the different groups. There were no statistically significant demographic predictors for PPD.

Implications for Practice: Given the high rates of symptoms of PPD in this population, it is strongly recommended healthcare providers implement universal screening for all Hispanic women in pregnancy and across the first postpartum year to ensure prompt diagnosis and culturally appropriate treatment. Further research is needed to assess the cultural components of postpartum depression and to determine if the prevalence is consistent in other community settings.

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## THE PREVALENCE OF POSTPARTUM DEPRESSION IN HISPANIC IMMIGRANT WOMEN

### INTRODUCTION

While researchers have explored postpartum depression (PPD) among culturally diverse women, most studies have focused on non-Hispanic whites and Asian women (Callister, Beckstrand, & Corbett, 2010). There is a lack of knowledge concerning the prevalence and cultural components of this serious disorder among Hispanic women. PPD in this demographic group is a growing concern as the Hispanic population continues to rise in the United States, along with the number of Hispanic women giving birth.

In addition, several studies indicate Hispanic women are at increased risk for PPD, have a higher incidence of PPD than non-Hispanic women, and that PPD is not readily identified by the women themselves or their healthcare providers (Chaudron et al., 2005; Horowitz, 2006; Howell, Mora, Horowitz, & Leventhal, 2005). It is crucial for providers to understand the prevalence of PPD in this vulnerable population, as well as understand special cultural considerations in screening, diagnosis, and treatment. The purpose of this study is to identify the prevalence and risk factors for PPD in Hispanic immigrant women.

### LITERATURE REVIEW

The severity of perinatal mood disorders ranges from mild transient symptoms that can be easily managed to severe depression that may require hospitalization and intense treatment.

PPD is typically characterized by persistent sadness, irritability, fatigue, sleep disturbances, appetite changes, withdrawal, invasive thoughts, and/or guilt. These symptoms can have serious consequences for the new mother and her family and can adversely influence the quality of interaction between the mother and infant. Depressed mothers are less nurturing and responsive to infant needs; distracted and less focused on the infant; more irritable, impatient, and hostile when dealing with the infant; and have low confidence in their mothering ability (Boyd, Zayas, & McKee, 2006; McKee, Zayas, Fletcher, Boyd, & Nam, 2006). These poor parenting behaviors can have a negative impact on the child including insecure attachment, delayed cognitive and motor development, behavioral problems, withdrawal, and anxiety (Boyd et al.; Surkan, Peterson, Hughes, & Gottlieb, 2006). Infants of depressed mothers also have a higher rate of language, social, and emotional delays (McKee et al.). Many of these damaging effects are preventable if early diagnosis and treatment are initiated (Koch, 2004).

The Hispanic population is the fastest growing in the United States, with growth rates three times that of the entire national population (United States [U.S.] Census Bureau, Ethnicity and Ancestry Branch Population Division, 2006). At least 14.8% of the American population is Hispanic, a total of 44.3 million people. It is estimated that over 25% of this population are women of childbearing age (Diaz, Cooper, Munoz, & Le, 2007). Hispanics have the highest birthrates throughout the country, including a high adolescent pregnancy rate, contributing significantly to the rapid increase in the population (Diaz et al.).

There exists a wide range of prevalence rates of symptoms of PPD reported among Hispanic women (Boyd et al., 2006; Horowitz, 2006; Howell et al., 2005; Kuo et al., 2004;

Malek, Connolly, & Knaus, 2001; Yonkers et al., 2001). This lack of congruency may be due to inconsistent screening and diagnosis (Le, Munoz, Soto, Delucchi, & Ippen, 2004). Higher rates of depression have been demonstrated in Utah, a state with a rapidly growing Hispanic population (Centers for Disease Control [CDC], 2004). The Pregnancy Risk Assessment Monitoring System (PRAMS) conducted a study in 2000 that examined PPD in seven states; Utah had the highest rate of PPD, and Hispanic women overall had a 46.7% rate of mild to moderate PPD and 8.4% had severe depression (CDC). Furthermore, an outcomes evaluation of the Hispanic Labor Friends Initiative conducted at the Ogden Community Health Clinic in Utah demonstrated that 4 out of 21 immigrant Hispanic women had significant symptoms of PPD and three were at high risk for PPD requiring referral to a mental health professional (Hazard, Callister, Birkhead, & Nichols, 2009). Because many of these women did not return for their six week postpartum checkup and had not been regularly assessed for PPD, the need was identified to determine the incidence of PPD in Utah for this population of vulnerable women so they could be referred for mental health services.

Hispanic women are at increased risk for PPD due to negative life events, high levels of stressors, low-incomes, large families, low levels of education, and poor housing (Boyd et al., 2006; Diaz et al., 2007; Surkan et al., 2006). Healthcare access barriers such as lack of knowledge about healthcare systems in the United States and how to utilize them, delayed access to prenatal services, and lack of insurance further compound the likelihood for untreated PPD (Diaz et al.). In addition, Hispanic women experience many unique stressors related to the immigration and acculturation process that influence child bearing and rearing. Immigrant status

is often a huge stress due to illegal immigration and fear of deportation, lack of documentation, perceived discrimination, and language barriers (Diaz et al.). While most researchers consider immigration status and low levels of acculturation a risk factor for PPD, several studies have found no association between level of acculturation and PPD (Beck, Bernal, & Froman, 2003; Davila, McFall, & Cheng, 2009; Kuo et al., 2004). One explanation for these incongruent findings in the literature is that acculturation is a complex concept with wide variation in how it has been defined and measured (Martinez-Schallmoser, Telleen, & MacMullen, 2003; Thomson & Hoffman-Goetz, 2009).

Furthermore, Hispanic women are at increased risk for untreated PPD due to low rates of self-report. Hispanic women may be reluctant to disclose negative feelings about themselves or their infants due to the cultural importance of family and motherhood (Koch, 2004). Unhappiness during the postpartum period may be interpreted as wrong, creating feelings of guilt and shame that prevent women from seeking treatment (Chaudron et al., 2005). While symptoms of PPD are high among Hispanic women, it is not readily detected by these women or their healthcare providers (Chaudron et al.). Accurate and early identification of PPD in this vulnerable population will serve to improve treatment and healthcare services to Hispanic women and their families (Adams, 2004).

Most studies evaluate women for symptoms of PPD during between 2 and 12 weeks postpartum. However, this time period may not be sufficient for many women as depressive symptoms may appear and linger much later than 12 weeks postpartum (Hewitt & Gilbody, 2009). A literature review yielded only two recent studies assessing PPD past this typical time

frame; one study screened women for depression up to 14 months postpartum and found similar rates in the early (2 weeks to 4 months) and late postpartum (8.1- 14 months) groups (Chaudron et al., 2010). Another study conducted by Munoz et al. (2006) screened women up to 12 months finding high rates throughout the first postpartum year, and recommended screening for PPD past the typical three month time period.

The purpose of this study is to (1) evaluate the prevalence of symptoms of PPD among Hispanic childrearing women receiving health care services at the Mountainlands Community Health Center in Provo, Utah, by incorporating the Beck Postpartum Depression Screening Scale - Spanish version (PDSS-Spanish) to screen Hispanic mothers 2 weeks to 12 months postpartum. In addition, the authors' objectives included determining (2) the demographic predictors of Hispanic women with symptoms of PPD, (3) the prevalence of symptoms of PPD among women who are past 12 weeks postpartum, (4) among depressed women, which symptoms are experienced most frequently, and (5) any differences in depressive symptoms reported by women across the different postpartum age groups (2-12 weeks; 13-24 weeks; 25-36 weeks; 37-48 weeks).

## METHODOLOGY

### *Setting*

All participants were recruited at Mountainlands Community Health Center in Provo, Utah between June 2009 and March 2010. This clinic primarily serves a low-income immigrant Hispanic population and provides primary care as well as full obstetric services.

### *Participants*

Hispanic childrearing women were invited to participate in the study. Inclusion criteria included Spanish speaking women of Hispanic origin who had given birth within the past 12 months. Exclusion criteria were women less than two weeks postpartum or greater than 42 weeks and women whose infants had died. Of the potential subjects approached, 116 consented to complete the study. Of this sample, 20 were determined to be ineligible leaving a final convenience sample size of 96. Reasons for ineligibility included inconsistent self-reporting as manifested by an inconsistent responding index (INC) score of 5 or greater ( $n = 10$ ), less than 2 weeks postpartum ( $n = 7$ ), and leaving the age of the infant blank ( $n = 3$ ). The authors of the PDSS-Spanish recommend the higher INC score of 5 to determine inconsistency and therefore, women scoring 5 or above were not included in the study (Beck & Gable, 2005a).

### *Procedure*

Participants were approached by the principal investigator and/or research assistant and enrolled in the study following institutional review board approval from Brigham Young University and the Mountainlands Community Health Center. All investigators and research assistants were bilingual, or had a Spanish translator with them, and were trained in administering and scoring the PDSS-Spanish. Hispanic women seeking healthcare services at the clinic were approached in a sensitive manner and were asked to complete a survey that screens for common and treatable symptoms many women experience after giving birth. Once verbal consent was obtained, the participants completed the PDSS-Spanish tool which took approximately 5-10 minutes to complete. Signed informed consent was waived due to the nature of the study and the vulnerability of the sample; however, a written consent form in Spanish was

given to the participant which explained the study and provided contact information for any questions. In addition, completion of the PDSS-Spanish assumed consent to participate in the study. Once the forms were completed, personal identifying information was removed and they were assigned a unique code number. All data, as well as the key to the code, was kept in a locked file in the principal investigator's office.

Each study participant was given a \$20 gift card for participation in the study. There were minimal risks for participation; however, some women may have experienced emotional discomfort when completing the questionnaire. If a woman scored 60 or above on the PDSS-Spanish, she was given information regarding PPD and immediately referred to the clinic social worker or other qualified healthcare provider at the clinic for further evaluation and treatment. Women scoring 59 or below had the normal results explained to them.

### *Instrument*

The incidence of PPD was measured using the PDSS-Spanish version developed by Beck and Gable. This instrument is a 35-item survey with a Likert-type self reporting scale ranging from 1 (strongly disagree) to 5 (strongly agree). The tool assesses the following seven areas: sleeping/eating disturbances, anxiety/insecurity, emotional lability, mental confusion, loss of self, guilt/shame, and suicidal thoughts. The content for these items were formulated from the comments and experiences of postpartum women during extensive qualitative study (Le, Perry & Ortiz, 2009). This screening tool has well documented internal reliability and construct validity and has been extensively reviewed and determined to be an excellent standardized measure of PPD (Le et al., 2004; Wei et al., 2008). The authors conducted two studies to evaluate the

psychometric properties of the Spanish scale; both demonstrated an alpha internal consistency reliability of .95 for the total score, and .94 and .95 for Mexican American women (Beck et al., 2003; Beck & Gable, 2005b). Le et al. (2009) examined the PDSS-Spanish scale and found excellent internal consistency ( $\alpha = .97$ ) for the entire sample, which included a higher proportion of Central Americans than Beck and Gable's studies, as well as good construct validity.

In addition, the PDSS-Spanish version has undergone rigorous measures to ensure equivalency between the English and Spanish scales, including back-translation with eight translators representing four predominant Latino groups, pretesting, and several studies measuring reliability and validity (Beck et al., 2003). A score of 60 and above is recommended as a positive indicator for significant depressive symptomatology. This cutoff point yields an 84% sensitivity and specificity in diagnosis (Beck & Gable, 2005b). Unlike the English scale, there is not a cutoff score to distinguish between mild and moderate depression.

### *Data Analysis*

All data were analyzed using SPSS version 16.0, 2007, for Microsoft Windows. Analysis included descriptive statistics and independent t-tests.

## RESULTS

The mean age of the sample was 26.6 years, with most of the sample ( $n = 68$ ) declaring Mexican as their nationality. The majority of the women ( $n = 60$ ) were married with at least a high school education ( $n = 74$ ) (Table 1). The Cronbach's alpha for this sample was .96, which is consistent with other studies implementing the PDSS-Spanish (Le et al., 2009).

The range of scores on the PDSS for the sample was 35 to 175. Of the 96 women with completed and usable data, 52 (54.2%) scored equal to or above 60, while 44 subjects (45.8%) scored 59 or below. The mean total score of all women was 69. In an attempt to determine if women in the group with depressive symptoms (total score  $\geq 60$ ) differed from those in the non-depressed (total score  $\leq 59$ ) group, demographic data were compared (Table 2). Independent t-tests revealed no statistically significant differences in demographic data among women with depressive symptoms and non-depressed women. However, one category, history of depression, approached significance with a p-value of 0.053, indicating women with a positive score were more likely to have a history of depression. In a comparison of demographic characteristics between non-depressed women ( $n = 44$ ) and those who scored 80 or above ( $n = 26$ ), two characteristics were statistically significant. Women who scored above 80 were more likely to report being Central American ( $p = .029$ ) and to have a history of depression ( $p = .001$ ) than those who scored below 60. Additionally, seven of the eight Central American women scored positive for symptoms of PPD on the scale. Marital status, education level, number of pregnancies and live births, type of birth, and formula versus breastfeeding were not significant predictors of postpartum depression (Table 2).

Women were divided into four groups based upon the number of weeks postpartum; 2-12 weeks, 13-24 weeks, 25-36 weeks, and 37-48 weeks. The prevalence of symptoms of PPD was examined among the four groups and found to be 52.1%, 60.9%, 50% and 46.7% respectively. Independent t-tests among the 4 groups revealed no significant differences among the types of depressive symptoms reported. Among the group with symptoms of PPD the following

categories had the highest mean scores in relation to their cutoff scores: suicidal thoughts, loss of self, guilt/shame, anxiety and insecurity (Table 3). Of particular note is the high rate (61.5%, n = 32) of positive screens for suicidal ideations among depressed women.

## DISCUSSION

The prevalence of women with a positive PPD screen was 54% in our study; this is higher than similar studies which have found prevalence rates ranging from 19 to 40% among Hispanic women (Boyd et al., 2006; Horowitz, 2006; Howell et al., 2005; Kuo et al., 2004; Malek et al., 2001; Yonkers et al., 2001). This is an important finding as it suggests 1 out of 2 postpartum Hispanic women in this sample may be suffering from PPD. This alarming rate strongly supports the practice of universal screening for PPD to ensure women receive appropriate and timely diagnosis and treatment. Several studies have found the onset of depression in pregnancy to be a significant predictor of PPD and recommend prenatal as well as postnatal screening (Boyd et al.; Koch, 2004; Kuo et al.; Martinez-Schallmoser et al., 2003; Yonkers et al.) Because of these findings, and because many Hispanic women do not follow-up for postpartum appointments, we recommend screening for depression beginning in pregnancy.

Among women with a positive score, we found 32 of the 52 (61.5%) women had clinically significant suicidal symptoms which warrant further investigation. Moreover, out of the seven symptom content scores, suicide ranked the highest in frequency and severity among women with depressive symptoms with a mean 56.7% above the cutoff score (Table 3). This finding is consistent with a recent study which found a positive suicide screen rate of 58.7% and indicates a need for further research to determine if Hispanic women with symptoms of PPD are

at increased risk for suicide compared to non-Hispanic women (Le et al., 2009). Our results, in association with Le et al. (2009), are of serious concern and indicate the need for further research. Increased suicidal thoughts, and possibly actions, is not well-studied among Hispanic women with symptoms of PPD and studies determining if Hispanic women have higher incidences of suicide and/or suicide attempts related to PPD are needed. Assessing the cultural factors that may contribute to more frequent and severe suicidal thoughts in Hispanic women is a critical component in understanding this phenomenon and should be addressed in future studies. The potential tragic outcome for the woman and her family of overlooking and under-treating symptoms of PPD has added significance in this population due to the high rates of suicidal thoughts.

One of the main objectives of this study was to determine the prevalence of PPD among women up to 52 weeks postpartum. Most recommendations include screening women up to 12 weeks postpartum; however, we hypothesized this is too early to detect PPD in all women and that we would find significant rates of PPD in women past this time period. Our findings support this hypothesis, as noted in Table 2. Our sample included women up to 48 weeks postpartum whom we grouped into four postpartum age groups. We found similar rates of positive symptoms among the four groups, with the highest prevalence of PPD symptoms found in women 13-24 weeks postpartum (60.9%). Women 2-12 weeks postpartum had a rate of 52.1%, followed by women 25-36 weeks with 50%, and women 37-48 weeks with 46.7%. The high rates of positive screening in women greater than 12 weeks postpartum suggest that current recommendations for screening may not detect PPD in all women. These findings are consistent

with a similar study which screened urban women up to 14 months postpartum and discovered high rates of depression in the late postpartum group (Chaudron et al., 2010). In addition, we were interested to see if women in these different age groups reported problems in different symptom content areas; however, multiple independent t-tests between the four groups did not reveal any significant differences. This reveals that women are experiencing similar symptoms from 2 weeks to 48 weeks postpartum. We recommend providers screen women at different intervals throughout the first year after birth, as well as in pregnancy, to ensure more accurate detection of symptoms of PPD. The need for standardized screening with an accurate tool is well documented in the literature, and is extremely important for the well-being of Hispanic immigrant women in the United States (Kuo et al., 2004; Martinez-Schallmoser et al.; Yonkers et al., 2001). The PDSS-Spanish scale has well established reliability and validity and we recommend the implementation of this tool when screening Hispanic women.

Similar studies have found demographic characteristics, such as marital status, level of education, and depression history to be risk factors for PPD among Hispanic women (Davila et al., 2008; Yonkers et al., 2001). However, our results did not demonstrate any statistically significant correlations among any of the demographic data and symptoms of PPD. This finding indicates that Hispanic women should not be screened solely upon currently accepted risk factors; PPD can affect women from any background. It should be noted that our research site primarily serves immigrants and/or patients with a low socioeconomic status, which are well documented risk factors for PPD, and that these characteristics can be assumed for most of our subjects. We did find a significantly higher percentage (87.5%) of Central American women

with a positive screening compared to women of Mexican descent who had a 53% rate for positive screenings. Independent t-tests of demographic data of non-depressed women and those with a score of 80 or above revealed that women with higher scores were more likely to be Central American ( $p = 0.029$ ) and have a history of depression ( $p = 0.001$ ). While the authors of the PDSS-Spanish scale do not recommend any cutoff point above 60 to indicate severity of symptoms of PPD as is done for the English scale, these findings may indicate a need to investigate PPD specifically among Central American women who may be at additional risk. Women from Central America may have unique difficulties and cultural issues contributing to PPD that providers would benefit from understanding when treating these women. In addition, along with Le et al. (2009), we also recommend establishing a score to differentiate between women with significant symptoms of depression and those with a positive screening for PPD, as can be done with the English scale. This would be useful in a clinical setting to determine priority of referral and treatment for women with symptoms of PPD.

After suicidal thoughts, the symptom content areas of loss of self, guilt/shame, and anxiety/insecurity were the most frequently reported symptom content areas of PPD among women with symptoms of depression. The two most frequently reported individual symptoms among the entire sample were they felt anxious over even little things concerning the baby and they felt all alone. This is valuable information for healthcare providers to focus interventions and provide education about caring for an infant which may relieve anxiety and increase confidence in parenting abilities, as well as provide support for these women. Several studies have indicated women with support systems report lower rates of PPD and recommend

interventions to increase social support (Martinez-Schallmoser et al., 2003; Surkan et al., 2006). Peer support, regular telephone calls to assess the mother and provide support, as well as nurse home visits have all been shown to be moderately effective methods in reducing the incidence of PPD among high risk women (Shaw, Levitt, Wong, Kaczorowski, & The McMaster University Postpartum Research Group, 2006). One intervention implemented by Munoz et al. (2006) consisted of a 12-week course, *Mamás y Bebés*, teaching low-income Latina women to “recognize which thoughts, behaviors, and social contacts had influence on their mood, the effect of mood on health, and the benefits of strengthening maternal-infant bonding” (p. 72). The high retention rate (91%) and maternal satisfaction reported by the women demonstrates that intense outreach programs can be an effective tool to educate Hispanic women about PPD and should be further researched and implemented in this population (Munoz et al., 2006). However, this program achieved only a small reduction depression rates and we recommend researchers focus on the creation and implementation of culturally centered interventions to decrease the prevalence of symptoms of PPD among Hispanic women. Programs designed to help women increase their access to resources in the community and at home are especially important. Social support has been repeatedly demonstrated to play a major role in preventing depression among Hispanic women (Martinez-Schallmoser et al.; Surkan et al.). Early interventions that include family members and spouses in the education and treatment process may be more effective than treating these women independently due to the cultural emphasis on family.

During the data collection process, common themes were observed that should be considered when conducting similar studies. Frequently, when told they screened positive for

symptoms of PPD, women were reluctant to talk about depression and resistant to receiving treatment. Some became quite emotional when referral for treatment was suggested. Several women stated they must have read the form wrong because they didn't feel depressed. The reluctance to talk about depression and seek treatment may have a cultural stigma consistent with findings from other researchers who have reported low rates of identifying and reporting depression among this population (Chaudron et al., 2005; Koch, 2004). Cultural taboos surrounding mental illness may cause women to interpret serious symptoms of depression as normal which perpetuates the high rates and lack of seeking professional help in this vulnerable population. Another repeated theme among multiparous women who screened positive for symptoms of postpartum depression was that their new infant reminded them of children they had left in their native country in order to come to the United States, and evoked feelings of sadness. These themes give insight into why Hispanic women may have higher rates of symptoms of PPD, and are useful to clinicians including nurses to consider when treating Hispanic immigrant women with PPD. We recommend further research examining the contributing cultural components that should be addressed when diagnosing and treating women with symptoms of PPD. Interviews will be conducted by students and faculty from Brigham Young University with women who screened positive to gain greater insight into their experiences and to identify barriers to accessing treatment for symptoms of PPD. Furthermore, Hispanic women need education during the prenatal and postpartum time period to explain PPD, common symptoms to be aware of, and the need for treatment if it occurs. Implementing prenatal and postpartum courses to address the needs of Hispanic immigrant women may be an effective method for disseminating information about PPD and establishing a support system where

women can feel safe to share their experiences during pregnancy and the postpartum time period. Involving Hispanic women in the creation and evaluation of education and support programs is necessary to meet the needs of this population and provide culturally appropriate interventions.

There are several study limitations. Study participants were screened only once; because of this we are unable to determine when symptoms of depression first appeared. We recommend further research that screens women multiple times at fixed intervals, throughout pregnancy and up to a year postpartum, to determine if there is an ideal time period to screen or if multiple screenings are truly needed the first year to detect symptoms of PPD. Next, our sample was a small convenience sample and women were not equally represented in all four postpartum age groups. Similar sample sizes among the groups would increase the accuracy of prevalence rates. Our study had the most women in the 2-12 week group, with decreasing numbers of women as postpartum age increased, possibly suggesting that women are more likely to seek maternal-infant healthcare services while in this 2-12 week postpartum time. If this is the case, women past 12 weeks postpartum are at increased risk from complications of PPD due to lack of healthcare utilization. Because of this, pregnancy and the first 12 weeks postpartum may represent a critical time to educate and screen for postpartum depression due to increased interaction with healthcare providers; however, screening should not be limited to this time period. Our demographic data were limited by the categories on the PDSS form; a more detailed description of social support, income and housing, length of time in the US, and immigration status, would have contributed greatly to the overall picture of women with depression. We

recommend that when studying Hispanic women, researchers obtain more in-depth information regarding these important variables.

Postpartum depression is a widespread problem among Hispanic women and contributes to multiple negative outcomes for women, infants, families, and communities. While knowledge of PPD is increasing, widespread screening for this serious disorder is still not routinely performed, especially among high-risk populations such as Hispanics. The effectiveness of implementing brief maternal screenings for PPD during well-child and postpartum visits is well documented (Freeman et al., 2005; Le et al., 2009; Olson, Dietrich, Prazar, & Hurley, 2006). This may be an important strategy since many Hispanic women do not return for their postpartum maternal check-ups (Hazard et al., 2009). Given the high rates consistently found among researchers, as well as the vulnerability of this population, we strongly recommend healthcare providers including nurses implement universal screening with the PDSS-Spanish version for all Spanish speaking Hispanic women across the childbearing year. In addition, healthcare providers should work to improve education regarding PPD during the prenatal period to ensure Hispanic women are well informed about this common problem before it occurs.

TABLE 1  
*Demographic Characteristics for Entire Sample*

Characteristic	Mean (n)	Range
Age	26.6 (95)	16-41
Number of Pregnancies	2.4 (93)	1-8
Number of Live Births	2.2 (96)	1-6

  

Characteristic	N	%
Level of Education		
Less than HS degree	21	21.9
High school graduate	48	50
Some college	10	10.4
College degree	16	16.7
Nationality		
Central American	8	8.3
Mexican	68	70.8

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Puerto Rican	1	1.0
Other	19	19.8

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Marital Status

Single	31	32.3
Married	60	62.5
Divorced/Separated	3	3.1
Other	2	2.1

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History of Depression

Yes	17	17.7
No	77	80.2

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Treated for Depression

Yes	8	8.3
No	84	87.5

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Method of Birth		
Vaginal	72	75
Caesarian	20	20.8

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Infant feeding		
Formula	17	17.7
Breastfeeding	35	36.5
Combination	44	45.8

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Weeks Postpartum		
2-12	48	50
13-24	23	23.9
25-36	10	10.4
37-48	15	15.6

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TABLE 2  
*Demographic Characteristics According to PDSS Score*

	Negative ( $\leq 59$ )		Positive ( $\geq 60$ )		Positive ( $\geq 80$ )	
Characteristic	Mean (n)	Range	Mean (n)	Range	Mean (n)	Range
Age	26.5 (43)	17-36	26.7 (52)	16-41	26.7 (26)	17-41
Number of Pregnancies	2.4 (43)	1-7	2.4 (50)	1-8	2.4 (25)	1-8
Number of Live Births	2.1 (44)	1-5	2.3 (52)	1-6	2.2 (26)	1-6
Characteristic	N	%	N	%	N	%
<b>Level of Education</b>						
Less than HS degree	8	18.2	13	25	8	30.8
High school graduate	23	52.3	25	48.1	11	42.3
Some college	4	9.1	6	11.5	3	11.5
College degree	9	20.5	7	13.5	3	11.5

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 Nationality

Central American	1	2.3	7	13.5	5	19.2
Mexican	32	72.7	36	69.2	18	69.2
Puerto Rican	1	2.3	0	0	0	0
Other	10	22.7	9	17.3	3	11.5

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 Marital Status

Single	9	20.5	22	42.3	14	53.8
Married	33	75.0	27	51.9	10	38.5
Divorced/Separated	2	4.5	1	1.9	1	3.8
Other	0	0	2	3.8	1	3.8

---

 History of Depression

Yes	4	9.1	13	25	11	42.3
No	38	86.4	39	75	15	57.7

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Treated for Depression						
Yes	3	6.8	5	9.6	3	11.5
No	38	86.4	46	88.5	23	88.5
Method of Birth						
Vaginal	33	75	39	75	21	80.8
Caesarean	11	25	9	17.3	2	7.7
Infant feeding						
Formula	7	15.9	10	19.2	6	23.1
Breastfeeding	19	43.2	16	30.8	6	23.1
Combination	18	40.9	26	50	14	53.8
Weeks Postpartum						
2-12	22	50	26	50	12	46.2
13-24	9	20.5	14	26.9	7	26.9
25-36	5	11.4	5	9.6	3	11.5
37-48	8	18.2	7	13.5	4	15.4

TABLE 3  
*Means and Percentages above Positive Cutoff Score among Women with PPD Symptoms*

Symptom Content Area	Mean	Cutoff score	% above cutoff score
Suicidal Thoughts	9.4	6	56.7
Loss of Self	12.1	11	10
Guilt/Shame	11.8	11	7.3
Anxiety and Insecurity	15.0	15	
Mental Confusion	12.5	13	
Emotional Labiality	14.7	16	
Sleep and eating disturbances	13.0	17	

*Note.* No statistically significant differences among the 7 symptom content areas across the postpartum age groups.

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