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Katherine Leah Wisner *Editors*

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A Global Perspective on Detection and Treatment

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Foreword

As an obstetrician-gynecologist and researcher focused on health equity and community engagement with immigrant and underserved populations, and mother of four, I am honored to write a foreword for this groundbreaking book.

Both my personal life experiences and my work as a physician who cares only for publically insured and uninsured women, I see daily the impact of social determinants of health and the often-insurmountable barriers to achieve and maintain wellness. One of the most remarkable struggles I see is the lack of culturally proficient and linguistically appropriate depression care. This concern cuts across the spectrum of education and messaging about mental health to the woefully limited access to culturally proficient health care professionals. It is especially relevant to women in the perinatal period because of the added stress and challenges a woman faces during pregnancy and after delivery.

I am often reminded of Liliana, who walked into my clinic in New Haven with her new baby in her arms and three others clinging to her coattails. It was a blustery, gray day in New Haven, and I thought that Liliana was just cold and tired. One of our nurses volunteered to watch the children while I examined her. After a few minutes alone with Liliana, she started to weep. I had heard her story before, and too often. She was extremely stressed about the lack of support she was receiving to care for her four young ones. She was alone at home, and she had no family in the area. Liliana felt as if the world was crashing around her and she had lost hope, yet at the same time, she had extreme guilt for feeling this way and not being able to fully care for her children. She spoke only Spanish and it was therefore very difficult, if not impossible, to navigate the health system. While she did not want to leave her apartment, she forced herself to seek help that day. Liliana was suffering from postpartum depression.

Fortunately, we were able to facilitate a connection between Liliana and local support services that included home visits. Over several months, Liliana's depressive symptoms improved. However, for many Latinas, this is not the case and they often suffer in silence—undiagnosed and untreated.

Many Latina women have been exposed to depression, either through their own personal experience or as witnesses to friends and family. Many Latinas are not aware that they are depressed because they don't know what depression really is, what it looks like, and where to seek help. Equally important is the high probability that they do not realize that it can be treated. Latina mothers often feel symptoms of depression are simply a natural part of the process of giving birth and therefore consider the issue temporary. Moreover, Latinos believe that mental illness is something they should handle on their own. Well-documented cultural stigma and persistent lack of access to health care put Latinas at elevated risk of developing postpartum depression; rates are estimated as high as 37 % among Latinas vs. 10–15 % among all new mothers.

Strikingly, despite this high prevalence and growing incidence, overall, very little is known about postpartum depression among Latinas in the USA and in Spanish-speaking countries. I applaud Drs. Lara-Cinisomo and Wisner for conceptualizing a book that directly brings this important issue to the surface. This book provides a detailed account of the scope of and cultural contexts related to depression among Latinas in the USA and abroad, and reviews important interventions and approaches to detection and treatment. This book's heart-wrenching accounts of Latinas who suffer with depression should alone be the impetus for action to improve depression education, screening, and treatment of a highly vulnerable population.

I would be remiss if I did not mention the role of intimate partner violence and substance abuse that has serious consequences on mental health and especially depression. Latinas are at high risk of suffering from and remaining in abusive relationships. Compounded with linguistic, social, and cultural barriers, Latinas with depression are entrenched in circumstances that make it extraordinarily challenging from which to emerge, including poverty, limited access to resources, and information about perinatal depression.

As we know, empirical research is essential for driving evidence-based programs and policies. Unfortunately, many existing interventions are not conducted in multiple languages, including Spanish, nor are they adapted and disseminated for other populations. This book serves an important starting point from which we can give a greater voice to the true need of our health care system, health care teams, policy makers, and politicians.

Moreover, many health care professionals are not adequately trained to educate, identify, and treat Latinas with perinatal depression. Globally, there is a real lack of culturally proficient mental health services, including bicultural/bilingual health professionals and staff, which limits the type of care available to Latinas. In 2011, the World Health Organization estimated a shortage of 1.18 million mental health professionals, including 55,000 psychiatrists, 628,000 nurses in mental health settings, and 493,000 psychosocial care providers, needed to treat mental disorders in 144 low- and middle-income countries. Only about 1 % of licensed psychologists with active clinical practices who are also members of the American Psychology Association identified themselves as Latinos. It is estimated that there are 20 Latino mental health professionals for every 100,000 Latinos in the USA. Even the presence of medical centers does not directly mitigate this disparity. Take for instance,

Chicago, where despite the presence of five major academic medical centers, a large county hospital, and the largest US network of Federally Qualified Health Centers, Chicago has some of the worst health disparities between income groups in the USA. This burden is accentuated with respect to linguistically and culturally isolated immigrants who do not traditionally benefit from nor participate in research. In particular Latinos, who are the largest growing segment of Chicago's population, have unacceptably low rates of health care access and high rates of mental illness.

In the USA, the Patient Protection and Affordable Care Act (ACA) provides an important opportunity. Although Latinos comprise 12 % of the US population, they represent nearly one out of every four uninsured Americans. The RAND Corporation estimates that under the ACA that only about one-third of all Latinos in the USA will gain health care insurance, which means that a significant portion remains uninsured. It is my hope that this book will reenergize the conversation about Latinas and postpartum depression nationally and globally so that my sisters will seek treatment for themselves or their loved ones. Postpartum depression is treatable and no one should have to suffer in silence with this debilitating disease.

My hope is that this book will also encourage health care professionals to: (1) refresh their knowledge about postpartum depression and, in particular, the way it can manifest differently in different racial/ethnic and cultural groups such as Latinas from numerous Spanish-speaking countries and the USA; (2) screen for prenatal and postpartum depression in Spanish and provide mental health educational materials in Spanish; and (3) learn about mental health resources available around their communities and in the USA—especially with respect to resources that have Spanish-speaking counselors or therapists.

Paramount to the success of diagnosing and treating Latinas and Spanish-speaking women with perinatal depression is continued engagement and partnership with the women themselves, communities that serve them, and health and social services organizations. A public health priority is to move this field forward.

Again, I am deeply grateful for creating an open and safe space to vigorously support the discussion of perinatal depression among Latinas and Spanish-speaking women in the USA and abroad. We know that when a woman is able to be adequately educated, screened, and treated for perinatal depression, not only is her individual suffering alleviated but also outcomes for her baby and entire family are greatly improved.

There is a lot to do! This book serves as the catalyst to help us hit the ground running. Let's get to it! It is personal and no one should suffer in silence.

Chicago, IL, USA Melissa A. Simon, M.D., M.P.H.

A Global Perspective on Postpartum Depression: An Overview of the Current Research with Spanish-Speaking Women in the USA and Abroad

There are an estimated 452 million Spanish-speaking people in the world. In 2008, Spanish speakers made up approximately 8 % of US residents (Spanish SEO 2013). Fertility rates across the 20 Spanish-speaking countries, the USA, and Puerto Rico are expected to continue to grow (Brea 2003). This expected growth raises questions about maternal well-being, including the occurrence and treatment of postpartum depression and this book is intended to address this issue. Specifically, this book focuses on four countries where Spanish is spoken: Mexico, Chile, Spain, and the USA. While the USA is not considered a Spanish-speaking country, it is home to a growing Spanish-speaking population that includes immigrants from various Latin American countries, including but not limited to Mexico, Puerto Rico, El Salvador, Guatemala, and Colombia. The purpose of this book is to bring together some of the leading research on Spanish-speaking women and postpartum depression.

Postpartum depression is the most common medical complication among new mothers (Oates 2003). The USA is a leading country in the fight against perinatal depression. One measure the country is taking is the passing of the Moms Opportunity to Access Help, Education, Research and Support for Postpartum Depression Act (MOTHERS Act), which is designed to increase access to information, detection, and treatment of postpartum depression. Despite these national efforts, postpartum depression rates remain high in the USA, particularly among Latina mothers both immigrant and US-born (Davila et al. 2009; Kuo et al. 2004; Zayas et al. 2003). Postpartum depression is not a US phenomenon; it affects mothers across the globe. Yet, little is known about the prevalence of postpartum depression in Spanish-speaking countries (e.g., Chile, Mexico, and Spain). Researchers have documented the rates of postpartum depression in a small number of Spanish-speaking countries. However, the information is not centralized nor is it readily available to practitioners or the lay reader. In a recent international meeting on postpartum depression, a group of researchers representing Spanish-speaking countries concluded that more information that is accessible, current, and focuses on

Spanish-speaking mothers is needed. This book is the first step toward addressing that need by highlighting the prevalence, detection, and treatment among Spanish-speaking and Latina/Hispanic women living in the USA, Mexico, Chile, and Spain.

Detection Among Spanish-Speaking Women

One of the barriers to treating Latina mothers is detection or diagnosis. While various culturally and linguistically relevant measures are available to researchers and health care providers, their implementation depends heavily on multiple factors. These factors include self-recognition by the woman, prior mental health diagnosis by health providers, fluency in Spanish translation of symptoms, differentiation in understanding of criteria by clinician and clientele, screening tools used or not used, availability of services, uniformity of screenings, and timing of screenings. All of these variables make determination of the number of women suffering with postpartum depression difficult, particularly across the globe. Among those factors is variation across health care systems. For example, while the MOTHERS Act recommends a systematic implementation of reliable detection measures, there is no regulation or mandated requirements. One hospital in a large city may screen every newly delivered woman for depression while another may have no screening procedures. As a result of a call by the Pan American Health Organization (PAHO) for more responsive mental health services over half of Latin American countries (64.5 %) have formulated plans and 67.9 % have established mental health legislation (Gaviria and Rondon 2010). A handful of countries, including Mexico and Chile, have made progress in addressing women's mental health needs (Alarcón 2003; Caldas de Almeida and Horvitz-Lennon 2010). Still, it is unknown whether these policies are systematically implemented and to what extent (Gaviria and Rondon 2010). In Spain, prenatal and mental health providers have formed the Perinatal Psychiatry Program Barcelona-Clinic to address the growing needs of mothers in the region.

Several studies recognize and impress the importance of appropriate screening, diagnosis, and treatment of Postpartum Depression (Chaudron et al. 2005; Gjerdingen and Yawn 2007; Jevitt et al. 2006; Matthey 2004). However, there is no standard protocol for clinicians and practitioners to follow to diagnose postpartum depression within a given country and across the globe. As a result many women are left unscreened, undiagnosed, thus untreated for a very treatable disorder.

A formal screening tool known as the Edinburgh Postnatal Depression Scale (EPDS; Cox et al. 1987) has been used among some providers and found to be uncomplicated to administer and score. It has been translated into several languages including Spanish and has been shown to effectively screen for symptoms of postpartum depression (Jevitt et al. 2006).

In Chap. 1, Katherine Leah Wisner and her colleagues used the EPDS to screen over 13,000 women in a Pittsburgh, PA clinical setting, 317 of whom self-identified as Hispanic and who spoke English. Using the recommended cut-off point of ≥ 10, their results show that 17 % ($n = 54$) screened positive for postpartum depression,

slightly higher than the current estimates among all new mothers (10–15 %) (Gavin et al. 2005). The authors determined that younger women who were less educated and single were more likely to screen positive than their counterparts. Using the full Structured Clinical Interview for DSM-4 (SCID; First et al. 1996), Wisner et al. confirmed the EPDS score 29 of 54 women to determine the primary condition responsible for the postpartum symptoms at the time of the assessment. Their analysis revealed that Unipolar Depressive Disorders accounted for 48 % of the cases and Bipolar Disorder accounted for another 44 %. The authors contextualize these results within the larger study population and current literature related to Latina women and detection.

Chapter 2 offers an international perspective on prevalence and detection using the EPDS in a sample of Spain-born and foreign-born Latin American women (i.e., Peru, Ecuador, Colombia, Santo Domingo, and Argentina) living in Spain. Garcia-Esteve and her colleagues found that Latin American Immigrant mothers had a 17.3 % prevalence of combined postpartum depression (PPD) (major and minor) and 11.4 % of major PPD compared to Spain-born mothers who had 11 % and 7.7 % prevalence, respectively. The authors note that their results reflect many recent findings that include immigrant Latin American women. Garcia-Esteve and her colleagues discuss these results within the context of health care behaviors among immigrant Latin American women and native-born Spaniard mothers. Their chapter goes on to highlight local efforts made to address the mental health needs of perinatal Spanish-speaking women (immigrant and native-born) in Barcelona.

In Chicago, the EPDS was used to screen women at the first prenatal visit and at postpartum visits at a health care center serving Latinos in the area. The screens were used to determine which women needed further evaluation and triage into further mental health support offered at the health care center. In Chap. 3, Miller goes on to describe two models of care used to bridge the gap between detection and treatment and to determine the feasibility of providing women integrating depression screenings during perinatal care visits. Miller describes the effectiveness of the screening and triage model used in these two models in her novel and forward-thinking program.

While the EPDS has been used to detect depression symptoms in a portion of women, it does not come without criticism. Matthey (2004) stated the EPDS is not sufficiently comprehensive. Further, some symptoms mimicking depression could be misdiagnosed and actually fulfill the criteria for anxiety. Other tools have been shown to correctly screen women for postpartum depression, including the Postpartum Depression Screening Scale (PDSS). The PDSS is a 35-item Likert scale that was developed to assess the presence and degree of symptoms believed to be part of postpartum depression. The screener has been translated into Spanish and has been shown to have good internal and external consistency (Le et al. 2010).

Linares (Chap. 4) used the PDSS-Spanish version to screen 163 Chilean women living in Arica, Chile. Results from the screenings indicate that 46.4 % of women screened met the recommended cutoff for major and minor depression (scores $\geq$60 in the PDSS). Her analyses indicates that six of the seven dimensions (Sleeping/Eating Disturbances, Anxiety/Insecurity, Emotional Lability, Mental Confusion,

Loss of Self, Guilt/Shame, and Suicidal Thoughts) of the PDSS-Spanish version were found to be "excellent" in discerning between women with and without symptoms of depression. Linares also reports that the most cited symptoms among the women screened were suicidal thoughts (32 %), sleeping/eating disturbances (25 %), emotional lability (24 %), and anxiety/insecurity (22 %). Given these results, the author recommends the use of the PDSS-Spanish version for identifying women with PPD as well as routine screening in Chile and other developing countries.

Treatment and Interventions

Following detection is treatment. When dealing with the treatment of depression there are three phases that make up the process. As defined in the study by Grote et al. (2004), these phases are known as the acute, continuation and maintenance phase. In the acute phase of treatment, the patient has experienced an episode of depression and engages in treatment through medication or psychotherapy. The continuation phase aims at preventing a relapse of depressive symptoms for a period of 2–6 months so the patient can achieve full recovery from depression. Finally, the maintenance phase occurs once the patient is recovered and is designed so that reoccurrence can be prevented for as long as 2–3 years (Grote et al. 2004).

Our review of the literature on the treatments used for postpartum depression with Spanish-speaking and Latina women suggests that the most prevalent types to be psychotherapy and psycho-educational therapy. In many cases, these therapies were combined in the interventions provided to those suffering with postpartum depression, with psycho-education being utilized as an introductory tactic in therapy. In terms of postpartum depression, psycho-educational therapy gives the mental health professional the opportunity to provide individuals with education on depression and for PPD it provides mothers with education on the developmental stages of pregnancy, parenting, delivery, and early childhood (Spinelli and Endicott 2003). This allows the mother further understanding of what the professional wants to treat and can therefore build a stronger bond between the professional and the mother. Scrandis et al. (2007) found that interpersonal therapy (IPT), cognitive-behavioral therapy (CBT) and group/family therapy are effective therapies for treating PPD. In the case of postpartum depression the group therapy commonly takes the form of a maternal-infant dyad group (M-IGT; Scrandis et al. 2007). Each of these therapies can be utilized in either an individual or group setting.

CBT addresses the negative self-schema and negative expectations regarding the sense of competence experienced by many women, especially in the mothering role (Clark et al. 2003). Leis et al (2009) described the framework of CBT as viewing depression as a product of negative-valenced thoughts. In the course of CBT, the individual identifies these depressive thoughts and is helped by the mental health professional to overcome them with positive thoughts.

IPT addresses and shows appreciation for the woman's functioning in her multiple roles, is usually time-limited (3 months), and makes use of the woman's social support system (Clark et al. 2003). IPT has been shown to reduce depressive symptoms by encouraging patients to focus on one or two interpersonal problem areas, which include role transitions, interpersonal disputes, grief and interpersonal deficits (Grote et al. 2004). Grote et al. (2004) note that IPT can prevent postpartum depression because it targets interpersonal problem areas during antenatal depression. One significant barrier to treatment of postpartum depression is the burden of time to attend therapy sessions. A brief version of IPT, IPT-B was developed to address this issue. Low-income, minority women have a high dropout rate in treatment for depression (Grote et al. 2004); therefore, this therapy alleviates the burden of time and allows for a more flexible schedule for the patient.

Antidepressants have also been shown to effectively treat postpartum depression. The recommended approach is to begin with a selective serotonin-reuptake inhibitor because of the reduced toxic risk if overdosed, ease of use, and effectiveness demonstrated in open trials (Wisner et al. 2002). Given postpartum women's sensitivity to medications, Wisner and her colleagues recommend that patients begin with half the recommended dose (see Wisner et al. 2002 for details) and gradually increase the dosage if the patient can tolerate it. It is also recommended that the medication be used until full remission and longer for those who had at least three previous depressive episodes.

Chapter 5 provides a cultural context of Latina immigrants in the USA as well as some prevalence rates. Zayas and Sampson conducted a review of the literature as it relates to Latinas and two psychotherapeutic interventions described above: CBT and interpersonal therapy (IPT). The authors highlight the methodological approaches used in each of the reviewed interventions as well as the culturally relevant approaches of the investigators, which proved to be important in the success of the intervention such as the use of *familismo* (sense of family obligation among Latinos) in the Mamás y Bebés project (Muñoz et al. 2007). Zayas and Sampson report on the effectiveness of IPT in reducing depressive symptoms among low-income Latinas. The chapter ends with a discussion about the needs for studies that include larger Latina samples and recommends the use of community lay workers known as *promotoras* to address the culturally relevant mental health needs of Latina mothers.

Chapter 6 provides a comprehensive overview of the psychosocial and cultural factors relevant to treating Latina women living in the USA. Blackmore and Chaudron provide an overview of the cultural understanding of and care for perinatal depression. Specifically, the authors highlight protective and risk factors such as the women's economic status, unplanned pregnancy, partner violence, and acculturative stress. The authors also discuss cultural values that may influence treatment preferences. For example, Latinas' belief systems about the use of home remedies, the role the environment plays on the cause of depression, and their definition of depression. Blackmore and Chaudron end their chapter by highlighting the limited empirical evidence on the effectiveness of various treatment modalities in treating depression among Latinas in the USA.

Lara (Chap. 7) describes the effectiveness of a randomized control trial (RCT) designed to prevent the number of postpartum depression cases in a sample of at-risk Mexican mothers living in Mexico City, Mexico. Using a psycho-educational model, the intervention successfully reduced the incidence of depression in the women who participated in the intervention. Self-report measures indicate that women felt the intervention influenced their role as mothers and their relationship with their infants. Interestingly, results also showed that vulnerable (e.g., single, with poor partner quality relationship, more stressful life events, and high anxiety levels) pregnant women exhibited higher levels of commitment to the intervention, suggesting that the intervention was both appealing and appropriate for these women. Lara also reports that while retention was a challenge, cultural factors may play a role in both retention and attrition. For example, Mexican women may find it difficult to decline when invited to participate and may choose to passively refuse. This highlights the importance of considering cultural factors when recruiting, enrolling, and engaging Latinas in interventions and treatment.

Making it Personal

Another important step in the effort to address the mental health needs of Spanish-speaking and Latina mothers at risk or suffering with postpartum depression is the dissemination of information to and from practitioners, researchers, members of the community, and survivors. The last section of the book is dedicated to "making it personal" by highlighting the experience of a Latina psychiatrist treating perinatal Latinas with mood disorders as well as the story of a Mexican mother who suffered with postpartum depression for several years before being diagnosed and treated.

Chapter 8 provides readers with a cultural context for treating postpartum depression in Latina (Spanish- and English-speaking) mothers. The chapters begin with a cultural definition of depression followed by a description of the concept of *Marianismo* (defines Latina women as self-sacrificing), which we believe influences how Latinas perceive and treat their depression. The chapter concludes with two compelling cases. Here, Sirulnik, a board-certified psychiatrist, recounts the linguistic and cultural factors that influenced the treatment of two bilingual mothers suffering with postpartum depression. The cases highlight the importance of contextualizing Latinas' fears and apprehension to the use of psychotherapy and psychotropic drugs.

The book ends with a gripping first-hand account of one woman's journey from the onset of perinatal depression to treatment 7 years later. Thiele (Chap. 9) shares her powerful story and sheds light on the loneliness she experienced those several years prior to being formally diagnosed with postpartum depression. Her story also highlights the inner struggle during those difficult years when her depression was severe and social support was virtually absent. As one of the first Mexican women to publish her story, Katia now serves as a resource to other Mexican women

struggling with depression. We applaud Katia's courage to speak openly about her depression and trust that readers will benefit from reading her compelling account.

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Characteristics of Hispanic Women Screened for Postpartum Depression

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Introduction

Childbearing is a major biopsychosocial event with a profound impact on women's mental and overall health (Sit and Wisner 2009) and depression during the perinatal period is a major public health concern (Vesga-Lopez et al. 2008; Wisner et al. 2006). The period prevalence for depression in the year following birth is a striking 21.9 % (Gaynes et al. 2005), which makes it the most common medical complication of childbearing. Moreover, postpartum depression (PPD) causes personal and family impairment at a time when adaptation to parenthood is critical. Both identification and treatment rates for women with depression are low in the general population (Bennett et al. 2010; Georgiopoulos et al. 2001), and they are even lower in pregnant and postpartum women (14 %) than in the general population (26 %) (Vesga-Lopez et al. 2008). Targeting mothers with PPD for early identification and

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intervention is a strategy that holds potential to reduce both maternal disability and negative effects on family well-being.

About 40 % of all births occur to women enrolled in Medicaid (Medicaid.gov 2012), and birth rates are higher in minority compared to non-Hispanic White mothers. Therefore, the population of childbearing women is disproportionately made up of low-income and minority women. Several investigators (Boyd 2007; Hobfoll et al. 1995; Miranda et al. 1998; Scholle and Kelleher 2003) have reported elevated rates of PPD in settings in which low-income women were served. These increased rates are consistent with risk factors for PPD (high life stress, limited resources, and low social support).

In a study of postpartum Hispanic women ($N=5{,}953$) in New York City, Miami, and San Francisco, Kuo et al. (2004) screened with the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff 1977), 42.6 % women were positive (CES-D ≥ 16). A positive screen was negatively associated with perceived level of social support and health insurance coverage, but not with the degree of acculturation or immigration status. Among the sociodemographic factors they examined, higher education, higher level of income, employment, and health insurance coverage during pregnancy were all significantly protective against depression. Yonkers et al. (2001) screened women ($N=802$) at four publicly funded, inner-city community maternal health clinics during the early 3–5-week postpartum period. Half the women who screened positive had postpartum onset episodes, while the other half had chronic depression or episode onset during pregnancy. The rate of PPD in this predominantly African American and Hispanic clinic population was similar to those reported for Caucasian women, which suggests that race and ethnicity alone are not significant risk factors for PPD.

The most frequently used screening tool for PPD is the 10-item, self-report measure, the EPDS (Cox et al. 1987). The utility of the EPDS is enhanced by its free availability, ease of administration and patient acceptability, and translation into multiple languages, including Spanish (Eberhard-Gran et al. 2001; Gibson et al. 2009). Screening measures identify only the risk for having a disorder and positive screens must be followed by a diagnostic assessment. In a large-scale screening study of an obstetrical population, we (Wisner et al. 2013) sought to (1) determine the proportions of women screened after birth with episode onset postpartum, during pregnancy or predating pregnancy, (2) evaluate the rate of self-harm ideation for women who screened positive on the EDPS, and (3) define both primary and secondary DSM-4 Axis 1 disorders associated with positive screens. To our knowledge, no similar large-scale PPD screening study with complete DSM-4 diagnostic characterization from a nonclinical sample of newly delivered women has been published. In this chapter, we present data from the subset of women in the population who self-identified as Hispanic and we compare the screening and diagnostic results of Hispanic women to the general population of mothers.

Methods

We conducted a large-scale screening program for PPD at an urban obstetrical hospital, Magee-Womens Hospital, the University of Pittsburgh, Pennsylvania, USA. The screening measure was the EPDS (Cox et al. 1987). The developers recommended an EPDS cut-off point of ≥10 for settings with the capacity to provide evaluations for women with positive screens (Cox et al. 1996). The measure consists of ten questions rated from 0 to 3, with the highest possible score of 30. Item 10 of the EPDS includes the prompt: "The thought of harming myself has occurred to me," with four response choices: yes, quite often; sometimes; hardly ever; and never. The woman is directed to respond to the questions for their experience over the past 7 days.

Women who delivered a live infant at Magee-Womens Hospital were visited by a nurse or social worker on the maternity ward and provided information about PPD. They offered newly delivered mothers the opportunity to be screened by telephone at 4–6 weeks post-birth. All women who were eligible for the study spoke English, were 18 years of age or older, had phone availability, and were able to provide informed consent. Therefore, the women in this study who self-identified as Hispanic spoke English and were able to complete the 10-item EPDS in English. Eligible women provided contact information for later telephone screening. The 4–6-week period after birth was selected because women are typically scheduled to have their post-birth obstetrical evaluation during this time. This time frame also includes the peak in psychiatric contact identified in epidemiologic studies (0–19 days postpartum) (Munk-Olsen et al. 2006) and therefore captures women with serious rapid-onset, post-birth episodes of mental illness.

The screening calls were made from our women's mental health research center. The telephone screeners were college students or graduates trained to deliver the EPDS. The callers were supervised by experienced Master's level psychiatric clinicians. Between 4 and 6 weeks postpartum, an intense effort was made to reach the participants, with day and evening calls. If the woman could not be reached after 3 days, a postcard encouraging her to contact our team was sent and attempts to reach her continued. If she was not reached by 6 weeks after birth, she was removed from the call list.

All women who had positive screens (EPDS ≥ 10) were provided with education about depression and offered an evaluation in their homes for a psychiatric diagnostic assessment. The subjects received a modest gift for their participation ($40 gift card). The goal for timing of the diagnostic assessment was within 2 weeks of the EPDS screen. The full Structured Clinical Interview for DSM-4 (SCID; First et al. 1996) was administered in women's homes by master's level clinicians (with childcare provided if needed). Every assessment was reviewed by the clinician with a board-certified psychiatrist for diagnostic confirmation.

We analyzed the data with descriptive statistics presented as means and standard deviations for continuous variables and as percentages for discrete variables. The comparison of subject characteristics was conducted with a chi-square (or Fisher's

Exact) test. The diagnoses of screen-positive women were grouped into the following categories: (1) Unipolar Depressive Disorders, (2) Bipolar Disorders, (3) Anxiety Disorders, (4) Substance Use Disorders, (5) Other Disorders or no diagnosis. The primary disorder was defined as the condition that was responsible for the postpartum symptoms at the time of the screen (the main focus of attention, which the DSM-4 defines as the "principal diagnosis") (First et al. 1996).

Results

This sample of Hispanic women was derived from a large cohort of women ($N = 13{,}891$) who were screened at 4–6 weeks postpartum. Displayed in Fig. 1 is the flow chart of the subset of women in this population who identified themselves as Hispanic ($N = 327$). Only 5 of the 327 women were not reached by phone for the telephone screen. Of the total of 322 women reached, only five more declined to

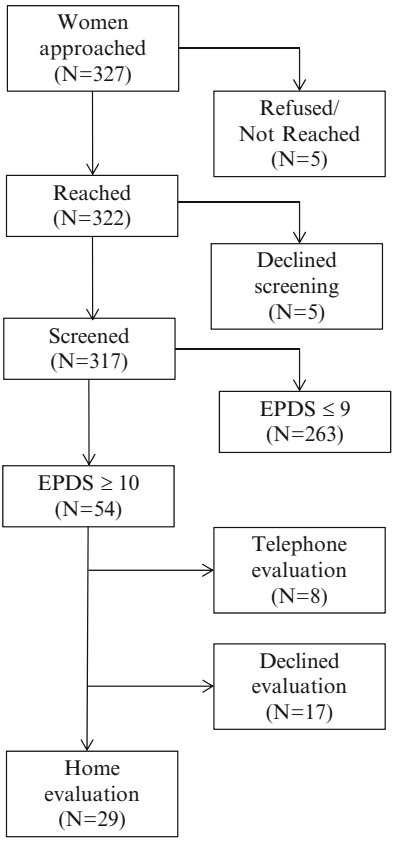

Fig. 1 Subject flow

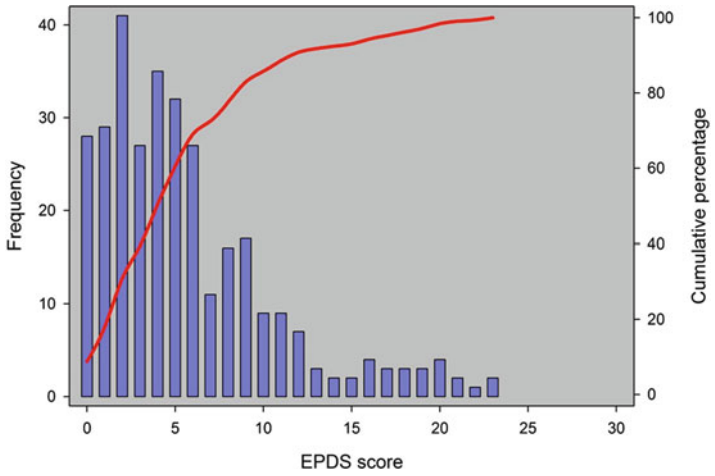

Fig. 2 Frequency distribution of EPDS scores

participate in the EPDS screening; therefore, 317 Hispanic women were screened, which represents 317/13,891 (2.3 %) of the entire population of women in the overall investigation.

The distribution of screening scores in both this Hispanic group and the population as a whole (Wisner et al. 2013) followed the expected right-skewed pattern (Fig. 2). Of the 317 Hispanic women screened for PPD, 263 (83 %) were negative and 54 (17 %) were positive (defined as EPDS $\geq$ 10). Of the 54 women who screened positive, 29 (55 %) accepted home visits for diagnostic assessment. The demographic characteristics of Hispanic women grouped by positive or negative screen results on the EPDS significantly differed in several domains (Table 1). Hispanic women with positive screens were significantly younger, less educated, and more likely to be single.

Among the 317 screened Hispanic women, 15 (4.7 %) women had thoughts of self-harm, as indicated by their response to Item 10 of the EPDS. Fourteen of these 15 women were included in the group of 54 women who had EPDS $\geq$ 10. The 54 women had the following distribution of categories of response: never (N=40, 74.1 %); hardly ever (N=9, 16.7 %); sometimes (N=4, 7.4 %); and yes, quite often (N=1, 1.8 %). The one woman who did not screen positive on the EPDS endorsed suicidality at the lowest level ("hardly ever").

For the 29 women who accepted home visits, the timing of episode onset was determined during the history taking portion of the SCID interview. The episode onset was equally distributed between postpartum (within 4 weeks after birth, N=11, 38 %) and during pregnancy (N=11, 38 %) and less frequently before pregnancy (N=7, 24 %).

The most common primary diagnoses in the women with positive EPDS screens were (Table 2) (1) Unipolar Depressive Disorders, N=14 (48.3 %); (2) Bipolar Disorder, N=13 (44.8 %); and, (3) Anxiety Disorders, N=2 (6.9 %), as determined

Table 1 Demographics by screen EPDS

		Screen EPDS		Analysis		
Measure	All ($N=317$)	≥10 ($N=54$)	≤9 ($N=263$)	Test statistic	d*f*	*p*
Age	28.6±5.9	26.8±5.6	28.9±5.9	$t=2.43$	308	0.016
EPDS	5.7±5.0	14.6±4.1	3.8±2.6	$U<0.0001$	1	<0.001
	N (%)	*N* (%)	*N* (%)			
Race				$\chi^2=4.56$	2	0.102
White	160 (51.9)	21 (38.9)	139 (54.7)			
Black	34 (11.0)	7 (13.0)	27 (10.6)			
Other	114 (37.0)	26 (48.1)	88 (34.6)			
Education (level)				$\chi^2=13.39$	4	0.010
<High school	24 (7.6)	6 (11.1)	18 (6.8)			
High school	52 (16.4)	16 (29.6)	36 (13.7)			
Some college	100 (31.5)	18 (33.3)	82 (31.2)			
College	69 (21.8)	8 (14.8)	61 (23.2)			
Graduate school	72 (22.7)	6 (11.1)	66 (25.1)			
Medical insurance				$P=0.006$		0.072
Private	192 (61.3)	25 (48.1)	167 (64.0)			
Public	118 (37.7)	27 (51.9)	91 (34.9)			
None	3 (1.0)	0 (0.0)	3 (1.1)			
Marital status				$P=0.0002$		0.004
Single	116 (37.1)	30 (55.6)	86 (33.2)			
Married/cohabiting	194 (62.0)	23 (42.6)	171 (66.0)			
Divorced/separated	2 (0.6)	1 (1.9)	1 (0.4)			
Widowed	1 (0.3)	0 (0.0)	1 (0.4)			

by the SCID. The majority of women with Unipolar Depressive disorder had already developed a recurrent pattern rather than experiencing their first episode (11 out of 14). Among the women with Bipolar Disorders, the polarity of episodes was depressed or mixed in all cases, which is consistent with use of a screening measure designed to identify depression. The diagnoses were distributed nearly equally between Bipolar 1 ($N=7$) and Bipolar 2 ($N=6$) Disorder. Although Anxiety Disorders were uncommon as primary diagnoses, nearly half the women with Unipolar Depressive Disorders (6/14) had secondary Anxiety Disorders (obsessive compulsive disorder, generalized anxiety disorder, and panic disorder). All of the women with Bipolar Disorder had comorbid diagnoses, with the majority being Anxiety Disorders (generalized anxiety disorder, post-traumatic stress disorder, panic disorder).

Discussion

We screened 317 postpartum Hispanic women in the context of a large study in an academic setting. The number of Hispanic mothers may be an underestimate of the true number in Pittsburgh because only English-speaking mothers were approached

Table 2 DSM-4 diagnoses of 29 home-visited Hispanic women

Primary diagnoses			Secondary diagnoses	
	N	%		*N*[a]
Depressive disorders	14	48.3	Secondary diagnoses for women with depressive disorders	6
Major depressive disorder, single episode	3		Anxiety disorders	6
Major depressive disorder, recurrent	11		Generalized anxiety disorder	(2)
			Panic disorder	(1)
			Obsessive compulsive disorder	(3)
Bipolar disorder	13	44.8	Secondary diagnoses for women with bipolar disorder	18
Bipolar I disorder, most recent episode depressed or mixed	7		Anxiety disorders	8
			Generalized anxiety disorder	(3)
			Post-traumatic stress disorder	(3)
			Panic disorder	(2)
Bipolar II disorder	6		Substance use disorder	1
			Eating disorder	1
Anxiety disorder	2	6.9	Secondary diagnoses for women with anxiety disorders	3
Generalized anxiety disorder	1		Major depressive disorder	1
Panic disorder with agoraphobia	1		Substance use disorder	2

[a]The number of secondary diagnoses does not match the number for a primary diagnosis group because some patients have no secondary diagnosis while others present with more than one secondary diagnosis

for the study, which was conducted by English-speaking staff. However, the 2.3 % Hispanic participation rate is the same as the percentage of persons in the Pittsburgh region who self-identified as being of Hispanic or Latino origin in the 2010 census (2.3 %) (U.S. Census Bureau 2011).

In general, the findings in this sample of Hispanic women were similar to the results of the population of over 13,000 women from which they were derived (Wisner et al. 2013). For example, the rate of acceptance of home visit among positively screened women was similar (Hispanic vs. general sample =55 % vs. 59 %, respectively). This acceptance of follow-up interviews after a positive screen is more favorable than in many American studies of PPD screening (12–33 %; Carter et al. 2005; Gjerdingen and Yawn 2007; Horowitz and Cousins 2006; Horowitz et al. 2011), which was due in part to conducting them in the women's homes (Flynn et al. 2010) and providing a small gift for participation ($40 gift card).

The rate of EPDS positivity in Hispanic women was 17 %, which is similar to the rate in the general population of the larger study (14 %) (Wisner et al. 2013). Our rate also compares to that reported by Yonkers et al. (2001) of 16 % for EPDS $\geq$ 12, which included English- and Spanish-speaking women. In our study, Hispanic women with positive screens were significantly younger, less highly educated (i.e., some college or less), and more likely to be single, which was also the case for women in the larger screened population. The observation that these

demographically high-risk mothers are likely to be in the screen-positive group provides a public health rationale for identification and intervention. Hispanic women have the second-highest fertility rate after non-Hispanic Whites (National Center for Health Statistics 2012), and mental health utilization is particularly limited for minority women with PPD, including Hispanic women (Boyd et al. 2011; Chaudron et al. 2005; Lara-Cinisomo et al. 2009; Lara et al. 2009).

The timing of episode onset was equally distributed between postpartum (38 %) and during pregnancy (38 %) and less frequently before pregnancy (24 %). In the larger screened population, the onset times were similarly distributed: postpartum, 40.1 %; during pregnancy, 33.4 %; and onset before pregnancy, 26.5 % (Wisner et al. 2013). The subjects in Yonkers et al. (2001) had a similar preponderance of episode onset during pregnancy and postpartum: prepregnancy (25 %), antenatal (25 %), and post-birth (50 %) periods. These data suggest consideration of screening during pregnancy to identify chronic psychiatric disorder and episodes beginning during gestation. This is particularly important for Hispanic women who are less likely to report depressive symptoms (Lucero et al. 2012).

The rate of endorsement of self-harm in this sample of 317 screened Hispanic women (4.7 %) was similar to that of the larger screened population (3.19 %) and to other samples of screened postpartum women, which ranged from 0.5 to 5.4 % (Lindahl et al. 2005). In populations recruited from socioeconomically deprived areas, higher rates have been reported: 9 % (Howard et al. 2011) and 8.5 % (Yonkers et al. 2001). Although the rate of completed suicide is lower in postpartum women than in the general population of women, it is the second leading cause of maternal death (CMAC 2011). In the United States, suicide is the third leading cause of death among 15- to 24-year-olds and the fourth leading cause among 25- to 44-year-olds. Prevention of suicide is a major public health goal (Centers for Disease Control and Prevention 2012), and screening women throughout the perinatal period contributes to the hope of preventing this tragedy in young mothers.

Research on effective interventions for Latinas is needed. A secondary data analysis from the NIMH-funded Sequenced Treatment Alternatives to Relieve Depression (STAR∗D) study was done to evaluate clinical characteristics and outcome after SSRI antidepressant (citalopram) treatment for Hispanic outpatients whose language preference was English ($N=121$) or Spanish ($N=74$) (Lesser et al. 2008). Spanish speakers were older, more likely to be women, less educated, had lower income, had more medical burden, and were more likely than English speakers to be treated in primary care rather than psychiatric settings. Compared with Spanish speakers, English speakers had more previous suicide attempts and more family history of mood disorders, although severity of depressive symptoms was similar. They concluded that Spanish-speaking Hispanic patients may have a less robust response to antidepressants than English-speaking Hispanic patients, possibly due to less-advantaged social status.

As in psychiatric epidemiologic studies of postpartum women (Kendell et al. 1987; Munk-Olsen et al. 2006), the most common primary diagnoses in the Hispanic women were mood disorders. The rates of diagnostic categories in the Hispanic subgroup as compared to the original population of women with positive screens

were as follows (Hispanic subgroup vs. whole population screened, respectively): Unipolar Depressive Disorders, 48.3 % vs. 68.5 %; Bipolar Disorder, 44.8 % vs. 22.6 %; Anxiety Disorders 6.9 % vs. 5.6 %; and Other or No Disorders 0 % vs. 3.3 %. Although a higher percentage of Hispanic women had episodes that fit criteria for Bipolar Disorder, the sample size for women who accepted home visits, $N=29$, was quite small, and this rate may not be generalizable to Hispanic postpartum women. In another large-scale study, the multicenter NIMH-funded Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD) (Gonzalez et al. 2007), no differences in the prevalence rates of Bipolar Disorder across ethnicity or race were noted between European American, African American, and Latino patients ($N=2{,}000$; 77 Latinos were included). Depression and manic episode severity and functional outcomes were similar across groups. These investigators reported that patients with Bipolar Disorder who are members of ethnic/racial minority groups continue to receive less-intensive specialized mental health treatment than do European American patients.

Women with Bipolar Disorder in both the Hispanic subgroup and the whole screened sample had a mix of Bipolar 1 and 2 subtypes with a predominant polarity of depression, which would be expected from a measure that is a screen for depression. Secondary diagnoses were common for women with both Unipolar and Bipolar Disorders, which is true of the general population of patients with Bipolar Disorder. In the STEP-BD study, anxiety disorders were common, occurred in over one-half of the sample, and were associated with younger age at onset, poorer role functioning and quality of life, less time euthymic, and greater likelihood of suicide attempts (Simon et al. 2004).

Although the EPDS was developed to screen for depression, a surprisingly large proportion of women with Bipolar Disorder were identified in both the Hispanic subgroup and larger screened population. However, this high rate of bipolarity may be an underestimate because there is no screening question for the manic phase of the disorder on the EPDS. The postpartum period carries the highest lifetime risk for first onset and recurrent episodes of Bipolar Disorder (Kendell et al. 1987; Munk-Olsen et al. 2006, 2011), which are common, clinically significant, and under-recognized (Das et al. 2005). In an urban general medical care clinic group of male and female patients, the rate of positive screens for lifetime Bipolar Disorder was nearly one of every ten patients (9.8 %)(Das et al. 2005). Our rate of diagnosed Bipolar Disorder in an obstetrical sample was even higher (Wisner et al. 2013) because (1) our participants were selected based on a positive screen for depression, which increases the likelihood of a mood disorder diagnosis, and (2) we conducted in-depth SCID interviews for both current and lifetime diagnoses, which increases the probability of diagnosis due to a detailed lifetime history review for hypomania and mixed states.

The distinction between Unipolar and Bipolar disorders is important in order to drive appropriate intervention (Arvilommi et al. 2007). Many patients receive treatment for psychiatric disorders, but lack of recognition of the underlying Bipolar Disorder results in few receiving appropriate treatment (Merikangas et al. 2007). Half of women with “treatment resistant” PPD actually suffer from unrecognized

Bipolar Disorder (Sharma et al. 2009). Failure to identify mania/hypomania results in the misdiagnosis of Bipolar as Unipolar Disorder and may even exacerbate the Bipolar Disorder through inappropriate treatment. Antidepressant drug therapy without an antimanic agent may increase the risk for rapid cycling, mania, and treatment resistance (Sharma et al. 2009). Treatment of the depressed phase of Bipolar Disorder with a mood stabilizer and an antidepressant does not confer benefit beyond treatment with a mood stabilizer alone (Sachs et al. 2007). Patients with Bipolar Disorder have complicated illnesses, and health care professionals must be vigilant about identifying these illnesses to optimize the treatment planning (Krishnan 2005). Special care should be taken when discussing treatment options, particularly the use of antipsychotic drugs, with Hispanic women given the stigma associated with mental health illness and the use of psychotropic drugs among this population (Martínez Pincay and Guarnaccia 2007).

No validated screens for postpartum mania or lifetime bipolarity are available (Chessick and Dimidjian 2010). Screening of general populations for Bipolar Disorder is most commonly accomplished with the Mood Disorders Questionnaire (MDQ; Hirschfeld et al. 2000), which assesses lifetime history of mania and hypomania with 13 yes/no symptoms reflecting DSM-4 criteria, a yes/no question about symptom occurrence during the same time period, and the problem level resulting from the symptoms. A single study of the application of the MDQ to a postpartum population of women with Unipolar ($N=68$) or Bipolar Disorder ($N=57$) at 2–4 weeks after delivery showed good sensitivity and specificity (Sharma and Xie 2011); however, the sample was not a general population of newly delivered women. The data from this project support that strategies to conduct comprehensive screening for both Unipolar and Bipolar Disorders is needed for perinatal women of all ethnic and racial groups.

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Trial Registration: Identification and Therapy of Postpartum Depression, NCT00282776, http://clinicaltrials.gov/ct2/home.

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Maternity, Migration, and Mental Health: Comparison Between Spanish and Latina Immigrant Mothers in Postpartum Depression and Health Behaviors

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Abbreviations

ABS	Primary health care (Spain)
AC	Autonomous community (Spain)
CatSalut	Catalan health service (Spain)
CBT	Cognitive behavioral therapy
CI	Confidence interval
CSMA	Community Adult Mental Health Center (Spain)
DSM-IV	Diagnostic and statistical manual of mental disorders

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ECT	Electroconvulsive therapy
EPDS	Edinburgh Postpartum Depression Scale
ETI-SF	Early Trauma Inventory—Short Form
GHQ	General Health Questionnaire
GP	General practitioner
HRC	High resolution consultation
Idescat	Catalan Statistics Institute (Spain)
INE	National Statistics Institute (Spain)
ISA	Index of Spouse Abuse
LAI	Latin American immigrant women (Spanish speaking)
MBU	Mother–baby unit
NHS	National Health System (Spain)
NICE	National Institute for Clinical Excellence
OECD	Organisation for Economic Co-operation and Development
PASSIR	Sexual and Reproductive Health Assistance Program (Spain)
PBQ	Postpartum Bonding Questionnaire
PPD	Postpartum depression
RD	Royal decree
SCID	Structured clinical interview for DSM-IV Axis I disorders
STAI	State–Trait Anxiety Inventory
T-ACE	Tolerance, Annoyed, Cut down, Eye-Opener (alcohol screening test)
UK	United Kingdom
US	United States of America

Introduction

Traditionally, motherhood has been seen as a period of emotional wellness. However, the process of becoming a mother is associated with more physiological, hormonal, cognitive, and social changes than at any other time in a woman's life. Women who are unable to adapt to these changes may experience psychopathological symptoms, which are sometimes interpreted as part of the postpartum period. For many women who are experiencing postpartum depression (PPD), however, symptoms can go undetected by family doctors, gynecologists, and pediatricians. Until recently, Spain did not have a system of care designed to treat perinatal mental health. Still, detection of and assistance for women with perinatal depression in Spain are characterized by a lack of specificity and a need for more training in perinatal mood disorders. For this reason, assistance for women afflicted with perinatal depression is plagued with numerous barriers to detection and adequate treatment due, in part, to misconceptions by both healthcare professionals and mothers.

Migration is one of the major political and sociocultural phenomenons of this century. Spain has traditionally been a country with relatively low rates of immigration and only in the last decade has experienced population growth due to migration into the country.

Between 1998 and 2007, the immigrant population in Spain grew from 1.9 to 11.5 % (National Statistics Institute [INE] 2012). Approximately half of the immigrants in Spain are women (49 %), most of whom were of childbearing age (84 % were between 15 and 49 years old) (INE 2012). In 2010, 34 % of immigrant women were from Latin American countries, making Latin America the second-largest contributor to Spanish immigration after the European Union.

Although it is not possible to consider "migrants" as a homogeneous group concerning the risk for mental illness (Carta et al. 2005), there are some reasons to believe that immigrants may have higher prevalence of psychiatric disorders than the natives of the host country (Fung and Dennis 2010). Given recent findings, we might expect differences in the expression and manifestation of depressive symptoms, in the number and types of risk and protective factors, and disparities in detection, diagnosis, and treatment of immigrant patients as well as in the variability in drug response (Burroughs et al. 2002). Despite the growing importance of understanding Spain's immigrant population, epidemiological studies have not included this population. In order to address the unique needs of immigrant women in Spain, this population should be included in empirical research that examines issues related to women's mental health.

This chapter has two objectives: first, to provide an overview of the Spanish Health System as it relates to initiatives designed to address the mental health needs of women suffering with PPD and second, to explore differences in rates of PPD and health behaviors between Spanish and Spanish-speaking Latin American immigrant (LAI) mothers.

National Health System of Spain

Spain has been a parliamentary monarchy since 1978, and it is a member of the European Union. It is located in the southwest of Europe, and it occupies most of the Iberian Peninsula. The country is divided into 17 Autonomous Communities (AC) where Spanish is the official language, and some ACs have also other official languages (Basque, Catalonian, Valencian, or Galician).

The Spanish National Health System (NHS) seeks to provide universal coverage with free access to health care for all, regardless of nationality or legal status. The Spanish NHS is supported predominantly through general taxation, allowing for the provision of medical service at little to no cost to patients. The Spanish NHS is largely decentralized, with each of the 17 Autonomous Communities (AC) responsible for their own health planning and healthcare services management (Ministry of Health and Social Policy 2010). The central government is responsible for the general organization and coordination of health services, as well as foreign health affairs and legislation of pharmaceutical products. The respective 17 AC Health Services have primary jurisdiction over the planning, organization, and delivery of health services and expenditure within their territory (Ministry of Health and Social Policy 2010) (Fig. 1).

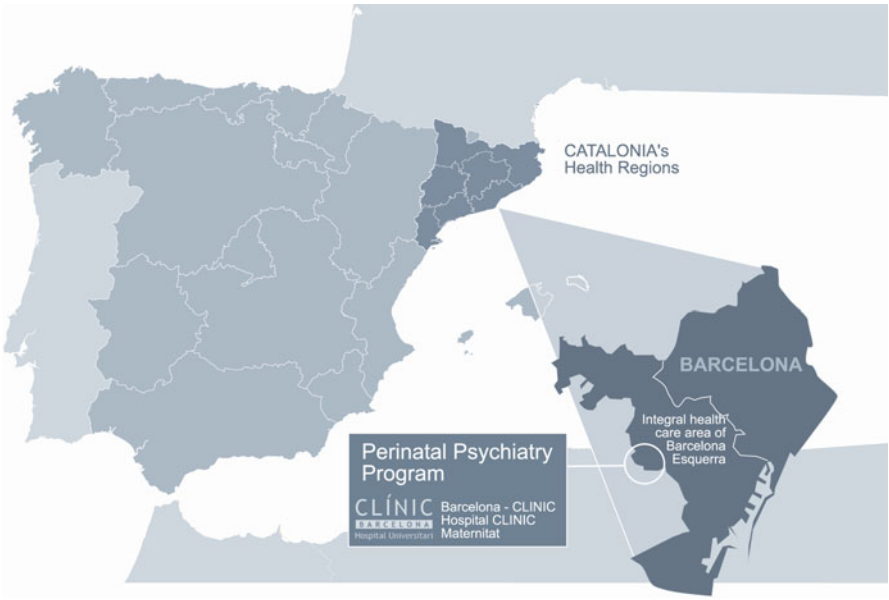

Fig. 1 Spanish autonomous communities, Catalonia's health regions, and basic health areas of Barcelona. *Note*: *PASSIR* Sexual and Reproductive Health Assistance Program, *CSMA* Community Mental Health Center

Although each AC uses different terms, the AC is functionally and organizationally divided into health regions based on geographic, socioeconomic, and demographic criteria. Each health region is organized in turn by health sectors, which comprise multiple basic health areas. The basic health area is the territorial unit around which Primary Care services are organized.

In 2012, the Spanish population was approximately 46.2 million, including 5.7 million immigrants. In Spain, all are entitled to health protection and public health care regardless of citizenship. Although the healthcare system is universal, immigrants may still face sociocultural and linguistic barriers to care, although the linguistic barrier is not an issue for Spanish-speaking immigrants from Latin America (LAI) and the Philippines (García-Armesto et al. 2010). However, access among illegal immigrants may change in the coming years, as the issue is currently under discussion (RD 16/2012).

The Spanish NHS is organized into two levels of care: Primary Health Care and Specialist Care. Primary Health Care provides basic health services to the population living within a 15-min radius of the Primary Care Centers. These centers are staffed by multidisciplinary teams consisting of family physicians, pediatricians, nurses, administrative staff, and in some cases also social workers, midwives, and physiotherapists and are responsible for health promotion, disease prevention, and assistance with common health problems. Specialist Care, on the other hand, is responsible

for the treatment and diagnosis of more complex conditions requiring more costly resources (Ministry of Health and Social Policy 2010). Specialist Care is offered in hospitals and specialty centers on an inpatient or outpatient basis. Patients may only access Specialist Care with a referral from a primary health care provider. Patients who have receive services through Specialist Care are then referred back to their primary care physician, who uses their medical history and the recommendations of the specialist to provide any needed clinical and/or therapeutic supervision, as well as continuity of care (Ministry of Health and Social Policy 2010).

Specialist Care includes hospital care, psychiatric and mental health care, drug-dependency care, and sexual and reproductive health assistance, as well as other specialist care resources. Sexual and reproductive health assistance is responsible for health care during the pregnancy and postpartum periods, in addition to other functions such as attention to sexual health, reproductive counseling, and issues of gender violence. The sexual and reproductive health assistance programs are staffed by obstetricians, gynecologists, midwives, nurses, and psychologists.

Psychiatric and Mental Health Care is organized into community mental health centers, with separate facilities for adults and for children and adolescents. These centers are territorially based and provide outpatient mental health treatment, are responsible for the continuity of psychiatric care, and centralize access to other sector-based mental health services (i.e., inpatient psychiatric units, psychiatric emergency care, day hospitals, rehabilitation units, psychosocial rehabilitation day centers). In parallel, some supra-sectorial programs have been developed for the specialization of specific pathologies or treatments (i.e., eating disorders units, bipolar programs, pathological gambling programs, perinatal psychiatry programs).

The Spanish NHS is able to provide quality health services in an efficient manner, achieving above average health indicators. Total expenditures on health in Spain are close to the average reported by Organisation for Economic Co-operation and Development (OECD) countries (9.6 % of gross domestic product), spending an average of 1,399 Euros per capita (Organisation for Economic Co-operation and Development [OECD] 2012). Spain has the second highest figures of any country in the OECD for life expectancy at birth in the female population (85.3 years), behind Japan (86.4 years). The male life expectancy at birth is also above average among OECD nations (79.1 years vs. 77 years) (OECD 2012). The infant mortality rate is 3.2 per 1,000 births, lower than the OECD average (4.3/1,000 births), and Spain also has lower than average levels for potential years of life lost, behind Iceland, Luxemburg, and Japan, in this order (OECD 2012). Finally, the rate of maternal mortality (6/100,000) is below average among OECD nations (24.7/100,000) (OECD 2012).

The study described in this chapter was conducted in Catalonia, an Autonomous Community of Spain. Catalonia is composed of 7.5 million citizens. It is divided into seven health regions (Fig. 1) (Catalan Health Service [CatSalut] 2012). Both Spanish and Catalonian are the official languages of Catalonia. Spanish is currently the most spoken language in Catalonia and especially in the Barcelona metropolitan area (Catalan Statistics Institute [Idescat] 2008). All the study described below was conducted in Spanish language.

The Status of Perinatal Mental Health in Spain

There are no nationally agreed quality assurance standards for perinatal mental health assistance in Spain. The availability of specialized care services in perinatal mental health in Spain is variable, and in most areas, it is absent. Mental disorders in the perinatal period are attended usually in the general mental health network. The initiatives to create specialized services emerge in Spain in the last decade, mainly from the national public health system, as the Perinatal Psychiatry Program Barcelona-Clinic (Hospital Clínic Maternitat, from Barcelona), the Hospital Puerta de Hierro Majadahonda, and the Consorci Sanitari de Terrassa, and some private initiatives, such as the USP Instituto Universitario Dexeus (Appendix I). While there may be more initiatives in Spain, we will refer to four national programs that have recently begun a stable collaboration within the newly created Spanish Marce Society (Olza-Fernández et al. 2011).

The perinatal liaison mental health service in the Consorci Sanitari de Terrassa (Barcelona) was developed in 2007. This service arises from the adult psychiatry section and provides specialized support to the mental health network of a specific health sector. It has developed an outpatient consultation for the psychopharmacological treatment of mental disorders (depression, bipolar disorder, etc.) in pregnancy, as well as a coordinated monitoring with obstetricians and neonatologists of pregnancy, childbirth, and immediate postpartum.

The perinatal liaison mental health service in Hospital Puerta de Hierro Majadahonda (Madrid) was developed in 2009. The service has two outpatient consultations: a perinatal psychiatry consultation (specifically for pregnant and postpartum or breast-feeding mothers with mental disorders) and an infant psychiatry consultation (from birth to 6 years old, addressing relational pathologies and early feeding disorders). The program arises from the child psychiatry section, and there is a close liaison with Neonatology and Obstetrics services. The program provides psychiatric service to pregnant and postpartum women hospitalized in the maternity and babies admitted to neonatal or pediatrics and their families.

Within the private sector, the perinatal psychiatry and reproductive unit of the USP Instituto Universitario Dexeus in Barcelona in 2009 was developed. It combines specialized consultations aimed at preventive care and psychological and psychiatric treatment during pregnancy and the postpartum period, with specific protocols for fear of pregnancy, panic disorder, fetal death, and PPD. The program also includes assisted reproduction, from the perspective of reproductive dysfunction, infertility treatments and pregnancy and postpartum period, and treatment failures and repeated abortions. The program also addresses the ongoing decision-making and subsequent course of recipient couples of donated gametes. Recently, it has developed a web-based system for the routine screening of PPD, using the self-administered Edinburgh Postnatal Depression Scale (EPDS) at 4–6 weeks postpartum period. Subsequently, it offers a telephone consultation for assessment and referral for clinical diagnosis and treatment.

Perinatal Psychiatry Program Barcelona-Clinic

The first Perinatal Psychiatry Program developed in Spain was started in 2000 modeled after other international perinatal psychiatry programs (Hospital Clinic Barcelona 2012). The Perinatal Psychiatry Program Barcelona-Clinic is located in the building of the Hospital Clínic Maternitat, along with Maternal-Fetal Medicine, Neonatology and Genetics programs. The Hospital Clínic Maternitat is the referral maternity hospital for more than 500,000 inhabitants, with approximately 3,000 births/year (Navarro et al. 2008) (Fig. 1).

The Perinatal Psychiatry Program Barcelona-Clinic is a supra-sectorial outpatient program and provides services to those in the health sector (Integral Health Care of Barcelona Esquerra), always in coordination with professionals with special training from community mental health centers and maternity services. Consultations with professionals from other health sectors are provided through a high resolution consultation (HRC). The HRC is an early visit (less than 15 days from receipt of the request) to develop an individualized treatment plan and report, which is given to the original referring physician. Hospitalization, Day Programs, and psychosocial rehabilitation Day Centers are provided through the respective health sectors.

The Perinatal Psychiatry Program Barcelona-Clinic incorporates a gender approach, taking into account the specificity of gender in relation to the nature and course of mental disorders, the treatment, the risk and protective factors, and the impact of perinatal mental disorders. The program's objectives are to provide assessment, care, treatment, training, supervision, and research. Assessment objectives include a prepregnancy psychiatric consultation, as well as the examination of the course and characteristics of the illness; the clinical evolution; the precipitating factors; the specific risk factors (perfectionism, vulnerable personality); the exposure to gender violence; the exposure to childhood adversities, including childhood abuse; the emotional state during pregnancy; the level of social support and division of household tasks; and a systematic assessment of emotional state using the EPDS at different times of pregnancy and at 6–8 weeks postpartum. The assessment also includes the evaluation of mother–infant bonding disorders using the Brockington's scale (Postpartum Bonding Questionnaire, Brockington et al. 2001) and questions for the bonding disorder diagnosis based on the criteria for disorders of the mother–infant relationship of Brockington (Brockington et al. 2006). Care objectives include changes in lifestyles such as substance use, smoking cessation, or dietary interventions. Pregnant women with severe mental health problems require special care. Treatment objectives include an individualized psychiatric and psychological treatment during pregnancy, delivery, postpartum, and breast-feeding. It aims to develop an individualized treatment plan for pregnant and postpartum women depending on the type of disorder they present and the course and current status of their illness. The best evidence regarding the use and safety of psychiatric medications during pregnancy and postpartum is applied (NICE 2009; Beyondblue 2011). The decision-making process is based on balancing risks and benefits of drug treatment. The psychological treatment includes a group cognitive behavioral therapy for panic

disorder in pregnant and postpartum women, psychological therapy for depressive and posttraumatic stress symptoms after pregnancy loss, cognitive behavioral therapy for women with obsessive fears about harming her baby, and intervention for mother–infant interaction. With respect to teaching and in line with the deficiencies in specific training in perinatal psychiatry, training activities are being developed for professionals from Primary Care teams, Specialized Care, midwives, residents of psychiatry, psychology and mental health nursing, and undergraduates. Although it is less frequent, training activities are also offered to Latin American mental health professionals. Regarding supervision, Primary Care professionals and midwives may receive consultancy and peer supervision to improve detection of women with perinatal mental health disorders and provide brief interventions for mild mental health problems and mother–child relationship and help to identify situations requiring referral to General Practitioner or to Secondary Care.

The program has received funding from public agencies to carry out research projects on the epidemiology of mental disorders in the postpartum period, the validation of screening instruments for anxiety and depressive symptoms in the postpartum period (EPDS, Garcia-Esteve et al. 2003; General Health Questionnaire [GHQ], Navarro et al. 2008), course of psychiatric disorders during pregnancy and postpartum (Garcia-Esteve et al. 2007), prognostic factors for recovery from PPD, and the study of the effects of the pathologies and psychiatric treatment on pregnancy, delivery, and the newborn in the short and medium term (Roca et al. 2011). The program has also lines of research on mental health and gender violence (Index of Spouse Abuse [ISA], Torres et al. 2010).

In the Fig. 2, a detailed summary of the Program's assessment and intervention procedures is shown.

Postpartum Depression in Spain

In Spain, scientific interest in PPD in recent years has led to research on prevalence of PPD, on its risk, genetic and personality factors, and on validation of detection tools.

Prevalence figures of PPD in Spain obtained using clinical structured interviews are similar to those observed in other developed countries, where the point prevalence estimate ranged from 6.5 to 12.9 % at different months in the first year postpartum (Gavin et al. 2005). In a previous study, we found an estimated prevalence of PPD of 10.15 % (3.6 % major depression, 6.5 % minor depression) at 6 weeks postpartum based on an SCID interview (Ascaso et al. 2003). In a multi-centric study conducted in seven teaching hospitals in Spain, the incidence of major depression during the first 32 weeks postpartum was 12.7 % (Sanjuan et al. 2008).

The risk factors for PPD found in studies conducted in Spain are similar to those observed in other developed countries. PPD has been associated with polymorphic variations (5-HTTLPR and VNTR) in the serotonin transporter gene (Sanjuan et al. 2008), clinical factors such as past depressive episodes, premenstrual symptoms and depressive symptomatology during pregnancy (Garcia-Esteve et al. 2008;

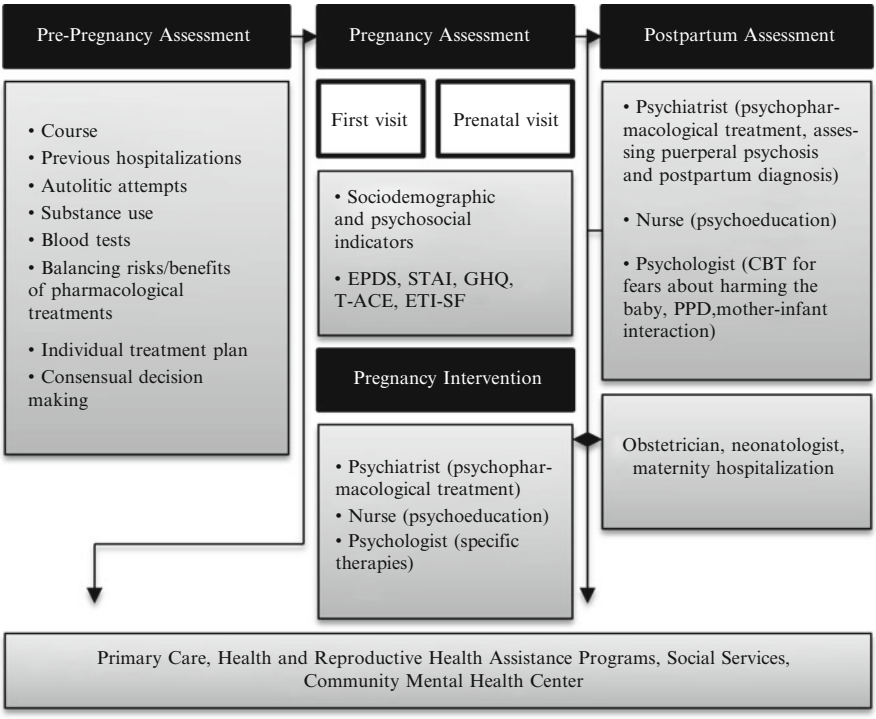

Fig. 2 Perinatal Psychiatry Program Barcelona-Clinic: summary of the program's assessment and intervention procedures. *Note*: *EPDS* Edinburgh Postnatal Depression Scale, *GHQ* General Health Questionnaire, *STAI* State–Trait Anxiety Inventory, *T-ACE* tolerance, annoyed, cut-down, and eye-opener, *ETI-SF* early trauma inventory—short form, *PPD* postpartum depression, *CBT* cognitive behavioral therapy, *PBQ* Postpartum Bonding Questionnaire

Escribà-Agüir and Artazcoz 2011), personality factors such as neuroticism or perfectionism (Gelabert et al. 2012; Martín-Santos et al. 2012), and psychosocial factors such as poor partner relationship, low social support, family caregiver role, negative life events, being on sick leave, or traumas such as childhood physical abuse (Garcia-Esteve et al. 2008; Escribà-Agüir and Artazcoz 2011; Vilella et al. 2012; Plaza et al. 2012).

Too often, PPD is dismissed as a normal or a natural consequence of childbirth. Screening of all mothers during the antepartum and postpartum period may help to identify women with PPD. The EPDS is a 10-item, self-rated questionnaire that is easy to use and with high acceptability, becoming an excellent tool for use by health professionals and midwives for detection of PPD. The EPDS was translated into Spanish and validated in a Spanish sample by our team (Garcia-Esteve et al. 2003). The cutoff for detecting PPD in Spanish mothers was determined to be 10/11, with a sensitivity of 79 %, a specificity of 95.5 %, and a positive predictive value of 63 % (Garcia-Esteve et al. 2003). This validation has allowed the implementation of systematic screening from Primary Care to increase rates of identified PPD. For use as

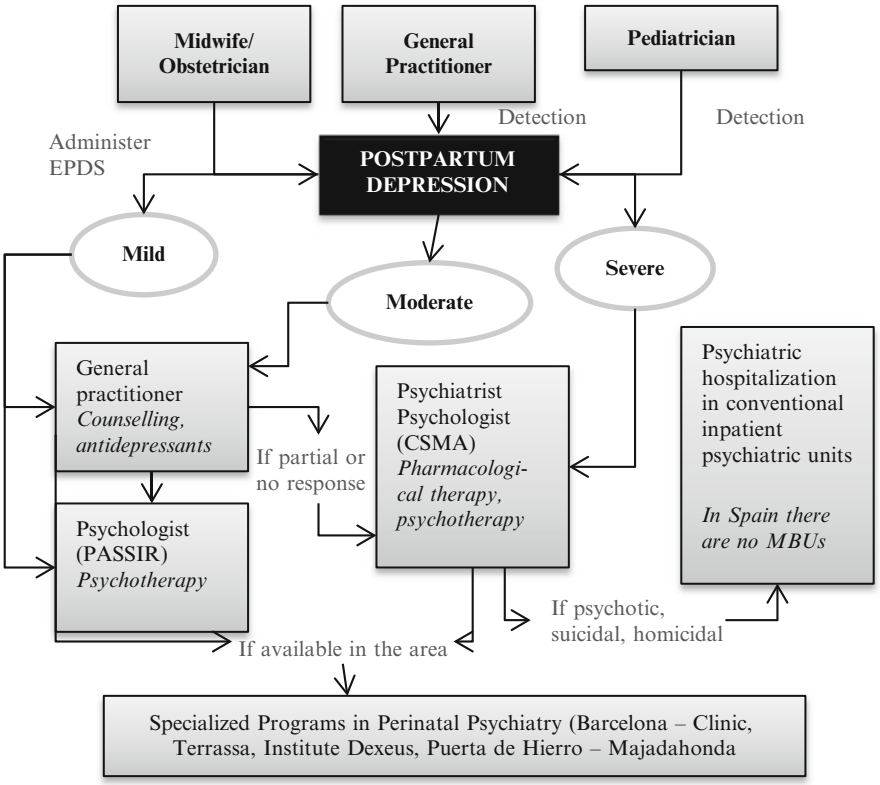

Fig. 3 Care management of postpartum depression. *Note*: *ABS* primary health care, *PASSIR* Sexual and Reproductive Health Assistance Programs, *CSMA* Community Mental Health Center, *MBU* mother–baby unit

a screening tool, the health professionals received training in the administration, detection, and referral. This questionnaire has been administered to both native Spanish and LAI mothers. In recent years, it has promoted the use of the EPDS (Cox et al. 1987) as a systematic tool for identifying women at risk for PPD by Primary Care and Sexual and Reproductive Health practitioners of its health sector. It also helps organize appropriate referral circuits for the health sector according to the severity of need and the type of mental health resources that already exist. Midwives usually administer the EPDS. If the EPDS score is 11 or greater or if item 10 "The thought of harming myself has occurred to me" is positive, the midwife may refer the patient to the General Practitioner for assessment and treatment (Fig. 3). Once detected, the case management depends on the general practitioner (GP) who can start the treatment if depressive symptoms are mild to moderate, together with the psychologist of the Sexual and Reproductive Health Program. If the depressive symptoms are moderate to severe, the GP refers to the general mental health center. Inpatient hospitalization may be necessary for severe PPD, and in this case the

patient is referred to a general psychiatric inpatient unit. To date, there are no psychiatric inpatient mother–baby units in Spain.

In the event that specialized services are available, several treatment options are available for PPD, including pharmacological and nonpharmacological treatments, psychological therapies, and psychosocial interventions (Fitelson et al. 2011). There have been few medication trials specifically evaluating the effectiveness of antidepressant medication, but the available evidence suggests that medications typically used to treat major depression in the general population are equally effective in PPD (Payne 2007). Decision-making about initiating antidepressant medication during breast-feeding and the choice of agent must be made on a case-by-case basis, taking into account the woman's characteristics (e.g., age, weight, ethnicity), her mental health history and tendency to relapse, the severity of the depressive symptoms, prior response to medications, the risk to the infant, the risk to undertreating or not treating depression, and the patient's preferences. The infant's pediatrician should be made aware of the possible exposure, and the infant should be monitored for changes in feeding patterns, sleeping patterns, sedation, irritability, and other signs of drug toxicity. Electroconvulsive therapy (ECT) is an option for depressed postpartum women with treatment-refractory major depression or with severe symptoms such as psychotic symptoms, catatonia, or strong suicidal urges. Anesthetic agents used in ECT are rapidly metabolized and risk of transmission in breast milk can be minimized by timing breast-feeding accordingly.

An example of psychological intervention for PPD is developed in the Perinatal Psychiatry Program Barcelona-Clinic (see section "Perinatal Psychiatry Program Barcelona-Clinic"), based on the Milgrom's cognitive behavioral program (Milgrom et al. 1999). It includes psychoeducation, increasing positive activities, relaxation training, assertive training, cognitive restructuring, problem solving, exposure and response prevention, and the preparation for return to work and baby separation. Psychoeducation includes information regarding PPD, specific risk factors, and stigmatized beliefs. It seeks to increase positive activities, such as self-care, time for herself, increasing previous social activities, or new activities with the baby, or finding the balance between the mother's and the baby's needs. The assertiveness training helps to seek support when needed or have the right to maintain her baby rules. Cognitive restructuring aims to restructure unrealistic attributions and expectations about maternity. Problem-solving techniques are used for resolving problems about balancing work and parenting or parenting and housework. They are also helpful for resolving interpersonal conflicts, such as problems with the couple about parenting. Psychological treatment of PPD is performed in conjunction with psychopharmacological treatment.

Barriers to Detection and Treatment

There are multiple barriers in the detection and treatment of perinatal depression. Professional barriers to detection include a lack of training in perinatal mental health, making detection and treatment difficult. Moreover, screening instruments

are not used systematically by health providers. Professional barriers also include stigmatized beliefs about women. In this sense, there may be a tendency to attribute depressive symptoms to negative personal characteristics such as lack of maturity, infantilism, and dependency or a way of seeking attention, obtaining a secondary benefit, or receiving financial help. Not infrequently, depressive symptoms are interpreted as a lack of family support rather than a legitimate mental health problem.

Barriers to treatment among depressed mothers may include misconceptions as well as structural barriers. Barriers to help-seeking by depressed mothers, as Wisner (2010) suggest, include the tendency to attribute symptoms to external causes such as stress. It is also common for mothers to be unfamiliar with PPD and assume that the symptoms presented are inherent in pregnancy and postpartum. Mothers tend to believe that depressive symptoms will resolve on their own, not knowing that PPD treatments work or that psychiatric and psychological care is beneficial. Furthermore, depressive symptoms are often seen as a sign of weakness, so embarrassment and fears of being stigmatized and rejected may also make it difficult to seek care. Additionally, women may be reluctant to take medication if they are breast-feeding. This has led to a delay in the onset of treatment and, consequently, in the therapeutic response, with an average of a year to achieve full remission (Garcia-Esteve et al. 2006) Structural barriers include difficulties in going to appointments during work hours (in Spain, visits are mostly in the public sector, and this is done primarily in the morning) or in balancing the many demands of work, caring for a newborn, and medical visits.

System-based barriers to treatment include the lack of availability of specific psychological treatments. In Spain, interpersonal psychotherapy is not implemented in most mental health programs, nor are therapies focused on mother–infant interactions available. Another issue is the lack of inpatient mother–baby units in Spain, which complicates the management of mothers with suicidal or infanticidal thoughts or psychotic symptoms. These mothers usually are hospitalized in conventional inpatient psychiatric units.

There are also specific barriers to assessment and treatment of perinatal depression in immigrant women. In addition to responses found among native-born mothers, immigrant mothers may not be used to asking for help, or they may think that services are for other native-born women not for them. For cultural reasons, some women may not describe psychological symptoms or will refer to somatic symptoms rather than psychological ones. They may not talk about these symptoms with a health professional for fear of being judged, which is heightened in illegal immigrant mothers who also fear being deported. Regarding structural barriers, these women may have greater financial difficulties that prohibit them from seeking medical care, including limited transportation and difficulty taking time off from work. These women tend to work as caretakers and often cannot take maternity leave. Similarly, they have less support from their partners and nuclear families, which are often in the country of origin (Fung and Dennis 2010). Regarding professional barriers, health professionals tend to interpret depressive symptoms in Latin American mothers as a strategy to get attention, a way to get a secondary benefit, or an attempt to take advantage of the universal healthcare system.

Maternity, Migration, and Postpartum Depression

Are There Differences in Prevalence Rates of PPD Among Spanish and Latin American Immigrant Mothers?

Outside Spain, few studies compare PPD prevalence between immigrant and native-born mothers, and results are controversial. While some studies have not found differences (e.g., Yoshida et al. 1997), others have found a higher prevalence of PPD in immigrant mothers compared to those who are native-born (e.g., Zelkowitz and Milet 1995). Furthermore, to our knowledge, studies comparing PPD rates between Spain-born and Spanish-speaking LAI mothers are lacking.

We carried out a cross-sectional study with two phases aimed at answering this question. The study was conducted at the Hospital Clínic Maternitat, a teaching hospital, in Barcelona (Spain) with an average of 3,000 births/year. All mothers who received a routine checkup at 6 weeks postpartum in the Department of Obstetrics and Gynecology during a 1-year period were eligible to participate. Illiterate women, as well as women whose children died after birth, were excluded. The study protocol was approved by the Hospital Clinic Review Board with written informed consent from all participants.

The study included two phases, which were carried out on the same day. In phase 1, all mothers who met the inclusion criteria were approached by a trained clinical research assistant who explained the study; collected data regarding sociodemographic, obstetric, and health behaviors; and administered the Spanish validated version of the EPDS (Garcia-Esteve et al. 2003). Participants were stratified into four levels according to their EPDS score as follows: <7; =7 and <10; =10 and <13; and =13. In phase 2, approximately 30 % of participants in the previous phase were randomly selected using a stratified multistage sampling design (Table 1). In order to ensure adequate rates of minor and major depression, a random sample including 15 % of women with EPDS score <7; 50 % with EPDS score = 7 and <10; 60 % with EPDS score = 10 and <13; and 100 % with EPDS score = 13 were selected. All participants in phase 2 were interviewed with the non-patient version of the Structured Clinical Interview for DSM-IV Axis I disorders (SCID-I) (First et al. 1997) in order

Table 1 EPDS score distribution in the two-phase sampling

	Native Spain ($N = 1{,}214$)				Latin American ($N = 164$)			
EPDS scores	Phase 1 (n)	Phase 2 (n)	%	Sample weight	Phase 1 (n)	Phase 2 (n)	%	Sample weight
0–6	889	121	13.60	7.35	93	9	9.70	10.33
7–9	137	70	51	1.96	32	13	40.60	2.46
10–12	78	45	57.70	1.73	16	9	56.30	1.78
13≥	110	104	94.50	1.06	23	19	82.60	1.21
Total (n)	1,214	340			164	50		

Note: *EPDS* Edinburgh Postnatal Depression Scale

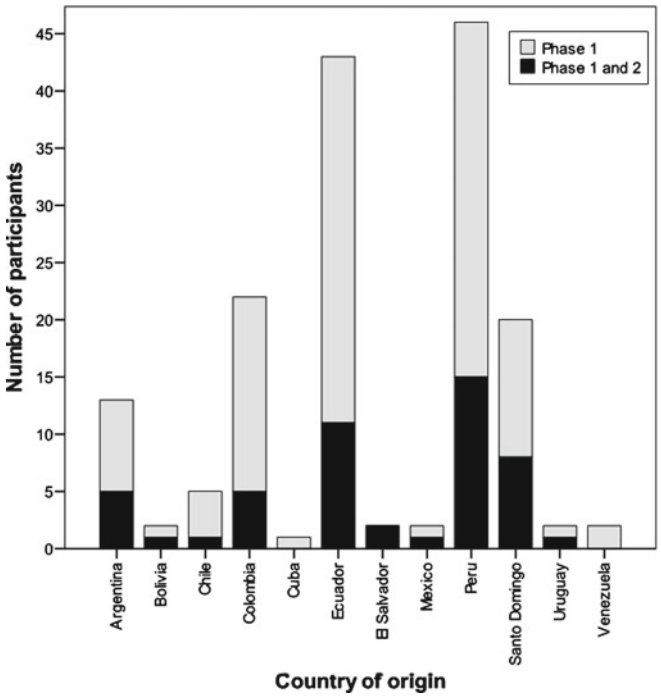

Fig. 4 Distribution of the Latin American immigrant (LAI) mothers by country of origin

to establish a diagnosis of minor and major PPD. The PPD prevalence and 95 % confidence intervals were estimated using weighted logistic regression with the observed sampling fractions of participants (Spanish and LAI mothers) in phase 2 as sample weights as explained in our previous work (Navarro et al. 2008).

The sample recruited in phase 1 comprised 1,378 mothers: 1,214 native Spanish and 164 LAIs. Figure 4 shows the distribution of LAI mothers by country of origin. The majority of immigrants were from Peru and Ecuador, followed by Colombia, Santo Domingo, and Argentina. Table 2 shows the sociodemographic characteristics of the study sample. LAI mothers, in comparison to native mothers, were younger, had higher education, had a higher proportion of single motherhood and poor partner relationships, had more financial problems, and had a higher percentage of employment without contract (Table 2).

Figure 5 represents the weighted prevalence rates of major, minor, and combined (major and minor) PPD for native Spanish mothers and LAI mothers. LAI mothers had a 17.3 % prevalence of combined PPD (major and minor) and 11.4 % of major PPD. In contrast, native Spanish mothers had a prevalence of 11 % and 7.7 %, respectively. The prevalence of PPD found in Spanish mothers was similar to that obtained in our previous work (Ascaso et al. 2003).

The immigrant LAI mothers had a higher prevalence of PPD than native-born mothers. A recent systematic review of PPD in refugee, asylum seeker, and

Table 2 Sociodemographic characteristics of the study sample

	Native Spain ($n=1,214$)		Latin American ($n=164$)		
	n	%	*n*	%	χ^2 (d*f*)
Educational level					
Primary	465	38.4	21	12.8	42.86 (2)***
Secondary	434	35.8	76	46.3	
University	313	25.8	67	40.9	
Stable partner	1,198	98.7	152	92.7	26.12 (1)***
Poor partner relationship	63	5.3	20	13.2	16.14 (1)***
Number of children					
1	729	60	98	59.8	0.01 (1)
≥2	485	40	66	40.2	
Employment status					
Employed	959	79	111	67.7	57.52 (3)***
Unemployed receiving benefits	64	5.3	3	1.8	
Unemployed not receiving benefits	25	2.1	21	12.8	
Housewife	166	13.7	29	17.7	
Employment without contract	104	8.6	56	34.1	92.11 (1)***
Financial problems	137	11.3	89	54.6	196.54 (1)***
Age					
18–24	108	8.9	39	23.8	36.36 (2)***
28–34	764	62.9	96	58.5	
>34	342	28.2	29	17.7	

Note: ***$p<0.001$

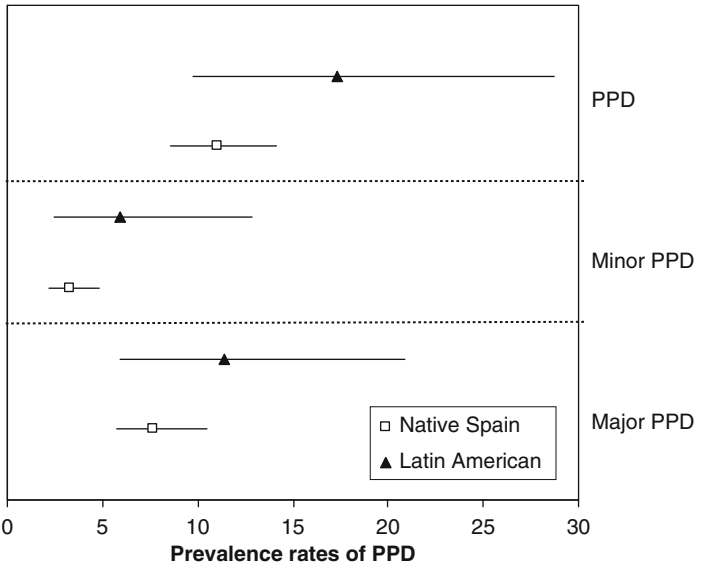

Fig. 5 Prevalence rates of postpartum depression (PPD) among LAI mothers and Spanish mothers. *Note*: *PPD* postpartum depression. The *horizontal lines* indicate 95 % confidence interval

immigrant mothers that included studies from Canada and Australia found that immigrant mothers had higher risk of PPD than the native-born mothers, with rates ranging from 24 to 42 % (Collins et al. 2011). In contrast, US researchers such as Yonkers et al. (2001) did not find differences in prevalence rates of PPD between Latina, African American, and Caucasian mothers. In addition, some studies have found a lower rate of PPD in foreign-born Latina mothers when compared to US-born Latinas, suggesting a negative influence of higher acculturation (Fung and Dennis 2010; Huang et al. 2007). These mixed results highlight the complex relationship between immigrant status and PPD, which may be mediated by multiple factors including ethnic, social, and cultural factors, the characteristics of the host country.

Our results are in line with those that found the immigrant mothers to be at high risk for PPD (Collins et al. 2011; Fung and Dennis 2010). Common risk factors associated with PPD in immigrant mothers are stressful life events prior or during their pregnancy, including premigration stressful events, and low social support, including poor marital quality (Collins et al. 2011; Zelkowitz et al. 2008). In our sample, LAI mothers showed a higher rate of single motherhood and poor partner relationships compared to native-born mothers. As suggested by Fung and Dennis (2010), marital quality may be especially important in this population due to the lack of support from the extended family that is not geographically accessible. The higher rates of PPD in LAI mothers may be explained by a higher exposure to well-known risk factors associated with PPD (e.g., stressful events, including traumatic events, low social support, poor partner relationship) and culture-related risk factors. More research is needed to elucidate the specific contributors to PPD in LAI mothers.

Are There Differences in Prevalence Rates of Reproductive Health Behaviors Among Spanish and Latin American Immigrant Mothers?

The last aim of the study described above was to examine differences in reproductive health behaviors (alcohol, coffee, and tobacco use during pregnancy and breast-feeding, unplanned pregnancy, and previous voluntary abortions) between Spanish and LAI mothers. Prevalence rates with 95 % confidence intervals (CI) for each reproductive health behavior in Spanish and LAI mothers were computed using the sample recruited in phase 1.

Figure 6 shows the prevalence rates and CI for each health behavior in both samples. LAI mothers had higher rates of unplanned pregnancy and previous voluntary abortions than native-born participants. There were also group differences in prevalence rates of breast-feeding, favoring immigrant mothers. Spanish mothers had higher prevalence of tobacco and coffee use during pregnancy.

Our results indicate that immigrant mothers breast-feed their children at higher rates than Spanish mothers. Similar trends have been found in the USA where

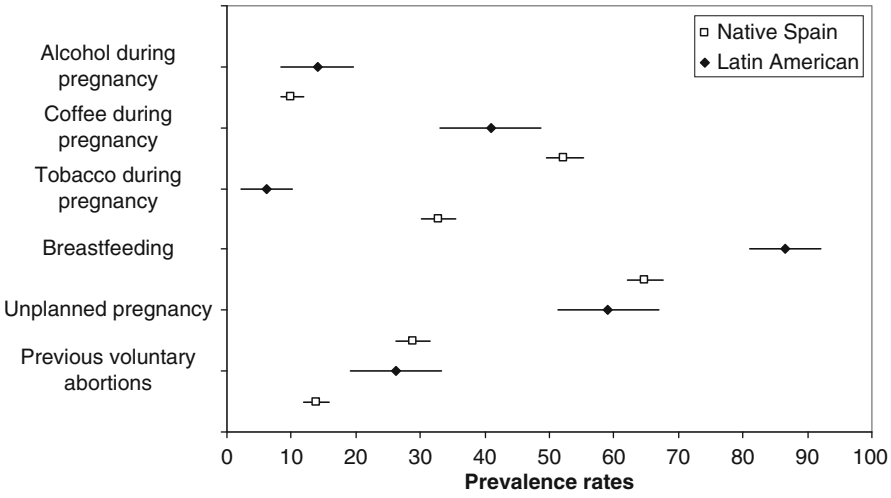

Fig. 6 Prevalence rates of health behaviors among LAI mothers and Spanish mothers. *Note*: The *horizontal lines* indicate 95 % confidence interval

breast-feeding rates among Hispanics are higher than in "white American" women (Beck et al. 2002). Other studies have shown a gradual abandonment of breast-feeding practices as immigrants acculturate (Gibson et al. 2005). In Spain, Spanish mothers have lower breast-feeding rates than immigrants. It is possible that the differences observed between the two populations in this study respond to differing cultural and economic patterns. Immigrant mothers retain an upbringing model in which breast-feeding is essential for infant survival. In fact, women who cannot breast-feed tend to look for wet nurses. In previous studies in the US population, the identification with Latin American Hispanic culture and low rates of acculturation were related to higher rates of breast-feeding in Hispanics, pointing out the importance of breast-feeding in the Latin American culture model (Gill 2009). The high cost of formula is another important reason that might explain disparities in breast-feeding rates given that immigrant mothers tend to experience more economic difficulties.

The rate of unplanned pregnancies in LAI mothers is higher than that observed in Spanish native mothers. In a US sample, the rate of unplanned pregnancy in Hispanic women was 40 %, vs. 32 % in white women, and the rate of unwanted pregnancy was 7 % in Hispanics, compared to 5 % in white women (Kost and Forrest 1995). However, in another study, Hispanic American women living in the USA showed the same rate of unplanned pregnancies as non-Hispanics, as high as 30.4 % (Henshaw 1998). Planning a pregnancy is a learned health behavior designed to control conception. These are behaviors that are facilitated by information in schools, visits to health centers, and dissemination of health policies aimed at greater control of pregnancies by women. While Spain is far from having satisfactory rates of planned parenthood, the results suggest that the level of conception control in Spanish mothers is higher than in LAI mothers.

The relationship between unplanned pregnancy and PPD has been shown in previous research (Garcia-Esteve et al. 2005). Planning involves the adoption of healthier behaviors, so pregnancy can occur in the best possible conditions. An unplanned pregnancy can affect mother–child bonding, which impacts future interactions which are necessary for the emotional and cognitive development of the newborn (Barber et al. 1999).

LAI mothers report a higher rate of induced abortions than native-born Spanish mothers in the study. Although data from other countries shows a higher prevalence of induced abortions in Hispanic samples (Henshaw and Kost 1996), we believe that abortion is a result of poor planning, not to be associated with a social or cultural group. In many countries its use is conditioned by religious beliefs and legal issues. This increased abortion practice in LAI mothers probably represents poor health habits in which abortion is used as a form of contraception when other birth control methods fail or have not been used.

Although the figures for smoking during pregnancy are very high in Spanish mothers, they are consistent with larger studies of this population (Martinez-Frias et al. 2005). The lower prevalence rate of smoking during pregnancy in the LAI group corresponds with results from other studies in which smoking during pregnancy is lower among immigrant mothers than in European or American mothers. For example, Mexican immigrant women smoked less than the US-born mothers and Mexican mothers born in the USA (Zambrana et al. 1997). In the UK, women of Afro-Caribbean, Asian origin smoked less during pregnancy than European women (Waterson and Murray-Lyon 1989). In the USA, smoking prevalence among Hispanic Americans is less than that of other racial/ethnic groups and varies from 1.8 to 8.2 % depending on the state (Beck et al. 2002). The lower prevalence of tobacco use in LAI mothers may be associated with the influence of social norms and cultural traditions that these women bring with them.

We did not find differences in prevalence rates of alcohol consumption among Spanish and LAI mothers. In a study of the general population, the Spanish National Health Survey found lower rates of smoking but higher rates of alcohol consumption in immigrant women in comparison to native-born women (National Statistics Institute [INE] and Ministry of Health and Social Policy 2006). Given the well-known teratogenicity of alcohol (e.g., fetal alcohol syndrome), alcohol intake during pregnancy by more than 10 % of the study population is a striking figure. Furthermore, substance use, including alcohol and tobacco consumption, has been associated with depressive symptomatology in pregnancy and postpartum (Melo et al. 2012; Le Strat et al. 2011; Quelopana et al. 2011).

Recommendations Based on Our Data

LAI mothers are a socioeconomically disadvantaged group; they are younger, have less support from their partners, and have more economic problems than Spanish mothers. We found that 17 % of LAI mothers developed PPD, and specifically,

11 % had a major depressive episode in the postpartum period. LAI mothers in our study have poorer reproductive health habits than native Spanish mothers; they have a higher risk of unplanned pregnancies and induced abortions. As described previously, these poorer health habits, especially unplanned pregnancy, have been associated with PPD. In contrast, LAI mothers show a greater likelihood of breast-feeding. LAI women should be a target population for psychoeducational health programs aimed at improving self-detection of depressive symptoms in the postpartum period and family planning habits. It would be advisable to study the barriers to detection and treatment of perinatal depression in LAI immigrant women, as well as the barriers to access to family planning programs.

There were no differences between Spanish and LAI mothers with respect to alcohol consumption during pregnancy, which was found in up to 10 % in this sample. However, smoking in pregnancy was less frequent in LAI than Spanish mothers. Given the rates of substance use in our study, these recommendations should be considered: (a) disseminate information on the well-known effects of tobacco, alcohol, and coffee consumption during pregnancy, (b) screen for substance use in both Spanish and LAI mothers, and (c) provide strategies for the cessation of alcohol in both populations given that previous studies show that consumption of substances, such as alcohol and tobacco, has been associated with perinatal depressive symptomatology and also given the teratogenic potential. In recent years, Spain has designed public health programs aimed at cessation of smoking in pregnancy (Department of Health 2006) and the cessation of alcohol and illegal drugs consumption during pregnancy (Department of Health 2010).

In conclusion, over the last decade, there has emerged in Spain a marked scientific interest in the subject of perinatal mental health. This has led to the development of outpatient specialized services, the launching of training activities for basic health and mental health professionals, and the promotion of screening programs for the detection of DPP. Multidisciplinary relationships have been established in order to create networks that facilitate the care of mental health problems during the perinatal period. All these achievements respond to the concerns of professionals who work in different services. It is suggested that the government should adopt perinatal mental health policies and establish a network based on a model of collaborative care. There is a need to include evidence-based knowledge about mental health problems in training and continuing education of health professionals. Finally, perinatal mental health needs should be addressed taking into account the specificity of different sociocultural groups of women, such as Latin American immigrant mothers.

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Assessment, Engagement, and Treatment Entry for Latina Women with Perinatal Depression

Laura J. Miller

Introduction

Despite the availability of validated screening tools and effective treatments for perinatal depression (Miller et al. 2011), rates of entry into mental health treatment for women who are depressed during pregnancy or postpartum are disappointingly low (Goodman and Tyer-Viola 2010; Horowitz and Cousins 2006; Marcus et al. 2003). Treatment entry may be especially challenging for Latina women with perinatal depression. For example, in a study of Medicaid recipients with new-onset postpartum unipolar depression (Kozhimannil et al. 2011), only 5 % of Latina women initiated mental health treatment (either a first psychotherapy visit or filling a first antidepressant prescription), as compared with 9 % of non-Latina white women ($p < 0.001$, AOR = 0.59). Similarly, among respondents to the 2004 Utah Pregnancy Risk Assessment Monitoring System, Latina women with self-reported perinatal depressive symptoms had significantly reduced odds of seeking help compared to non-Latina women (McGarry et al. 2009). Accessing mental health services may be especially difficult for recent immigrants. Depressed mothers who were immigrants (86 % Latina) were significantly less likely to report having sought mental health treatment than depressed nonimmigrant mothers, with an odds ratio of 5.76 (Lara-Cinisomo et al. 2009).

Implementing universal screening has been proposed as a means of improving recognition and treatment of perinatal depression. Indeed, within perinatal care settings, using validated screening tools for perinatal depression has been shown to substantially improve detection compared to clinical recognition (Georgiopoulos et al. 2001).

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However, large-scale screening efforts have not been shown to improve clinical outcomes. Women participating in a Healthy Start initiative to screen for perinatal depression were no more likely to receive mental health treatment, and no more likely to experience a reduction of depressive symptoms, than women prior to the initiative or women who did not enroll in the initiative (Yonkers et al. 2009). Similarly disappointing results have ensued even with study designs that included strategies to enhance referral to mental health care. In one such model (Smith et al. 2009), case managers conducted risk assessments for all women receiving perinatal care at publicly funded obstetric clinics within the study period ($N=465$). Women who screened positive for psychiatric disorders received mental health assessments over the phone by psychologists or social workers. Those who met criteria for psychiatric disorders were given at least two referrals to mental health providers. A clinician (the same one who had conducted the assessment whenever possible) called women 1, 3, and 6 months after the initial assessment to administer depression symptom questionnaires, to ask whether the woman had attended treatment, and to provide additional referrals if needed. Mental health treatment entry was defined as having attended at least one psychotherapy session or having received a prescription for a psychotropic medication from any provider. Clinicians provided an average of 6.17 outreach contacts per woman. Despite these robust outreach attempts, 122 women (26.2 %) declined to accept mental health referrals after being diagnosed with psychiatric disorders. Of the 189 women diagnosed with major depressive disorder, 87 (46.0 %) entered treatment, while 102 (54.0 %) did not. Among 82 study participants who were monolingual Spanish speakers, only 21 (25.6 %) entered treatment, while 61 (74.4 %) did not. Being born in the United States increased the likelihood of entering mental health treatment (OR = 2.06).

Studies like these highlight the compelling need to develop more effective strategies to promote treatment entry for women with perinatal depression. Taking a careful look at next steps after perinatal depression screening may shed light on how to do this. Scoring positive on a screening tool indicates that a person may have a disorder, but is not in itself diagnostic. Therefore, the next step for patients who "screen positive" is a diagnostic assessment by a clinician, who rules out false positives and distinguishes among related disorders (e.g., unipolar vs. bipolar depression). For nonpsychiatric disorders (e.g., gestational diabetes or hypertension), the initial assessment is usually conducted by a perinatal or primary care provider, with referral to a specialist only for complex cases. By contrast, in most systems of care studied to date, women who screen positive for perinatal depressive symptoms are referred to mental health providers for assessment, rather than being diagnosed by their perinatal care providers (Flynn et al. 2010).

Referring women with positive depression screens outside of the perinatal care context for assessment may miss a key opportunity for perinatal care providers to engage patients in treatment. Empirically, treatment engagement refers to patients' active participation in treatment in ways that can be behaviorally measured, such as taking prescribed medications, attending scheduled psychotherapy sessions, or practicing recommended self-care behaviors (Tetley et al. 2011). A key first step is treatment entry—e.g., attending a first session with a therapist or filling an initial prescription for an antidepressant medication. The likelihood of a patient entering

and engaging in treatment can be substantially influenced by the way in which providers explain the diagnosis and treatment options. Optimal engagement strategies may differ for different individuals and groups of patients, influenced by age, gender, race, ethnicity, life experiences, and other factors. Strategies to improve engagement in treatment for depression have been studied for several populations of patients, including adolescents (Chi et al. 2006), elderly patients (Bartels et al. 2004), veterans (Stecker et al. 2010), patients in rural areas (Greeno et al. 1999), and black patients (Alvidrez et al. 2010). The low rates of mental health treatment entry for Latina women with perinatal depression suggest that developing effective engagement strategies is especially important for this population.

This chapter summarizes two studies addressing the role of assessment and treatment engagement strategies for perinatal depression in predominantly Latina populations. Both studies examine models of care which incorporate assessment and engagement strategies directly into perinatal care visits within community mental health centers, to ascertain whether that improves patient acceptance of mental health assessment and entry into mental health treatment.

Study #1: Alivio Medical Center

Purpose of the Study

This pilot study (Miller et al. 2009) was designed to evaluate the feasibility and effectiveness of a new model for detecting, diagnosing, and treating perinatal depression within a community health center. The model introduced formal depression screening as well as brief diagnostic assessments for depression within perinatal care visits, by perinatal care providers, for women with positive screens. Depending on illness severity and complexity, treatment was then delivered either by perinatal care providers with psychiatric consultation as needed or via referral to external mental health providers. Study objectives were to determine:

- Whether the model would improve detection of women with perinatal depressive symptoms
- Whether it was feasible for perinatal care providers in a community health setting to incorporate diagnostic assessments for major depression into perinatal care visits
- Whether the model improved patient acceptance of mental health assessment

Population and Context

The study site, Alivio Medical Center, is a Federally Qualified Health Center in the Pilsen neighborhood of Chicago. Pilsen underwent a rapid transformation into a predominantly Mexican-American neighborhood in the 1950s (Pugh 1997); 88.9 %

of census-documented inhabitants are Latino (U.S. Census Bureau 2000). The neighborhood's cultural cohesiveness is fostered by its Mexican American Fine Arts Center Museum. Alivio provides most of the primary and perinatal care for the Pilsen neighborhood, assisting in over 1,200 births per year. It has three geographically distinct clinic sites, one of which is a school-based clinic. Its patient population is 94 % Mexican American and 90 % monolingual in Spanish. Ninety percent of its patients are at or below the 200 % federal poverty level; 13.2 % are unemployed. Among the Alivio patient population, 58 % are under 25 years old; 44 % are under 18 years old. In 2003, the year prior to study initiation, only 24 of the 5,439 female patients of reproductive age served by the clinic (0.4 %) were recorded in the clinic's database as having a psychiatric diagnosis. There was no formal screening for depression or other psychiatric disorders. One full-time social worker, shared among the three clinic sites, was available for individual counseling, support groups, and family interventions.

Prior to study initiation, Alivio staff members identified several barriers limiting access to mental health care for their patients. Although there was a mental health center nearby, the latter served a specific geographic catchment area. Since Alivio served Spanish-speaking patients from a much wider geographic area, most Alivio patients did not qualify for services at the mental health center. Patients seeking mental health services within their own geographic catchment areas often found that no Spanish-speaking mental health providers were available. For perinatal women with young children, lack of child care compounded the challenges of attending multiple medical appointments. Further, mental illness was not consistently discussed and explained in culturally congruent terms at other mental health centers.

Methods

In conjunction with Alivio staff, the research team developed a model for perinatal depression screening, assessment, and treatment, including provider support. The model was developed during a 3-month planning period by a multidisciplinary team including an obstetrician, a midwife, a pediatrician, a family practitioner, a psychiatrist, a medical assistant, and a clinic administrator. The model included: (see Fig. 1)

- *Screening* with the Edinburgh Postnatal Depression Scale (EPDS) (Cox et al. 1987) at the first prenatal visit, at 28 weeks' gestation, and at postpartum visits to either the mother's perinatal care provider (obstetrician, midwife, or family physician) or the baby's pediatrician. Screens were administered and scored by medical assistants, who flagged positive screens and placed a blank assessment tool on the front of the chart for all women with positive screens.
- *Assessment* of all patients scoring above 10 on the EPDS with a brief, semistructured tool based on relevant parts of the Structured Interview for Clinical Diagnosis (SCID; First et al. 1996). All perinatal care providers were trained to

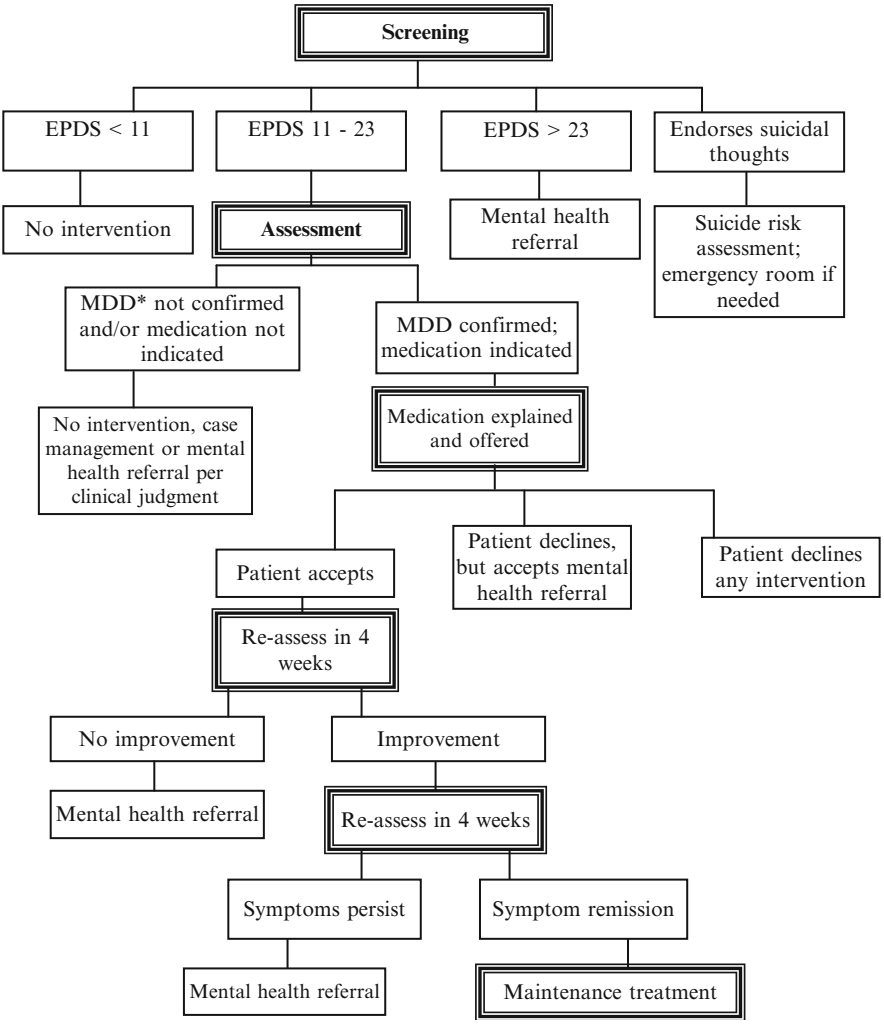

Fig. 1 Algorithm

conduct these assessments. The assessments were performed by the mother's perinatal care provider within the perinatal visit. Assessments were conducted in Spanish for nearly all patients, but in English for the relatively small number of patients who were more comfortable speaking English. Diagnosis and disposition were documented directly on the assessment tool.

- *Treatment* guided by an algorithm to help perinatal care clinicians decide when to offer antidepressant medication and when to refer for outside mental health services. The algorithm was developed by the multidisciplinary planning team by adapting evidence-based guidelines used in primary care settings to the clinic

flow. It was based on a stepped-care model of treating relatively low-severity cases within the clinic and referring relatively severe cases for specialty services.
- *Provider support*, including training workshops, reference guidelines for evidence-based prescribing of antidepressant medications during pregnancy and postpartum, availability of phone and web-based consultation with perinatal psychiatrists, and a system for referral for mental health care. The latter included a collaborative agreement with the neighborhood mental health center to accept patients from this program even if they were not in the center's geographic catchment area.
- *Quality monitoring* to track missed opportunities for screening and assessment was conducted monthly by a multidisciplinary meetings who reviewed the data and implemented system improvements.

Results

During the first 7 months of implementation of this model, a mean of 62.5 % of Alivio perinatal patients completed EPDS screens. Among those who completed screens, a mean of 17.1 % had positive screens (EPDS cutoff scores above 10). Among women with positive screens, a mean of 72.0 % received complete, documented diagnostic assessments within their perinatal care visits on the same day as the screening. The mean rate of patient refusal of assessment was 1.4 %.

Conclusions

This pilot study demonstrated that it was feasible to incorporate depression screening and diagnostic assessment into perinatal care visits within a fast-paced community health clinic. Doing so substantially improved detection of perinatal depressive symptoms. Of particular note, among this Latina patient population, there were high rates of acceptance of depression screening and assessment. This is in marked contrast to the much lower rates of acceptance of mental health assessment in prior studies.

Study #2: PCC Salud Health Center

Purpose of the Study

This study (Miller et al. 2012) was designed to replicate the feasibility of incorporating diagnostic assessment for depression directly into perinatal visits in a different community health clinic. In addition, it addressed the question of whether doing so improves treatment entry for women with perinatal major depressive episodes.

Population and Context

The study took place at PCC Salud Family Health Center, one of seven health centers in the PCC Community Wellness Center network, a Federally Qualified Health Center in Cook County, Illinois. PCC's mission is to improve health outcomes for the medically underserved community by providing high quality, affordable, and accessible primary health care and support services. PCC specializes in maternal and child health care, serving over 10,000 women of reproductive age (15–44) annually and providing prenatal care to approximately 2,500 women annually. Among PCC patients, about 16 % are uninsured, and 54 % utilize Medicaid. PCC Salud is located in the Belmont-Cragin neighborhood of Chicago. PCC Salud's patient population is 78 % Latino, 13 % African American, 3 % non-Latina Caucasian, and 5 % other.

Prior to study initiation, PCC Salud had implemented perinatal depression screenings with the 9-item Patient Health Questionnaire (PHQ-9; Kroenke et al. 2001). PCC Salud had social workers on site who were behavioral health specialists. Clinical practice was to refer women with positive PHQ-9 screens to the on-site social workers for mental health assessment. Clinic staff had observed that, despite this co-location, few women followed up with these assessments, prompting their interest in participating in this study.

Methods

The study was part of a larger project to design, implement, and evaluate a stepped-care model of perinatal depression care within a community health clinic setting. Stepped-care models aim to link the severity and complexity of an illness with the type and intensity of interventions. The model developed at PCC Salud included the following steps:

- *Screening* for depression with the PHQ-9. Screens were administered by medical assistants and scored by perinatal care providers within perinatal care visits. All perinatal care providers were trained to score the screening tool. Women were offered screens at their first prenatal visit, at a postpartum visit within 4 weeks of delivery, and at a second postpartum visit between 4 and 8 weeks of delivery. At clinicians' discretion, screens were repeated during pregnancy if the initial score was positive, if the patient had experienced a substantial change in her condition or situation, or if she had risk factors for depression.
- *Assessment* for diagnosis of major depression and for the severity of depression. These were conducted by perinatal care providers within the perinatal visits for all women who screened positive (score ≥10). Since PHQ-9 items are derived from Diagnostic and Statistical Manual (American Psychiatric Association 2000) criteria for major depression, the emphasis of the diagnostic assessment was to rule out false positives due to confounds from normal perinatal somatic changes and/or normal reactions to transient stressors. All perinatal care providers were trained to conduct these assessments.

- *Treatment engagement* for women who were diagnosed with major depression. This occurred at the time of diagnosis, by the perinatal care provider, within the perinatal care visit. Engagement strategies included explaining the diagnosis and treatment options in culturally congruent terms; eliciting and addressing patients' reactions, concerns, and treatment preferences; and delivering and explaining self-care kits which were among the interventions offered. This was followed by introducing an on-site behavioral health specialist (social worker) as a consultant to the patient. These introductions occurred in person during the session whenever possible, but when unavailable during the visit, the behavioral health specialist would call the patient later. There was no prescribed "script" for patient engagement. Rather, providers participated in a training session that included explaining the purpose of engagement strategies and encouraging them to take into account women's level of acculturation, manner of expressing emotions, religious beliefs, conceptual understanding of depression, relationships with family members, and other relevant factors in deciding how to discuss depression and its treatment.

The pre-existing clinic screening protocol was not changed for the study. The following model was newly implemented. An algorithm based on patient symptoms guided stepped-care interventions based on PHQ-9 score, but providers could use their clinical judgment to advance individual patients to more intensive treatments:

- *Step one intervention*, for at-risk women (subsyndromal depressive symptoms), was to receive a self-care kit based on cognitive-behavioral principles.
- *Step two intervention*, for women with mild major depression who did not want medication or formal psychotherapy, was to receive a self-care kit with guidance by an on-site behavioral health specialist, health educator, or *promotora* (health promoter).
- *Step three intervention*, for women with moderate major depression, consisted of mental health treatment on site, including antidepressant medication (when indicated and accepted) and cognitive-behavioral therapy (when indicated and accepted) along with the self-care kit.
- *Step four intervention*, for women with severe major depression or treatment-refractory symptoms, was case-managed referral to a mental health center.

The study compared depression screening, diagnosis, and treatment entry for all women receiving perinatal care at PCC Salud during a 3-month pre-intervention phase ($N=141$) to the same parameters for all PCC Salud perinatal care patients during a 1-year intervention phase ($N=400$). Both before and after implementing the model, treatment entry was defined as at least one chart-documented visit with a mental health clinician after a diagnostic assessment. Pre- and post-intervention differences in the frequencies of screening, assessment, and diagnosis of depression were examined with chi-square (X^2) analyses, using two-sided p values at a statistical significance level of $p<0.05$. For sample sizes <5 within contingency tables, Fisher's exact test was used.

Results

During the intervention period, 93.5 % of women receiving perinatal care visits completed a PHQ-9, as compared to 65.2 % during the pre-intervention period ($p < 0.001$). Prior to intervention, 10.9 % of women who completed the PHQ-9 scored above 9, but none of those women entered mental health treatment. During the intervention phase, 84.8 % of women with positive screens received chart-documented diagnostic assessment by the perinatal care provider. Among these, providers diagnosed ten women (42.9 % of those with positive screens) with major depression and employed engagement strategies for those women. Of those 10 women, 9 of them (90 %) entered mental health treatment. Providers estimated that the combined assessment and engagement process took 5–7 min per patient.

Conclusions

This study confirms prior findings that, when screening is followed by referral to a mental health provider for assessment, rates of attending the assessment and entering treatment are low. For this study, this was the case during the pre-intervention period even though the mental health providers worked on site within the same clinic as the perinatal care providers. Results indicate that training perinatal care providers to conduct brief diagnostic assessments, and to explicitly engage patients in mental health treatment, substantially improved rates of assessment and entry into mental health treatment.

Implications for Practice

The findings from these studies demonstrate that it is feasible to incorporate brief diagnostic assessments for women with positive depression screens into perinatal care visits, even in busy community health centers with limited resources. Doing so seems to be far more acceptable to patients than referral to a mental health provider for assessment and may improve entry into treatment.

Further efforts to improve mental health treatment entry, and therefore outcomes, for Latina women with perinatal depression may benefit from insight into the limitations of "screen and refer" models in which women who screen positive for depressive symptoms are referred to mental health providers for diagnostic assessment, rather than having the assessment conducted as part of perinatal care. Figure 2 illustrates key elements of an optimal health service delivery model, encompassing detection by screening, diagnosis via clinician assessment, treatment engagement to promote treatment entry and maintenance, treatment tracking to promote symptom

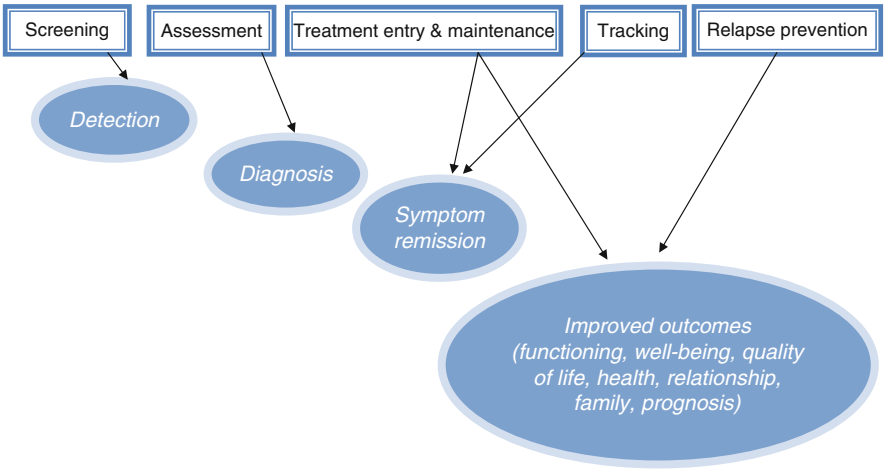

Fig. 2 The health service delivery pathway

improvement, and resultant improvement in areas of functioning that matter to patients. "Screen and refer" models may disrupt this flow, missing a key opportunity for engaging patients in treatment for depression. They may inadvertently contribute to a sense of stigma about mental illness by treating psychiatric symptoms differently than other symptoms.

Qualitative data (Palladino et al. 2011) suggest that, in the absence of clinic-wide guidelines for follow-up of positive depression screens, obstetricians' choices of how to address perinatal depression are highly variable and are strongly influenced by their individual engagement styles and perceptions of role identity. By contrast, the studies summarized in this chapter engaged perinatal care providers in explicitly incorporating perinatal depression diagnosis and treatment as part of their role identity. These models also trained providers to pay explicit attention to including treatment engagement strategies in their discussions with patients about depression.

These findings raise additional questions to be answered by future studies, in order to best inform clinical care and health service delivery models. Key questions are:

- What are the specific elements of engagement that lead to successful treatment entry? The health care providers participating in these studies were seasoned clinicians with high levels of cultural competence. To ensure success with more widespread adaptation of this model, it will be important to explicitly define and study the engagement process, taking into account factors such as culturally influenced mental health concepts and vocabulary, acculturation, acculturative stress, family and social context, and culturally influenced relationships with health care providers.

- Does the improved treatment entry lead to improved clinical and functional outcomes? Addressing this question may require study of factors that promote retention in treatment once treatment has begun.
- What are the most effective ways to promote self-care for women with perinatal depression? The study at PCC Salud included the development and piloting of a cognitive-behavioral therapy informed self-care kit specifically designed for pregnant women and new mothers with depressive symptoms. The usability and efficacy of this kit, and of other perinatal depression self-care tools, remain to be systematically studied.
- What is the most clinically effective and cost-efficient model of care for women with perinatal depression? In primary care settings, integrated, collaborative care models such as Improving Mood—Promoting Access to Collaborative Treatment (IMPACT) have been found to improve psychiatric and medical outcomes when compared to usual care (Watson et al. 2012). Such models have not yet been fully adapted to perinatal care settings, particularly with predominantly Hispanic and Spanish-speaking populations.

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Screening for Postpartum Depression in Chilean Women with the Postpartum Depression Screening Scale, Spanish Version

Ana Maria Linares

Study Rationale

Having a child is often considered a positive event; however, it is known that motherhood can also be a time of great vulnerability for psychiatric disorders, including postpartum depression (PPD). Internationally, PPD is recognized as a potential sequel of pregnancy, labor, and childbirth and has garnered increasing attention in recent years (Goldsmith 2007). The Diagnostic and Statistical Manual of Mental Disorders, fourth edition text revision (DSM-IV-TR) of the American Psychiatric Association (2000), defined PPD as a "moderate to severe disorder comparable to a major depressive episode" (p. 422). The diagnostic criteria for major depression include (a) depressed mood or loss of interest and (b) at least four of the following symptoms: sleeping and eating disturbances, physical agitation, fatigue, cognitive impairments, guilt, and suicidal thought (Beck and Indman 2005).

Risk factors for PPD include young (adolescence) or old maternal age (older than 35 years old), history of depression, negative attitude toward pregnancy, problems with partner, lack or poor support from partner during the postpartum period, and prenatal anxiety (Alvarado et al. 2000; Beck 1998a, 2001; Cohen et al. 2002; Evans et al. 2003). PPD can be devastating for the affected woman and also impact her child's early emotional and cognitive development (Beck 1998b). Children of depressed mothers have increased odds of developmental delay and adjustment problems (Beck 1999; Deave et al. 2008).

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PPD potentially impacts nearly twice as many women in developing vs. industrialized countries (Villegas et al. 2011). PPD symptoms have been found among 10–20 % of women in various areas of the USA (Brett et al. 2008; Toohey 2012), while Chile, a developing country, has reported PPD among 22–32 % of women (Alvarado et al. 2000; Evans et al. 2003; Perez et al. 2007). This underscores the importance of screening and early identification of PPD, especially in women from developing countries.

As in many developing countries, the Chilean Health Service provides free access to prenatal and postpartum care. This care is delivered primarily by midwives. Children also receive free access to outpatient child health care located in low-income neighborhoods (Health Ministry of Chile 2008). Chilean women build strong relationships with their health care provider during pregnancy and childbearing. These health care encounters represent an ideal opportunity to screen for PPD. Until recently, screening for PPD has not been a national priority in Chile; however in 2008, Chile initiated a health promotion program "Chile Grows with You" (Chile Crece Contigo, Health Ministry of Chile 2008) that acknowledged the necessity for PPD screening. Nevertheless, not all women are screening routinely for PPD.

The purpose of this study was to determine the prevalence of PPD symptoms among women seeking care in outpatient clinics in the north region of Chile using the Postpartum Depression Screening Scale (PDSS)-Spanish version (Beck and Gable 2005).

Methods

Study Design

This study was approved by the Institutional Review Board (IRB) of the Universidad de Tarapaca, Arica, Chile and the IRB of the University of Kentucky. The convenience sample included women ($N = 163$) who gave birth to a live infant. The mothers were assessed at 2–6 weeks postpartum when they presented to one of three Primary Health Clinics in Arica, Chile.

Potential participants were selected from the daily list of patients with an appointment for a routine child wellness exam at their public health clinic. Eligible women were approached in the reception area of the clinic while waiting for their child's appointment. The study was described and women were invited to participate. Ninety-nine percent of the eligible women agreed to participate. Those who declined to participate indicated that they did not have time to be interviewed. Women who agreed to participate were interviewed in a private room at the clinic following the child's visit. The interview contained questions to obtain information on sociodemographic and reproductive history. After the interview, women were left alone to complete the PDSS-Spanish version. The average time for interviews and completion of

the PDSS-Spanish version was 17.0 min (SD ±3.7). Participants with PDSS-Spanish version scores of 60 or more were referred to the Mental Health Department at the Health Center for appropriate psychological management.

PDSS-Spanish Version

The PDSS-Spanish version is based on the original English Version (Beck and Gable 2002). The PDSS-Spanish version was purchased directly from the Western Psychological Service, Los Angeles, CA, USA. To assure semantic equivalence, the authors of the English Version translated to Spanish using multiple methods (Beck and Gable 2003). These methods included back translation, pretest techniques, and alternate forms equivalence (Beck and Gable 2005). The PDSS is multidimensional with seven subscales or dimensions, including sleeping/eating disturbance (SLP); anxiety/insecurity (ANX); emotional lability (ELB); mental confusion (MNT); loss of self (LOS); guilt/shame (GLT); and suicidal thoughts (SUI) (Beck and Gable 2002). The PDSS-Spanish version is a 35-item self-administered Likert scale. Women are asked to indicate their degree of agreement with each item on a 5-point scale where 1 = strongly disagree to 5 = strongly agree. Responses to each item are summed to form a total score ranging from 35 to 175. Cutoff scores for the PDSS-Spanish version are sorted into two categories: normal adjustment (scores ≤59) and significant symptoms of PPD (scores ≥60) (Beck and Gable 2005). Beck and Gable (2003) tested the psychometric characteristics of the scale with a sample of Hispanic mothers living in Connecticut and Texas. The overall alpha reported for the PDSS-Spanish version was 0.95. Dimension internal reliability levels ranged from 0.76 for ANX to 0.90 for SUI (Beck and Gable 2003). One other study with a Hispanic population in the USA reported equivalent reliability of the PDSS-Spanish version, with a total alphas = 0.95 and dimension scales ranging from 0.76 (GLT) to 0.85 (MNT) (Beck and Gable 2005). Based on the reliability and multiple dimensions of the PDSS-Spanish version, this instrument was selected to assess PPD among women in Arica, Chile.

Statistical Analysis

Data were analyzed with the software package SPSS Version 19. Descriptive statistics were used to observe the characteristics of the participants. Bivariate analysis was run to observe differences between women with significant symptoms of PPD and women without symptoms of PPD. We calculated the Inconsistent Responding Index (INC Index), which identifies those participants who have discrepancies in their answers either by lack of concentration or difficulty following instructions (Beck and Gable 2002). The INC Index is derived from 10 pairs of the PDSS items

for which ratings tend to be very similar. Beck and Gable (2002) recommend that an INC score of 5 or higher represents a respondent who did not complete the PDSS-Spanish version accurately. This possibility increases as the INC increases (Beck and Gable 2002, 2005; Rychnovsky and Beck 2006). Additionally, we examined the discriminatory power of the scale items in order to identify anomalous items or atypical distributions.

To measure internal consistency, we calculated the Cronbach's alpha for each dimension of the questionnaire and for the total PDSS-Spanish version. Construct validity was explored using the degree of interaction between subscales. Exploratory factor analysis was performed to determine whether groups or clusters of related variables in the original questionnaire kept the dimensions shown by the authors of the scale (Beck and Gable 2002). Principal component analysis was performed to obtain eigenvalues, amount of variance by each factor, and weight for each variable on each factor (Burns and Grove 2001). The correlation matrix was obtained with selection of factors with eigenvalues of 1.00 or above, and factor loadings of 0.40 or greater.

Results

Descriptive Statistics

Most of the women were young (mean 26.8 ED ± 6.6, range 18–43) and were living with a partner, either through marriage or cohabitation (see Table 1). Regarding education levels, 53 % had completed a secondary education and 20 % had a college education. Most of the women did not work (78 %) and 54 % reported living with five or fewer people. About half of the women reported a monthly income lower than $300. Most of the women were multipara (more than one delivery) and had a vaginal delivery.

Positive symptoms of PPD (PDSS-Spanish version score ≥60) were reported by the 45 % of the women (see Table 2). No significant differences in PDSS-Spanish version scores were found between groups based on monthly income level, number of persons living at home, or living with a partner status (results not shown). Level of education was the only sociodemographic characteristic significantly associated ($p < 0.05$) with positive symptoms of PPD (results not shown). Women with high education were less likely to score high in the PDSS-Spanish version. Parity and type of delivery were not significantly associated with positive symptoms of PPD. The most often reported symptom categories among women were SUI (32 %), SLP (25 %), ELB (24 %), and ANX (22 %) (see Table 2).

To ensure the validity of responses, we calculated the INC Index. The INC Index is the sum of the differences in scores on the responses of 10 pairs of items similar in nature of the PDSS-Spanish version. In this study, 93.9 % ($n = 153$) of participants obtained an INC Index of ≤4 which is considered appropriate. An INC Index of 5 was found in the 3.7 % ($n = 6$) of the sample, and INC Index of ≥6 was found in the 2.4 % ($n = 4$) of the participants.

Table 1 Sociodemographics and reproductive characteristics of Chilean women ($N=163$)

Characteristics	Number of women	% of women
Marital status		
– Marriage	43	26
– Live-in partner	63	39
– Single	55	34
Education		
– ≤11 years	44	27
– Completed high school	87	53
– Some college or more	32	20
Employed		
– Yes	36	22
– No	127	78
People living at home		
– ≤5 people	88	54
– ≥6 people	75	46
Monthly income		
– ≤$300	76	47
– <$300	76	47
– Does not know	11	6
Parity		
– Primipara	62	38
– Multipara	101	62
Type of delivery		
– Vagina	104	64
– Cesarean	59	36

Table 2 Symptoms categories of PPD in a sample of Chilean women ($N=163$)

Symptoms category/dimension	Cutoff score*	With symptoms of PPD	Without symptoms of PPD
Sleeping/eating disturbances	≥17	41 (25 %)	122 (75 %)
Anxiety/insecurity	≥15	36 (22 %)	127 (78 %)
Emotional lability	≥16	39 (24 %)	124 (76 %)
Mental confusion	≥13	19 (12 %)	144 (88 %)
Loss of self	≥11	30 (18 %)	133 (82 %)
Guilt/shame	≥11	26 (16 %)	137 (84 %)
Suicidal thoughts	≥6	53 (32 %)	110 (68 %)
Total score PDSS-Spanish version	≥60	73 (45 %)	90 (55 %)

*Cutoff score of significant symptoms for the PDSS-Spanish version (Beck and Gable 2005). Numbers are showing with percentages in parentheses

This is the first known study to use the PDSS-Spanish version in a Chilean population; consequently, particular attention was placed in knowing the reliability of the instrument. Cronbach's alpha of the total PDSS-Spanish version was 0.95. We calculated the correlation between interrelated items and internal consistency with alpha per dimension. Table 3 shows subscales with Alpha ranging from 0.68 to 0.86. The majority of the items showed a moderate to high correlation with the content

Table 3 Intercorrelation of items and internal consistency by dimensions of the PDSS-Spanish version ($N = 163$)

Item per symptom category/dimension	Correlation with content scale	Content scale alpha if item deleted	Total score/content scale alpha
PDSS-Spanish version total score			0.95
Sleeping/eating disturbances (SLP)			0.75
1. I had trouble sleeping even when my baby was asleep	0.43	0.74	
8. I lost my appetite	0.49	0.72	
15. I woke up on my own in the middle of the night and had trouble getting back to sleep	0.62	0.67	
22. I tossed and turned for a long time at night trying to fall asleep	0.60	0.67	
29. I knew I should eat but I could not	0.46	0.73	
Anxiety/insecurity (ANX)			0.68
1. I got anxious over the littlest things that concerned my baby	0.16	0.75	
9. I felt really overwhelmed	0.57	0.55	
16. I felt like I was jumping out of my skin	0.55	0.57	
23. I felt like all alone	0.56	0.55	
30. I felt like I had to keep moving or pacing	0.36	0.65	
Emotional lability (ELB)			0.79
1. I felt like my emotions were on a roller coaster	0.59	0.74	
10. I was scared that I would never be happy again	0.46	0.78	
17. I cried a lot for no real reason	0.63	0.73	
24. I have been very irritable	0.53	0.76	
31. I felt full of anger ready to explode	0.63	0.73	
Mental confusion (MNT)			0.80
1. I felt like I was losing my mind	0.45	0.80	
11. I could not concentrate on anything	0.59	0.76	
18. I thought I was going crazy	0.61	0.76	
25. I had a difficult time making even a simple decision	0.61	0.75	
32. I had difficulty focusing on a task	0.69	0.72	
Loss of self (LOS)			0.80
1. I was afraid that I would never be my normal self again	0.49	0.79	
12. I felt as though I had become a stranger to myself	0.63	0.70	
19. I did not know who I was anymore	0.64	0.71	
26. I felt like I was not normal	0.50	0.75	
33. I did not feel real	0.60	0.72	
Guilt/shame (GLT)			0.83
2. I felt like I was not the mother I wanted to be	0.55	0.82	

(continued)

Table 3 (continued)

Item per symptom category/dimension	Correlation with content scale	Content scale alpha if item deleted	Total score/content scale alpha
13. I felt like so many mothers were better than me	0.71	0.76	
20. I felt guilty because I could not feel as much love for my baby as I should	0.59	0.80	
27. I felt like I had to hide what I was thinking or feeling toward the baby	0.72	0.77	
34. I felt like a failure as a mother	0.58	0.80	
Suicidal thoughts (SUI)			0.86
2. I have thought that death seemed like the only way out of this living nightmare	0.75	0.81	
14. I started thinking that I would be better off dead	0.64	0.85	
21. I wanted to hurt myself	0.65	0.84	
28. I felt that my baby would be better off without me	0.66	0.84	
35. I just wanted to leave this world	0.72	0.82	

Table 4 Inter-scale correlations of the PDSS-Spanish version ($N = 163$)

Dimension	SLP	ANX	ELB	MNT	LOS	GLT	SUI
Sleeping/eating disturbances (SLP)	1.0						
Anxiety/insecurity (ANX)	0.58**	1.0					
Emotional lability (ELB)	0.50**	0.78**	1.0				
Mental confusion (MNT)	0.51**	0.68**	0.70**	1.0			
Loss of self (LOS)	0.43**	0.70**	0.67**	0.75**	1.0		
Guilt/shame (GLT)	0.40**	0.62**	0.68**	0.72**	0.74**	1.0	
Suicidal thoughts (SUI)	0.42**	0.56**	0.54**	0.69**	0.66**	0.67**	1.0
Total PDSS-Spanish version	0.68**	0.86**	0.86**	0.87**	0.85**	0.84**	0.77**

**$p \leq 0.01$

scale assigned. The only exception was the item, "I got anxious over the littlest things that concerned my baby," from the symptom category ANX. The analysis showed that if this item is removed from the content scale ANX, the assigned subscale alpha increases to 0.75. The intercorrelation between the dimensions and total PDSS-Spanish version was significant ($p \leq 0.01$). Loading correlation greater than 0.71 is considered excellent, 0.63 is very good, 0.55 good, 0.45 fair, and ≤0.32 poor (Beck and Gable 2003). Using these guidelines, six of the dimensions (ANX, ELB, MNT, LOS, GLT, and SUI) contributed excellently to classifying participants with positive symptoms of PPD vs. women without symptoms of PPD. The dimension SLP had a contribution considered to be "very good" ($r = 0.68$) (see Table 4).

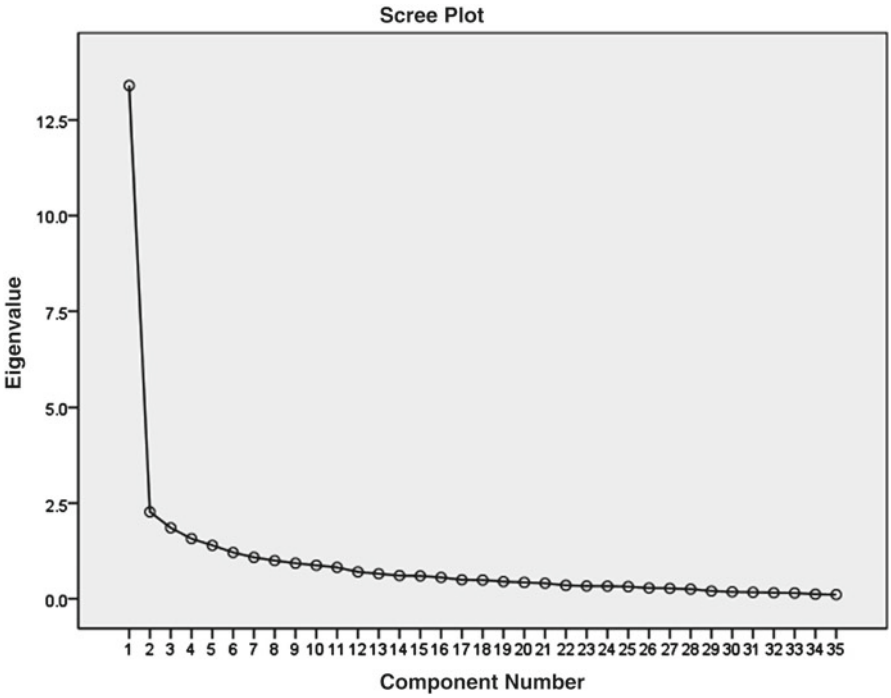

Fig. 1 Graph of Eigenvalues of the PDSS-Spanish version

Factor analysis revealed 35 items with seven components in the matrix, with an explained cumulative variance of 65.1 %. Figure 1 shows the diagram with the factors' eigenvalues; it is observed that factor 1 obtained a high explained variance (eigenvalue = 13.40; variance = 38.3 %). It is further noted that after the first seven factors the slope begins to flatten, which shows small difference scores between factors and indicates that little additional information was obtained by including more factors (Burns and Grove 2001). All the items loaded on the first factor had values greater than 0.40, which indicated that factor rotation was not necessary for the interpretation of the results.

Discussion and Conclusions

The group of participants in this study was fairly homogeneous in demographic characteristics. The majority were living with a partner, had completed secondary education and reported limited income. Most of the women were multipara and had a vaginal delivery. With the exception of education, sociodemographics and reproductive characteristics were not associated with positive PPD screening. Consistent with these findings, other international researchers have reported that sociodemographics

characteristics are not associated with PPD (Alvarado et al. 2000; Evans et al. 2003; Perez et al. 2007; Yong-Ku et al. 2008).

This study substantiates previous findings concerning the high incidence of PPD in Chile (Alvarado et al. 2000; Perez et al. 2007), and reaffirms that PPD constitutes a significant public health concern in Chile. Screening by health providers would allow for early diagnosis and appropriate intervention. Our study found that 45 % of postpartum women seeking health care at public clinics in Chile screened positive for symptoms of PPD. This rate is high compared to rates 10–20 % from developed countries (Baker 2012; Brett et al. 2008; Toohey 2012); however, in a review of PPD research in specific ethnic groups in the USA, Clare and Yeh (2012) found that Hispanics had the highest rate of PPD compared to other ethnic minorities.

Of urgent concern is the endorsement of SUI among participants. Thirty-two percent of participants with PPD reported having SUI, the highest of all dimensions endorsed. This category assesses a woman's contemplation of ending her life as an escape from PPD (Beck and Gable 2002). The authors of the PDSS reported that any score above five indicates that the woman has had thoughts of harming herself. Because suicide is a serious and tragic outcome, the authors recommend that any patient who obtains a score higher than the minimum should be evaluated by a mental health professional to determine the risks, and, if necessary, initiate an intervention to protect her physical integrity (Beck and Gable 2002). In this study, all the women who scored above five for SUI were referred to the Mental Health Department at the Health Center for appropriate psychological management. Although pregnant and postpartum women are at risk for suicide, the risk is higher for nonpregnant/non-postpartum women (Samandari et al. 2011).

In Chile, suicide is a phenomenon that is growing and is most predominant in males. The suicide rate in women is one-fifth that of men (Nahuelpan and Varas 2010). However, although the number of Chilean women who commit suicide is less than Chilean men, the suicide rates for women doubled during the 8-year period from 2000 to 2008 compared to previous years (Nahuelpan and Varas 2010). This is particularly important considering a report that acknowledges that Chilean women age 20–45 are more likely to commit suicide (Madariaga et al. 2010). Depression and ideation of SUI are highly correlated. In the USA while suicide deaths and attempts are lower during postpartum than in the normal population of women, nevertheless, suicides account for up to 20 % of postpartum deaths (Lindahk et al. 2005).

Others symptoms that were commonly reported by participants were SLP, ELB, and ANX. An elevated score in SLP indicates a woman has had difficulties falling and/or staying asleep and/or perceives that her appetite is reduced; an elevated score in ELB suggests that a women feels that she has lost control of her emotional functioning; and a high ANX score indicates that a woman is experiencing significant anxiety with feelings of isolation in her role of motherhood (Beck and Gable 2002). Others authors have reported that anxiety is an important component of PPD (Beck and Indman 2005; Toohey 2012). Anxiety symptoms may be fairly pronounced in some patients and therefore mask the underlying depression (Toohey 2012). When anxiety is a component, depression is more challenging to treat and is more lethal (Fava et al. 2008).

The INC Index evaluates and determines if the participant has the ability to read, understand, and pay attention when answering each item in the questionnaire. In general, the INC score obtained from the participants in this study was appropriate, which indicated that women were attentive when answering the questionnaire and that the questions were asked in a logical manner (Beck and Gable 2002). A small portion of the participants (6.1 %) obtained an INC Index ≥5. This score indicated that these participants did not respond in an organized manner (Beck and Gable 2002). In some cases, the discrepancy between pairs of questions may be caused by misreading an item, so it is recommended that the importance of focusing on reading each item be explained to participants. In addition, respondents should be placed in a quiet and private place to reduce distractions while completing the PDSS-Spanish version. In cases in which the INC Index is high, use of other methods to screen for PPD is recommended (Beck and Gable 2002).

The reliability coefficient of the PDSS-Spanish version was 0.95, indicating that the scale maintains dependability, internal consistency, accuracy, and comparability (Burns and Grove 2001). Polit and Hungler (1999) explain that if a researcher is interested in making group comparisons, the desirable coefficient is 0.80 or greater, but if the assessments are used to make decisions about individuals, the ideal reliability coefficient is 0.90 or greater. The PDSS-Spanish version reliability found in this study was similar to studies in the USA (Clemmens et al. 2004). Items showed a good to excellent correlation with the assigned category dimension, with the exception of the item "I got anxious over the littlest things that concerned my baby" in the symptom category ANX; in most cases, deleting an item did not increase the subscale's reliability.

Construct validity is important for an instrument like the PDSS-Spanish version. This shows how well the instrument is measuring what it is intended to measure (Polit 1996). The construct validity of the PDSS-Spanish version depends partly on the degree of intercorrelation between the subscales (Beck and Gable 2002). In this study, all subscales showed high to moderate intercorrelation with each other. According to Beck and Gable (2002) this strong correlation is typical in many instruments measuring psychosocial and emotional disorders; theoretically, specific measurements of the scale represent an interrelated construct.

Factor analysis is also used to validate previously developed instruments (Polit 1996). In this study, exploratory factor analysis identified seven components, and all the items loaded with values greater than 0.40 on the first component. One possible interpretation of this result is that, in this population, the PDSS-Spanish version worked as a one-dimensional scale. This interpretation should be taken with caution given that the sample in this study was small. A sample of at least 15 participants per item of the scale is recommended (Burns and Grove 2001).

We concluded that the PDSS-Spanish version obtained adequate reliability. Moreover, it was brief and acceptable to participants and provided relevant information regarding symptoms of PPD. The sample was composed exclusively of patients attending Primary Care Clinics in Arica, Chile; therefore, the generalizability of the findings is limited to women with similar characteristics. It is recommended that the PDSS-Spanish version be tested in other Spanish-speaking regions and with a larger sample.

Implications for Practice

PPD is a major public health problem internationally. Primary providers are increasingly involved in the health care of women and their children. Childbearing offers a unique window of opportunity to screen for PPD and is a situation in which clinicians can develop a trusting relationship with the mothers. This is especially true in countries like Chile where the majority of women receive prenatal care from midwives in public outpatient clinics (Health Ministry of Chile 2008). Screening for PPD with validated tools is a simple practice that could make a significant difference for prompt diagnosis, prevention and management of PPD. Goldsmith (2007) underscores the importance of screening in the identification of PPD and the positive effects this produces on the health and quality of life for women and their infants. In Chile, there is a new initiative (Health Ministry of Chile 2008) that acknowledged the necessity for PPD screening. The Chilean screening system for PPD covers virtually the entire population; however, women are dealing with barriers accessing the treatment. Many developing countries with national guidelines for perinatal mental health problems deal with the same difficulties. New research studies are necessary to acknowledge the barriers to access treatment for this devastating disease. One of the main advantages in using the PDSS-Spanish version as a screening tool was its multidimensionality, capturing depressive symptoms including sleeping disturbances, anxiety, and cognitive impairment that are not detected by other instruments (Clemmens et al. 2004; Rychovsky and Brady 2008).

It is important to highlight that this research was conducted in a clinical setting in a manner consistent with routine clinical care. Assessment and intervention for PPD by clinicians is essential for pregnant and postpartum women worldwide. In fact, many of the women in our study who reported positive symptoms of PPD would not have been identified had it not been for assessment with the tool. This study setting can easily be adapted to perinatal clinical settings to increase PPD screening in women. Discussion of PPD and the availability to reliable screening tools should be included in the training of health professionals in order to prepare them with the skills and measures required in the identification and prompt referral of these patients.

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Perinatal Depression Treatments for US Latinas: A Review of Research Findings

Luis H. Zayas and McClain Sampson

Introduction

Motherhood for most Latinas[1] in the United States is set in the context of many stressors, primarily poverty, single-parenthood, inaccessibility to health services, low levels of education, and discrimination. In 2010 over a quarter (26.7 %) of Hispanics, more than 13 million people lived below the established poverty level. This is more than double the 10 % rate of non-Hispanic whites (Lopez and Cohn 2011). Hispanics make up nearly 3-in-10 of the nation's poor (28.6 %; Lopez and Cohn 2011). Therefore, a large proportion of the nation's 50 million Hispanics are raising their children in poverty, which comes with difficulties accessing medical and psychiatric care, especially for undocumented women. Barriers include lack of insurance, under-insurance, stigma surrounding depression and mental illness as well as overt discrimination by health care providers.

Undetected, untreated, or under-treated perinatal depression can have many untoward effects on maternal functioning and infant development. Depression in women of childbearing age directly affects their parenting and the infant's development. When mothers are depressed, they may not respond to the child in the manner and timeliness that the infant needs, which is associated with insensitivity in mother–infant interaction and impacting infant attachment processes. Extant

[1] We use the term Hispanic and Latina interchangeably to denote women whose heritage is traced to Spanish-speaking countries of Latin America.

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research shows that infants of depressed mothers may acquire their mothers' depressive features and show "depressed" behavior, even when held and played with by nondepressed female adults (Field et al. 1988). Poverty and its consequent stressors combine to affect parenting. Poor parents tend to show less affection and responsiveness to children's socioemotional needs, express more punitive child-drearing attitudes, and use punishment and demand obedience rather than explanation, reasoning, or rewarding positive behaviors (Field et al. 1985; McLoyd 1990; Boyd et al. 2006). When a mother is depressed, she is likely to be less spontaneous, responsive, and nurturing toward her newborn, and with older children she may use corporal punishment (Boyd et al. 2006). When a mother is not fully engaged with her infant due to depression, the child's language, social, emotional, and cognitive development may be affected seriously. The infant might show higher levels of inconsolability and excessive crying (Zayas et al. 2005).

Understanding the impact of poverty and other stressors on Hispanic women, and how we can best intervene, is important for a several key reasons. One is that the Hispanic population is growing and diversifying. Between July 2006 and July 2007, about 1.4 million Hispanics were added to the total US population. That meant that in the United States one of every two persons who was born or immigrated was Hispanic. While immigration accounted for some of the increase, it was Latinas' birth rates that influenced this growth. Using 2006 as a representative year, Hispanic women had a birth rate of 23.4 % compared with about 11.6 % for non-Hispanic women and about 16.5 % for African-American women (Hamilton et al. 2007).

Another reason for our interest in the mental health status of Hispanic women, especially immigrant Latinas, is that their comparatively higher birth rates mean their offspring are leading the way toward the replenishment of the US population for decades to come. As a country's population ages, it is critical that "replacements" are born or allowed to immigrate, thereby ensuring that the labor force will have the requisite number of workers to take over as many in the population retire and die. Many European countries are facing a shortage of the replacement population because of low birth rates and fewer women of childbearing age. Estimates show that US Hispanic births play an important role in replenishing the population that the United States will need to ensure its economic prosperity and national security. The current US population growth is largely attributable to immigrants and their children (Lundberg and Pollak 2007). While the United States is replacing its population at a rate of 2.1 children per woman, other major developed countries have lower population replacement rates due to fewer births per woman. In Western Europe (e.g., France, Spain) and in Asia (e.g., Japan), the need for replacement populations is not simply because of the "graying" of the population but also because younger women in these regions are having fewer children on average, with birth rates below those needed to continue the nations' legacies. The fertility rate of US-born women, which includes some Latinas, is lower than the fertility rate of 2.1 that would be needed to keep the US population replenished (Dye 2005; Lundberg and Pollak 2007). However, foreign-born (i.e., immigrant) women in the United States are exceeding these birthrates, thereby providing the much-needed replenishment populations. Immigrant Hispanic women have a birthrate of 2.8 children per

woman and non-Hispanic immigrant women have a birth rate of 2.2 children. The fact that the median age for all Hispanics in 2011 was 27 years, compared to 36.8 years for the US population as a whole, shows that Hispanics in the childbearing age group are younger than other groups. As a younger population generally and one with a high birth rate, Hispanics will be an important source of US population replenishment.

If young immigrant women, mostly from Mexico, Central and South America, and the Caribbean, and other continents, are replacing the aging US population, then the pregnancy, motherhood, and well-being of these women is an important public health issue. Altogether, the impact of maternal depression across the perinatal period on the well-being of mothers and infants coupled with growth and birth-rates of US Latinas give us cause for considering ways of preventing and treating perinatal depression. In this chapter, we review the research on interventions for prenatal and postpartum depression (PPD) that have been tested in large part or exclusively on Latinas. We describe the intervention studies and present their effectiveness with Hispanic women. The chapter concludes with a discussion of implications for future research and clinical care of Latinas across the perinatal period.

Latinas in Intervention Research

Perinatal depression is a term used to refer to depressive mood disorders that occur during pregnancy or within 1 year of giving birth. The intervention research literature has examined treatments that have occurred during the perinatal period or exclusively in the postpartum period. In this chapter, we consider these interventions together.

Depression during pregnancy often is associated with depression after pregnancy (O'Hara 2009). Prepartum depression has received much less attention than PPD. PPD is generally known to affect 1 in 8 women and 1 in 4 among non-White, low-income women (Hobfoll et al. 1995). Research among pregnant and postpartum Hispanics has revealed high risk for PPD as evidenced by prevalence rates ranging from 23 to 51 % (Chaudron et al. 2005a; Lara et al. 2009; Yonkers et al. 2001; Zayas et al. 2002). Defined with the same clinical criteria as major depressive episode, PPD has a specific "postpartum onset" within 4 weeks after childbirth (American Psychiatric Association 2000). The time frame for identifying PPD is generally thought to extend at least up to 3 months (Wisner et al. 2002) and up to 12 months after childbirth in research and clinical settings (O'Hara 2009).

A few things should be considered when interpreting research findings of predictors and prevalence of perinatal depression among Hispanics. Hispanics are often studied as one homogenous group rather than examining prevalence among subsets of culture and different nativity. This is important since studies suggest increased acculturation among certain ethnic groups is associated with increased depression rates (Escobar et al. 2000; Vega et al. 1998). Immigration status and stress, length of

residency, and socioeconomic status also add to the challenges of studying depression among Hispanic women. Most Hispanic samples that are included in prevalence and intervention research are already at risk for developing major depression due to their socio-demographics, such as young maternal age, low levels of education, income, and employment rates as evidenced by research we present here. Given this, it is important to keep in mind the limitations of generalizability for treatment studies of perinatal depression among Hispanics.

Although we are beginning to understand the breadth of prevalence of PPD among various populations, less is understood about the effectiveness of interventions and what, if any, adaptations must be made for Latinas. Very little of the intervention literature addresses psychosocial treatments aimed at reducing depressive symptoms among Hispanics. A widely cited study used to support the need for early intervention among Hispanics by Yonkers et al. (2001) compared rates of onset and prevalence of PPD between African Americans and Hispanics. They found that most women had the onset of depression during pregnancy rather than postpartum. Rates of depression after childbirth remained high for Hispanics (US-born and immigrant) in the postpartum period with 35 % experiencing clinically significant depressive symptoms within 1 month of birth. Bilingual Hispanics had a higher rate (43 %) of increased depressive symptoms than solely Spanish-speaking Hispanics (33 %). Yonkers et al. speculated that more acculturated Hispanics are at greater risk for developing PPD. Beck's (2006) review of perinatal studies investigated the effect of acculturation among Hispanics revealed that research findings differed mainly because of inconsistency of acculturation measures used. Acculturation is a complex phenomenon that likely requires multidimensional measures and frameworks, as it likely effects the beliefs and behaviors of women with perinatal depression and treatment acceptability (Beck 2006).

The most common treatment models tested that have been used for perinatal depression among various populations were based on some form of interpersonal therapy (IPT) or cognitive-behavioral therapy (CBT). Dennis (2004) confirmed this through a review of 26 studies that tested the efficacy of various treatment methods. The most promising results employed IPT and CBT. There is evidence to support brief, time-limited treatment rather than long-term therapy. Dennis stated that results from all studies were compromised by methodological limitations such as small sample size and no adequate control group. We now detail the treatments for perinatal depression with Hispanic women and other racial and ethnic groups that are most frequently cited in the literature and provide the theoretical underpinnings for each. In Table 1 we highlight the methods and main findings of the studies reviewed here.

Cognitive-Behavioral Interventions

Zayas et al. (2003) tested the efficacy and feasibility of a multicomponent psychosocial intervention among 187 low-income African American and Hispanic women

Table 1 Overview of studies reviewed

Study	Population	Intervention	Results and lessons learned
Le et al. (2008)	Hispanic women in the United States and Mexico	Two randomized clinical trials (RCT) focused on preventing postpartum depression	Both sites had recruitment rate around 70 %. US sample had fewer depressive symptoms than Mexico sample. Incorporated traditional Latino values and culture; awareness of cultural norms for women promoted passive acceptance of intervention but not following through with study. Used bilingual and/or bicultural methods to increase number of interviews and screenings. Face-to-face recruitment preferable in these populations. Focused more efforts on preventative measures. Stigma and discomfort may actually be less for preventative measures
Le et al. (2011)	$N=217$ women, mostly Salvadoran, <1 % US-born recruited from community health center and prenatal care clinic	RCT-replication and adaptation of Mamás y Bebés. Eight 2-h weekly prenatal group classes. Follow-up: three booster sessions based on cognitive-behavioral treatment (CBT) of mood regulation, social learning, attachment theory, and sociocultural issues at 6-week, 4- and 12-month postpartum	Intervention associated with lower depressive symptoms. Cumulative incidence of major depressive episode (MDE) was 9.6 % in the control group and 7.8 % in the intervention group. Reduction in depressive symptoms was only short term and did not persist into postpartum period. On average women attended only four sessions. Decrease in depression was notable after four sessions but no main effect of group or time. For all mothers, depressive symptoms decreased from pregnancy to postpartum regardless of group. 30 % lost to follow-up
McKee et al. (2006)	$N=187$ low-income African American and Hispanic women from three inner-city community health centers receiving prenatal care before 32nd week gestation	Followed from third trimester of pregnancy to 3 months postpartum. Women with elevated depression were randomized to either the experimental intervention ($n=57$) or treatment as usual (TAU) ($n=43$). Nondepressed women served as comparison ($n=87$). TAU was basic clinic service	Depression scores decreased significantly for all three groups of women. Both intervention and TAU equally effective in reducing depression. No significant change in total functional support scores. Stress management was more important to participants than reducing depressive symptoms. Intervention efforts among these types of populations may be more effective if a stress management component is primary. Most women preferred to meet at a central location rather than a home visit. TAU and experimental intervention may not have been different enough from one another to cause large effects A complex, time-consuming intervention is difficult to implement in a community-based health center. It seemed especially burdensome on Hispanics with less residential stability

(continued)

Table 1 (continued)

Study	Population	Intervention	Results and lessons learned
Miranda et al. (2003)	267 mostly African American and US-born Latinas randomized into three groups. Medication only $n=88$; CBT $n=90$; treatment as usual = 89	Random assignment to TAU or multicomponent psychosocial treatment Manualized eight-session CBT (Miranda and Muñoz 1995) Four child development psychoeducational modules and social support building sessions (SSB)—occur twice monthly in person or by phone Follow-up interviews conducted for all participants at 2 weeks and 3 months postpartum. Videotaped assessment of mother–infant interaction occurred at 3-month visit RCT testing effectiveness of reducing MDE among low-income non-White women. 12 weeks CBT, medication, or treatment as usual	Medication, or individual or group CBT was more effective in treating depression than usual care community referral. Those in community referral made appointments for mental health but did not attend. Interventions were effective at reducing depression but multiple supports for low-income women needed to be in place to recruit and retain them in the study. Extensive outreach, calling multiple times, helping with tangible factors (e.g., childcare, transportation, multiple points of contact) helped keep women engaged. Rapport was extremely important: it took time to build trust within the population
Muñoz et al. (2007)	Low-income pregnant Latinas receiving prenatal care in public hospital All women were high risk for developing postpartum, depression (based on previous research. Past Hx of MDE and CES-D ≥16)	RCT testing effectiveness of culturally relevant CBT to reduce perinatal depression. 12-week Spanish and English prevention intervention using an adapted CBT. Four booster sessions at 1, 3, 6, and 12 month postpartum	No effect-size differences between groups. Future studies should use global measure that "captures the interrelationship between depression symptoms and ability to carry out everyday activities" (p. 80). Mood management course may not have stigma if given in medical setting instead of mental health setting. It is possible to implement interventions with hard-to-reach sample. High retention at 12 months (91 %) due to providing child care, transportation, rescheduling interviews. Shorter treatment may be more feasible for the population. Incorporating sociocultural aspects is key to keeping women engaged

Spinelli and Endicott (2003)	50 recruited and randomized; 38 women included in analysis	Randomized controlled trial testing the effect of IPT compared to parenting education sessions	Although both groups experienced declines in depression over time, women receiving IPT had significantly lower depression ratings on all measures with a steeper decline in the last 5 weeks
	Sample analyzed ($n=38$) pregnant women 25 Latina, 11 White, 2 Black. 92 % Latina, mostly immigrants from Dominican Republic. An outpatient maternal mental health program, New York City	IV group ($n=21$) received 45 min IPT sessions per week in a 16 week offered bilingually. Comparison group ($n=17$) also received 45 min sessions for 16 weeks but content of course focused on developmental stages of pregnancy, parenting and childhood	Improvement of >50 % in mood symptoms and 60 % recovery rate based on measures of severity and improvement in the IPT group compared to the control group
Urizar and Muñoz (2011)	Women and their infants followed from pregnancy to 18-months postpartum ($n=86$ at baseline; $n=75$ at 6 months postpartum, $n=46$ at 18 months postpartum). 80 % Spanish-speaking; 78 % born in Mexico or Central America	Utilization of the Mamas y Bebes cognitive approach with biomarkers of stress. Information to teach stress management. 12-week prenatal course focused on helping women create a healthy physical, social, and psychological environment and four booster sessions (1, 3, 6, 12 months postpartum) to review course material	Baseline: Cortisol levels lower for women in the cognitive-behavioral stress management condition compared to those in the low-risk comparison condition. Women with higher depressive symptoms had higher perceived stress levels and higher likelihood of depression history. Positive affect associated with more education, lower depressive symptoms, and no history of depression. Negative affect associated with greater perceived stress and depressive symptoms 6-months postpartum: Higher cortisol levels in women whose infants had birth complications. High stress at baseline associated with higher perceived stress and cortisol levels. Higher cortisol levels in infants of mothers with high cortisol levels, those with siblings, older mothers, and boys, those requiring oxygen at birth, those not breastfed, or of mothers with history of depression 18-months postpartum: Women with depression history and English-speaking women had higher cortisol levels compared to those without depression history or who were Spanish-speaking Women with high perceived stress during pregnancy and at 6-months postpartum also had high perceived stress at 18-months postpartum

(continued)

Table 1 (continued)

Study	Population	Intervention	Results and lessons learned
Urizar et al. (2004)	*N* = 41 women; 70 % in second trimester of pregnancy; 81 % Spanish-speaking; 57 % Mexican-born	Longitudinal stress-reduction condition instructed participants to eliminate stressful activities and increase relaxation	Significant decreases in morning and evening stress ratings, depressive symptoms, and negative affect in stress-reduction condition compared to non-stress-reduction condition. Significant decreases in morning cortisol levels after controlling for gestational age but no significant differences for positive affect or evening cortisol levels. Women in first trimester had significant decreases in evening cortisol levels compared to women in second or third trimester
Zlotnick et al. (2001)	*N* = 35. 46 % Caucasian. No ethnicity breakdown given. 77 % single. Pregnant women receiving public assistance. 20–32 weeks pregnant and clients at a prenatal clinic in hospital who met at least one risk factor for postpartum depression	Interpersonal therapy (IPT) consisted of four 60-min group sessions over a 4-week period (usually 4–6 women per group). Most women attended at least three sessions; 1 woman in IPT and 1 woman in treatment as usual dropped out. Phases of IPT focused on education of postpartum depression, role transitions, setting goals/developing supports, skills for resolving interpersonal conflicts	IPT prevented the occurrence of major depression within 3 months postpartum. Significantly greater change in depression scores before and after IPT than women in control

Zlotnick et al. (2006)	99 women randomly assigned. 44 Hispanic, 28 Caucasian, 17 African American, 2 Asian, 8 "other." No ethnicity breakdown given. 77 % single. Only $N = 86$ were available for analysis at 3 month follow-up Pregnant women receiving public assistance. 20–32 weeks pregnant and clients at a prenatal clinic in hospital who met at least one risk factor for postpartum depression	Interpersonal therapy (IPT) consisted of four 60-min group sessions over a 4-week period (usually 4–6 women per group). Most women attended at least 3 sessions; 7 woman in IPT and 6 woman in treatment as usual dropped out. The 4 sessions of IPT replicated information delivered in Zlotnick et al. (2001). An additional booster session was added after IPT delivery (no specified time frame given). Booster session aimed to reinforce skills learned and address any current or anticipated mood or interpersonal relationship changes	Women in experimental group were less likely to develop PPD (4 %) at 3 month follow-up than women in standard care group (20 %)

in a primary care setting. Hispanics comprised 57 % of the sample. Their intervention was designed to follow women from late pregnancy to 3 months postpartum and involved three components: (1) manualized eight-session CBT (Miranda and Muñoz 1995); (2) Four child developmental psychoeducational sessions, and (3) twice monthly in person or via phone social support building sessions (McKee et al. 2006). Postpartum assessments also included a videotaped assessment of mother/infant interaction at 3 months. Depression scores decreased significantly for both the experimental intervention group and usual care group (social services offered at clinics). Researchers offered several possible explanations for why there was no difference in treatment effect between groups. The authors noted that their multicomponent intervention may have unintentionally been too similar to the usual social services offered at the clinics where intervention took place. Also, women in the treatment group received an average of only 2.8 sessions (as opposed to full dose of eight). They also noted that it may be an effect of depression naturally declining over time after pregnancy. The authors observe a potential discordance between a research-driven problem and lived experiences within the population. They state, "it became clear to us that focusing on reducing their depression was much less relevant an outcome than being able to manage the common stresses in life" (McKee et al. 2006, p. 76). The authors also offer suggestions for managing complications of intervention research within a primary care setting (Zayas et al. 2004).

Miranda et al. (2003) conducted a three-arm, 8-week randomized controlled trial (RCT) to test the effect of CBT versus antidepressant medication or treatment as usual among a sample of low-income African Americans, Whites, and Hispanics who were receiving services from Women, Infant, and Children program services. While this study did not target PPD specifically, the sample was comprised of women who received services at WIC, a federal program that only serves pregnant and postpartum women. Results show that the medication intervention or the CBT interventions were more effective at reducing depression than the usual care (referral to community resources for counseling). This study is often cited to show that evidence-based, non-medication therapy is effective in low-income, culturally diverse samples. But, the researchers stress that the results were effective largely because of extensive outreach efforts to recruit and retain the participants. Techniques used in this study included calling multiple times to make contact and helping with tangible issues such as child care and transportation. These findings are helpful in understanding how to make interventions accessible, but there are no specific indications for Hispanics.

Perhaps one of the most often cited and adapted interventions for perinatal depression among Hispanics in the United States is the Mamás y Bebés project (Muñoz et al. 2007). This study was an RCT that tested the effect of a 12-week prevention intervention of an adapted CBT among low-income, pregnant Latinas who were receiving prenatal care at a public hospital in California. Mothers who participated were identified as "high risk" based on a previous history of major depressive episode and a clinical-level score on an objective measure of depression. The assessment for high risk was created by Le et al. (2004). The intervention was crafted from concepts of social learning theory (Bandura 1977) as applied to depression by

Lewinsohn et al. (1992) and adapted for low-income populations (Muñoz 1996). The premise of the intervention was that both the internal and external realms of an individual's reality must be addressed to maintain a healthy mood state. When extended to low-income populations who suffer perinatal depression, the goal is to increase a mother's sense of self-efficacy and agency over both realms by teaching the mother to recognize which thoughts and behaviors influence her mood and the effect of mood on maternal infant bonding. The intervention is unique in two ways. First, it was developed specifically for mothers of Latin American descent and the researchers extensively considered culture when developing the intervention. For example, the CBT incorporated traditional Latin American cultural beliefs such as collectivism and *familismo* (the value of the centrality of the family and the sense of obligation and duty to family first). It also conveyed respect for traditional values and beliefs of pregnancy and motherhood, and religion as a coping tool and addressing attitudes of mental illness (Muñoz et al. 2007).

The intervention was a 12-week adaptation of CBT during pregnancy with four booster sessions offered up to 1 year postpartum. The intervention was offered in English and Spanish and a control group received treatment as usual. Seventy percent of the overall sample ($n=41$) were Spanish-speaking women born in Mexico and Central America with an average age of 19 at time of immigration. The incidence of major depressive episodes was lower for mothers in the intervention group, but effect-size differences were not statistically significant. Researchers demonstrated feasibility to implement this kind of intervention with a typically hard-to-engage population and concluded that mental health interventions in medical settings may hold less stigma than interventions in mental health settings. They had unusually high retention rates at 1 year after initiation (91 %), which the researchers attributed to provision of child care, transportation, and flexibility in scheduling. The success of implementation, decline in depressive symptoms, and positive acceptance by participants spawned adaptation studies of Mamás y Bebés.

Le et al. (2011) conducted a replication and adaptation of the study with a larger sample ($n=217$). All participants were pregnant and considered high risk (Le et al. 2004). Most were Salvadoran and others were from Central or South American countries. The intervention was delivered in weekly 2-h sessions and followed by three postpartum booster sessions. Final results showed a significant reduction in depression among the treatment group but the difference was only during pregnancy and did not extend to postpartum. Researchers reported that women attended an average of four sessions (out of eight) and decreases in depression were notable after four sessions, which suggested the possibility of success with a shorter CBT adaptation. The investigators reported a decrease in depression from pregnancy to postpartum, regardless of group. Also noteworthy is that 30 % of participants were lost to follow-up.

Urizar's work (2011; 2004) extends the Mamas y Bebés line of research by incorporating stress management techniques and adding measurement of cortisol levels to the CBT intervention. Urizar and Muñoz (2011) followed 86 Hispanic women, 80 % of whom were Spanish speaking, and 78 % were born in Mexico or Central America, through pregnancy to 18 months postpartum. Women considered

high risk for developing a major depressive episode were randomized into cognitive-behavioral stress management (CBSM) or usual care groups. The researchers also used a low-risk control group of mothers who did not have depressive symptoms. Intervention involved a 12-week CBT course with added information to teach about stress management and taught stress-reduction techniques. Outcomes measured included measures of depression and mood, biomarkers of salivary cortisol levels of the mother, and collection of cortisol of the infant in postpartum time period. Results showed that both mothers in the CBSM and their infants had significantly lower cortisol levels at 6–18 months postpartum. Researchers point to the efficacy of teaching stress management along with the Muñoz et al. (2007) Mamás y Bebés intervention in an effort to reduce high levels of cortisol during pregnancy. Even without a course of CBT, researchers found that simply giving instructions to decrease stressful events and increase behaviors that are relaxing significantly reduced cortisol levels, improved mood, decreased stress, and resulted in increased positive behaviors among a group of pregnant Hispanics (Urizar et al. 2004).

Interpersonal Therapy

Other perinatal depression treatments have used primarily IPT, which operates from the theoretical perspective that mothers in the perinatal period will experience role disruption in their relationships. They may also feel a discrepancy between the support they need and desire and the support they actually receive or perceive as being received from their interpersonal relationships (Beck 2002). According to Beck (2002), IPT for PPD typically focuses on four different interpersonal areas: role transitions, interpersonal disputes, grief, and interpersonal deficits. IPT uses educational sessions, typically led by a mental health professional, to help the client conceptualize depression within an interpersonal context and examines how aspects of relationships contribute to the depression. Interventions are meant to be delivered in weekly sessions and are based on the manual by Klerman and colleagues (Klerman et al. 1984). O'Hara et al. (2000) reported significant decreases in PPD symptoms for women receiving IPT but the sample was mostly White and had high educational attainment.

We identified two studies that employed IPT for perinatal depression with Latinas. Spinelli and Endicott (2003) implemented a RCT testing the effect of IPT compared to parenting education sessions among a sample of low-income, mostly Hispanic pregnant women ($n=38$). Most of the Hispanics, primarily Dominican, were immigrants, most were unmarried and of low-income status. Spinelli and Endicott noted that almost half the sample had reported a history of child abuse and 73 % reported history of depression. Researchers chose IPT because of its documented efficacy in treatment of depression and because it is an alternative to psychotropic medication during pregnancy. The intervention consisted of weekly 45-min sessions for a 16-week period, and all written and verbal materials were offered in English and Spanish. Researchers used several measures of depression as

well as a global clinical index to assess severity and track improvement of depressive symptoms. Therapists used an IPT protocol manual specific to antepartum depression (Spinelli 2001). The comparison group was also offered weekly classes for 16 weeks but the content focused solely on developmental phases of pregnancy, child development, and parenting issues. Both groups experienced declines in depression over time but women receiving the IPT intervention had significantly lower depression scores (Spinelli and Endicott 2003). The investigators reported the steepest decline in symptoms occurred during the last 5 weeks of treatment and CGI scores revealed dramatic "recovery" scores for the treatment group based on change in depressive symptoms. The authors concluded that although the study's generalizability was limited by small sample size, the intervention appeared to be efficacious for low-income, high risk Hispanic mothers.

Zlotnick et al.'s (2001) study pilot tested the efficacy of a brief four-session IPT-informed intervention to determine if a shortened model of IPT could prevent the occurrence of depression after birth. Zlotnick's sample of 35 women were mostly non-White (ethnic/race differences not provided) women who received public assistance, were between 20 and 32 weeks pregnant and attended a prenatal clinic in a large hospital. Women were considered "high risk" of developing PPD if they reported at least one of the following: previous experience of major depressive episode or PPD, mild to moderate levels of depression, low social support or life stressor within past 6 months. After this initial screening, high risk mothers were randomized into two groups. The experimental treatment group received four 60-min group sessions over a 4-week period and the comparison group received "treatment as usual" which included typical prenatal services offered at clinic. The four sessions focused on education about perinatal depression, discussion of role changes for the mother, setting goals and developing support systems and learning skills for resolving interpersonal conflicts. Researchers reported that most women attended 3 of 4 sessions. Results showed a significant decrease in depressive symptomatology for the women in the intervention group and women in the intervention group had no occurrence of PPD. Thirty-three percent of women in the treatment as usual group reported PPD during the 3 months following birth, whereas none of the women in the treatment group reported symptoms.

A more recent study by Zlotnick et al. (2006) replicated these positive results among a larger sample ($N=86$). In this study, high risk mothers received either standard care at a prenatal medical clinic or a four-session IPT intervention with an additional booster session after IPT. At 3 months postpartum, fewer mothers in the experimental group (4 %) had PPD than mothers who received standard care (20 %). Zlotnick's work shows promise for a fairly brief intervention in a medical setting.

Summary and Implications

A small number of cognitive-behavioral and interpersonal therapies for perinatal depression have been reported and are the most commonly cited in the intervention literature that include Latinas in the United States. There are promising findings

regarding effectiveness of brief interventions. Zlotnick et al.'s (2001) study showed effect after just four sessions of IPT and Le et al.'s (2011) adaptation of Mamas y Bebés CBT intervention found a notable reduction of depression after four sessions.

These studies indicate that psychosocial interventions delivered during pregnancy can have a lasting effect in the postpartum period, although research is needed to examine effects beyond the first 3 months postpartum. The effects of prenatal interventions may have the most impact in the early postpartum period, but factors affecting mood in later postpartum may be different and perhaps more complex than we currently understand. Beyond the early months postpartum, women may be dealing with different psychological issues of adjustment to motherhood, role transitions with their families and partners, the infant's development and needs, and their own physiological changes after giving birth. Existing research does not address these issues but leaves open important areas for future investigations.

Interestingly, a few studies report decreases in depression for both intervention and comparison groups (McKee et al. 2006; Muñoz et al. 2007; Spinelli and Endicott 2003), suggesting that perhaps the act of talking to someone else and receiving emotional or instrumental support is helpful even if the discussion does not involve a specified protocol for depression reduction. For example, McKee et al. and Muñoz et al. speculate that the comparison groups in their studies may have felt relief from depression when professionals engaged them in discussions and provided education on parenting or child development. The implication may be that women, Hispanic, and others find worth in receiving organized help from clinics, hospitals, and other community agencies and institutions. While it may appear that professionals delivering evidence-based interventions are most suitable for reducing perinatal depression, a review of over 30 intervention studies by Boath and Henshaw (2001) indicates that the effectiveness of the interventions occurred regardless of their theoretical basis or the professional qualifications of those delivering the intervention. The effectiveness of the interventions did not differ whether the treatments were delivered by doctoral, master, or baccalaureate degree holders, or women from the community (such as community health workers or *promotoras*). The positive effects were the same. What the interventionists provided was important relational, psychoeducational, and organized and institutionally supported help. This may explain why samples receiving specialized treatments or service-as-usual regimens did not differ greatly in outcomes. Testing cost-effectiveness along with clinical-effectiveness in treating women for perinatal depression for Latinas and non-Latinas alike is an important topic for future research and public health programming.

There are limitations in the studies that we have reviewed in this chapter. Most studies were made up of small samples that grouped Latinas from different Hispanic subgroups together and were made up of young, low-income, mostly urban Latinas. Starting with small sample sizes makes attrition a more serious concern since studies often suffered from loss to follow up of substantial proportions of their samples. Accessibility to professional help for perinatal depression may be obstructed by language barriers, time constraints, child care needs, transportation, and other logistical challenges (Miranda et al. 2003; Muñoz et al. 2007). Chaudron et al.'s (2005b)

survey of Hispanics found that nearly a quarter of postpartum mothers self-identified as suffering some depression and felt they needed help, yet only half of them were given information by their health care providers. Mothers and some providers tend to rely on their own emotional experience to identify depression whereas some providers watch for symptoms or use diagnostic tools to detect symptoms, without taking culture or context into consideration. Given that language barriers will often exist for mothers who speak Spanish, an informal discussion of emotions may be a more relevant way to detect signs and symptoms of perinatal distress than administering standardized measures alone.

Findings from qualitative research support the significance of these barriers and also provide some insight into what might help US Latinas enter treatment. In one study of a group of ethnically diverse women during pregnancy (about one-third Latinas), one quarter of the women discussed emotions during their prenatal visits and 81 % of these discussions were initiated by the doctor (Sleath et al. 2005). Whereas Chaudron et al. (2005b) found that Latinas reported needing help[2], Sleath et al.'s Hispanic sample wanted more time spent on discussing emotions with providers (more so than non-Hispanic Whites and African Americans). In another study of 12 s-generation Hispanic mothers seeking treatment for depression, a mother's impetus to get help was often hampered by her reluctance to give priority to her own needs in addition to the demands placed on them by busy schedules that created time constraints (Pieters and Heilemann 2010). Interviews revealed that mothers were intrinsically motivated to get professional help and believed that counseling would help improve their depression. Pieters and Heilemann discuss the participant's reliance on "pathfinders"—friends, family, or providers who the mothers trusted—to pave the way toward initiating and adhering to treatment. Pathfinders are people who could speak to the mothers empathetically in nonmedical language. These findings add support to the use of *promotoras* or peer counselors to raise awareness of perinatal depression and benefits of treatment. Also of importance, mothers expressed more motivation to get help for their own depression if they saw how it would positively affect their child and family.

The direction for future research emerges naturally from the review of past intervention efforts. Studies with larger sample sizes will not only yield greater statistical power but also reduce the effects of the attrition that inevitably occurs in intervention research with vulnerable populations, particularly in the context of community health centers (Zayas et al. 2004). The design of interventions must be realistic with respect to the number of sessions, and the overall time demands placed on Latinas during and after pregnancy. These interventions must reflect the realities of their lives and their cultures. Furthermore, recruitment of samples and the effects of the dosage of a treatment should not be considered without attention to the cultural values, and family and social contexts that US Latinas possess (Le et al. 2008). Traditional gender roles must be considered when designing perinatal mood interventions for Hispanic women as traditional roles make it difficult for women to admit negative moods or need for help.

[2] The authors of the study authors thought the question was conducive to an affirmative response.

Finally, the transition to motherhood by Latinas and the role of extended family are important elements to include in future research, for it is in these developmental and family contexts that depression may be averted and treated. Effectiveness of interventions must also be measured beyond the first few months and into the first year postpartum. If indeed the differences in effects between professional and non-professional interventionists are insignificant, then balancing the cost of interventions and the effectiveness of the personnel delivering the treatment can have important consequences for how we design our public health programs.

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Psychosocial and Cultural Considerations in Detecting and Treating Depression in Latina Perinatal Women in the United States

Emma Robertson Blackmore and Linda Chaudron

Overview of the Chapter

Pregnancy and childbirth (i.e., the perinatal period) are well established as a time of increased risk for the development of serious mood disorders. Perinatal depression is an established significant public health concern (Wisner et al. 2006) because of its prevalence and known impact on adverse birth outcomes (Grote et al. 2010), maternal mental health (including risk of future depressive episodes related and unrelated to childbirth) (Wisner et al. 2001), and the long-term health of the child, including behavioral and emotional problems (O'Connor et al. 2002), ongoing cognitive impairments (Hay et al. 2001), and altered neuroendocrine outcomes (Halligan et al. 2007).

Census estimates show that Latinos continue to be the largest minority group in the United States, accounting for 16 % of the total population (Ennis et al. 2011). Furthermore, Latinas have the highest birthrates of all racial/ethnic groups in the United States. (Hamilton et al. 2006). Although there is a substantial literature on perinatal depression, relatively little is known about perinatal depression among Latina women living in the United States. This chapter will provide a brief overview of perinatal depression with a focus on prevalence rates and risk factors for Latinas. We will discuss the traditional approaches to postpartum mental healthcare among Latinas, in particular, and the potential impact on Latina women if these rituals are not available or understood by providers. Finally, we present and discuss issues surrounding access and barriers to standard mental health care treatments in the United States.

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Prevalence

Both ante- and postpartum depression (PPD) refer to episodes of nonpsychotic depression that are temporally linked with pregnancy and childbirth. Prevalence rates of perinatal depression are well established. Epidemiological data suggest that between 10 and 15 % of women in the United States experience significant depressive illness *during* pregnancy (antenatal) which is comparable to the average 13 % of women who develop PPD (Robertson et al. 2004).

However, reported prevalence rates of perinatal depression among Latina women are inconsistent. Recent studies report that 12 (Rich-Edwards et al. 2006) to 59 % (Heilemann et al. 2004) of women had high levels of depressive symptoms reflective of moderate to severe depression. The variation in rates might be due to the fact that a diverse range of instruments were administered between studies, and differing cut-off points was used. It is clear that there are high rates of depression among Latina women in the peripartum and that many episodes start in pregnancy and continue into the postpartum period (Yonkers et al. 2001).

There remains debate as to whether Latina women are at increased risk of depression compared to other ethnic groups. Studies are equivocal and report no difference (Yonkers et al. 2001), lower (Segre et al. 2006), or higher (Howell et al. 2005; Rich-Edwards et al. 2006) rates compared to non-Latina Caucasian and African American samples. A recent study comparing perinatal women in the United States and Mexico found similar rates of depression between the groups, with 32.4 % of United States and 36.8 % of Mexican women, respectively, having depression scores consistent with major depression (Lara et al. 2009).

Risk and Protective Factors

Results from the general literature show that although perinatal depression can affect any woman, it is not randomly distributed in the population. The strongest predictors of both ante- and PPD include a personal or family history of depression, experiencing stressful life events, and a lack of social support (Robertson et al. 2004). In addition, the strongest predictor of PPD is antenatal depression or anxiety (Robertson et al. 2004). Higher prevalence rates and population-specific risk factors for perinatal depression have been reported among subgroups of women including ethnically diverse mothers as well as women with a history of trauma or abuse (Rich-Edwards et al. 2006). Recent research findings have shown a cumulative risk of antenatal and PPD in women who have risk factors associated with low socioeconomic status (SES), with at least doubled rates of PPD (Goyal et al. 2010).

Although there are limited data, a handful of studies conducted in South America and Mexico found similar risk factors for perinatal depression to those reported in general populations. These included: being single, unplanned

pregnancy, ambivalence about having a child, low educational attainment, immigration status, separation from partner, stressful life events and economic difficulties, lack of social support, previous history of depression, and family psychiatric history (Kuo et al. 2004; Heilemann et al. 2004; Davila et al. 2009; Diaz et al. 2007; Lara et al. 2009).

Several studies have attempted to differentiate between depressed and nondepressed Latina mothers. Howell et al. (2005) found that depressed mothers were significantly more likely to be under 25 years old, have a high school education or less, report less access to healthcare providers, describe their infants as more demanding (particularly infants with colic), have less social support, and feel less able to manage the baby and home. Lara and colleagues (2009) compared Latinas residing in the United States and Mexico and found that in the US sample, being in the second trimester and being more educated were associated with higher depressive symptoms. Conversely, in the Mexican sample, women who were cohabiting (rather than being single or married) were most at risk for perinatal depression. Similarly, Davila et al. (2009) found that among US-born Latinas, the strongest predictors of depressive symptoms across the perinatal period were being pregnant and unmarried.

Protective factors include availability of social support, active non-avoidant coping style, sense of mastery and resilience, all of which were associated with lower levels of depression in Latinas (McFarlane et al. 1995).

Unintended Pregnancies

Current literature suggests that having an unintended pregnancy may be a particular risk factor for Latina women. Epidemiological data from the United States reports that half of all pregnancies were not planned and that unintended pregnancy rates among poor Hispanic women are more than 3 times higher than the national average (Finer and Henshaw 2006). Although most studies are cross-sectional and not designed to address causality, a recent longitudinal study by Christensen and colleagues (Christensen et al. 2011) suggested that unintended pregnancy was associated with higher postpartum depressive symptoms in a Hispanic sample of 217 women followed through pregnancy and the postpartum period.

Christensen et al. (2011) have discussed how Latina immigrant women may experience unique stressors when faced with an unintended pregnancy. Many Latino immigrants (both men and women) come to the United States to send money to their families in their home countries. Becoming pregnant can severely impede these goals and women are left with few options. Abortion may be culturally unacceptable and many women found it difficult to continue working through pregnancy and after childbirth, particularly in low-income jobs. Typically the woman's social network is limited and there is no extended family or friends to provide free or cheaper childcare. (Christensen et al. 2011).

Acculturation

Although many of the risk factors for perinatal depression are known, and shared between Latina and non-Latina women, there remains controversy over how much acculturation affects the level of depression in Latinas during the perinatal period. A simplified definition is that acculturation is the experience of an immigrant's adaptation to a host country (Beck 2006; Davila et al. 2009). In this particular context, low acculturation suggests that an individual has not adopted the US lifestyle while high acculturation suggests the opposite.

Large epidemiological studies comparing US- and Mexican-born Latinos suggest that higher levels of acculturation are associated with increased risk of depressive symptoms (Moscicki et al. 1989) and major depression (Escobar et al. 2000). However, studies of acculturation and perinatal depression have produced mixed results. A study of new Latina mothers born outside of the United States had a lower prevalence of depressive symptoms than their US-born counterparts (Huang et al. 2007) while two other studies found no differences comparing US-born to foreign-born Latinas (Chaudron et al. 2005a; Kuo et al. 2004). Davila et al. (2009) found similar results, those women with higher levels of acculturation were most at risk for depression; risk factors for depression among US-born Latinas were being single, preferring to use English and being currently pregnant.

The differences in findings could be due to lack of consistency in how acculturation is measured (Beck 2006) a variety of measures being used, variable populations and small sample sizes (Davila et al. 2009). For example, within the same study comparing US- and Mexican-born Latinas, birthplace and language preference (Heilemann et al. 2004) showed no difference between the groups, but age at immigration was negatively related to depressive symptoms; that is, women who spent their childhood in Mexico had lower levels of depressive symptoms.

Intimate Partner Violence

Intimate partner violence (IPV) is a significant public health concern and is associated with adverse physical and mental health consequences for women (e.g., Campbell and Lewandowski 1997). Between 1.3 and 5.3 million women in the United States are affected by IPV each year (Tjaden and Thoennes 2000; National Center for Injury Prevention and Control 2003), with lifetime estimates of 22–39 % (CDC 2008; Collins et al. 1999). There is a substantial literature on the risk of depression in women with a history of IPV; almost half report major depression (Golding 1999), but less is known about the course of depression during the perinatal period in Latina women (Rodriguez et al. 2010). Studies report that interpersonal violence is a predictor of PPD (Kendall-Tackett 2007; Records and Rice 2009; Lancaster et al. 2010). However, a major problem is that many studies of perinatal depression do not address IPV specifically. Rather, indirect markers such

as poor marital relationship and low partner support have been linked with PPD (Robertson et al. 2004).

Rodriguez and colleagues (2008, 2010) in their *Proyecto Cuna* study have developed and conducted one of the few longitudinal studies examining the impact of IPV in Latina women. They argue that the impact of IPV within the context of immigration may be greater for Latinas. The deleterious mental health consequences of immigration and acculturation are evident. The stress and socioeconomic difficulties that individuals experience are independent risk factors for depression. Poverty is associated with increased IPV and depression in the population in general and within Latinos (Garcia et al. 2005). Evidence for a link between IPV and depression in Latinos is mixed. No association was found after controlling for other sociodemographic factors (Fedovskiy et al. 2008). However, there was a twofold increase in antenatal depression among IPV-exposed Latina women compared to nonexposed women, after controlling for poverty, acculturation, and other factors (Rodriguez et al. 2008).

Rodriguez and colleagues (2008, 2010) found that lifetime exposure to IPV predicted antenatal depression in Latinas and, furthermore, that recent exposure to IPV in the perinatal period predicted PPD. In a further study, Rodriguez et al. (2010) followed women through 13 months postpartum and found that women who were exposed to IPV had elevated rates of depression throughout the perinatal period. In the IPV exposed group, 40–50 % of women were depressed during pregnancy and at two postpartum assessments. These data suggest that depression persisted across the perinatal period as nearly a third of IPV exposed women, compared to 5 % of non-IPV exposed women, experienced depressive symptoms at multiple points across the first year postpartum. Within the same sample, Valentine et al. (2011) examined the effect of the timing of IPV as a predictor of PPD. They reported high rates of depressive episodes, with 43.7 % of women scoring above the cut-off score at least once during the 12 months following childbirth. Those women who had experienced IPV during or within 12 months of pregnancy had a fivefold risk of PPD (OR 5.38, 95 % CI 2.21–13.08, $p<0.001$). This is after controlling for the effects of prenatal depression, non-IPV trauma history, and levels of social support.

Protective factors against perinatal depression in IPV exposed women included increased social support and a sense of mastery (belief in one's own personal efficacy). These data suggest that screening for both IPV and depression should continue throughout pregnancy and the first year postpartum (Rodriguez et al. 2010).

There are multiple challenges in addressing the mental health needs of women exposed to violence and these issues may be magnified for women for whom there may be cultural or linguistic barriers (Rodriguez et al. 2008). There are several issues that clinicians should be aware of, including the fact that sexual coercion or violence may have resulted in the current pregnancy. Screening tools should be linguistically and culturally sensitive; clinicians should be aware that there are several that are readily available (see Basile et al. 2007). For women whose first language is Spanish, clinicians should not rely on using a family member or friend as the interpreter. A professional interpreter or a bilingual health professional who does not know the woman needs to be used. Latina women may be threatened with

a legal system that is difficult to navigate, particularly if she is undocumented or her visa status is linked to their partner. The partner may hide the woman's passport, threaten her with deportation if she reveals the abuse or threaten that she will lose custody of her child(ren). Women should be notified that many cases can be dealt with by family court rather than criminal court and that, in certain geographical areas, there are specific courts for domestic violence.

Most Latina women are Catholic, and that there are deep-rooted traditions surrounding the sacrament of marriage. Women may first turn to the Church for help and guidance regarding domestic violence. In many cases their partner may threaten that they will be breaking their sacrament and will no longer be able to attend church or receive other sacraments. Many Latina women may potentially be unaware that the Catholic church has a clear documented stance on domestic violence and that there is pastoral help available. The US Catholic Bishops have made it very clear that "violence against women, inside or outside the home, is never justified. Violence in any form—physical, sexual, psychological, or verbal is sinful; often it is a crime as well." Further, they emphasize that "no person is expected to stay in an abusive marriage" (see http://foryourmarriage.org/everymarriage/overcoming-obstacles/domestic-violence/).

Treatment

Mental healthcare disparities between whites and nonwhites in the United States are well documented (Fiscella et al. 2002). Latinos living in the United States seek help from mental health specialists at significantly lower rates than whites in the United States (Hough et al. 1987; Vega et al. 1999). There are multiple proposed explanations for these disparities including cultural, historical, financial, and logistical. Few studies have explored if and what mental health prevention and treatment disparities exist specifically for Latina women with perinatal depression compared to other women of color, women from low-income communities, and white women in the United States. To understand the current state of treatment interventions for perinatal depression among Latina women living in the United States, it is important to understand the potential contributing factors that may impact the use of mental health treatment as defined by the American healthcare system.

Perinatal Traditions Among Latina Women

First, there are many facets to being an immigrant in any culture and to experiencing pregnancy and parenthood in that new culture. In times of stress or during important life transitions such as birth, age of adulthood, and death, many immigrants will return to cultural practices and traditions, even if they have adapted their lifestyle to the needs of their new home. It is important to consider the perinatal period as a very

likely time that Latina women may seek traditional care and rituals. The extended family and the support of women, mothers, sisters, aunts, and grandmothers are expected during pregnancy and the postpartum period (Callister et al. 2011). For women living in a new or foreign country far away from their familial supports, and traditions, the happy occasion can be less than joyous.

American healthcare providers may not be aware of the important culturally based traditions that, if not carried out properly, might cause the perinatal woman to become distraught. Two postpartum practices that are found in many non-Western cultures include "hot-cold balance" beliefs and postpartum confinement (Kim-Godwin 2003). In Latino cultures such as Guatamala and Mexico, the loss of blood during pregnancy leaves the mother in a cold state and heat must be used to restore the balance (Lang and Elkin 1997; Jordan 1993). Heat might be applied through baths and through protection from cold air and drafts. Therefore, these restrictions may affect the mother's ability to leave the house, attend an appointment, or even bathe (Jordan 1993; Purnell and Paulanka 1998). In addition to the balance of hot and cold, some Latina women expect to receive *purgantes* (home remedies) to help eliminate impurities following birth. Some women believe PPD will not occur if these remedies are used (Neria 2000). Providers who are not aware of these traditions and the potential impact on the mother might misinterpret the mother's unwillingness to come to an appointment or bathe as a sign of depression. Alternately, if a mother feels pressured to not abide by these traditions she may feel sad and/or guilty.

Postpartum confinement is also important and can range from 7 to 40 days (Kim-Godwin 2003). A period of confinement of approximately the first 40 days is known as the *cuarentena* (Maldonado-Duran et al. 2012, http://www.kaimh.org). During this time, women receive care from maternal figures, receive special attention and massages, do not work, are not exposed to drafts, and avoid eating certain foods. In an industrialized society, with inconsistent maternity-leave policies in which new mothers may need to return to work, or may need to care for children or other relatives and have possibly few family supports, new mothers may not be able to maintain this important tradition. Breaking such a social taboo may increase the likelihood of depression in women in the postpartum period.

Another example of a ritual that, if not completed, can contribute to anxiety and depression among new Latina mothers is the establishment of *compadres* (Maldonado-Duran et al. 2012). The *compadres* are godparents who provide support and help and become close to the parents and the child. Without *compadres*, the mother may feel her child is vulnerable and at risk of harm. Finally, the mother–child bond is extremely important in Latino societies. In most instances, in less industrialized countries, the child is not separated from the mother during the first few years, with only female family members assisting with care. In the United States, with the emphasis on returning to work, paid childcare, and autonomy, it becomes clear that traditional Latina mothers' values would be in direct conflict with the expectations of American society and therefore might impact her mental health, as well as her willingness to engage in mental health care in the traditional American healthcare system.

Depression in Latino Culture

In the Latino culture, depression, which could be triggered by such a loss of support and tradition, is often viewed not as an illness to be treated but rather as a weakness which invokes feelings of guilt and embarrassment (Callister et al. 2011). For providers this might be confusing as many Latinos are very emotionally expressive, but this expressiveness is not necessarily related to a mental illness or depressive disorder. Latina women, as women in many non-Western cultures, more often express their distress through somatic complaints such as sleep difficulty, headaches, loss of appetite, weight loss and agitation, or "nerves" rather than expressing it as depression or sadness (Lewis-Fernandez et al. 2005; Escobar et al. 1987). Somatic symptoms are more culturally acceptable than depression. In addition, women may complain of *nervios*, which is a nervous illness that may be connected to specific causation, symptoms, and treatment expectations (Lewis-Fernandez et al. 2005). In particular with respect to motherhood in Latina cultures, as in most cultures, it is the expectation of society that she is happy about the baby and is coping with change. Therefore, identifying the woman's symptoms or complaints as perinatal depression and then referring a new mother to a mental health provider for "treatment" may not be looked upon with the same understanding and acceptance as in the medical community and in some American communities and cultures.

Barriers to Treatment in the American Healthcare System

To improve access to treatment and treatment options, providers must be aware of these—and other—barriers to successful referral, engagement, and adherence to mental health treatment. In addition to the stigma of mental illness, logistical barriers are immigrant status, insurance, transportation, and the lack of flexibility of the American mental healthcare system to accommodate different cultural norms. For instance, for Latina women, extended family is critical and would be expected to be involved in the mother's care. In most mental healthcare settings, patients are seen individually, not with extended family members. In addition, while providers may view the extended family as a support, they may not be aware of other additional conflicts or burdens on the mother such as an expectation of financial support of her extended family (Skogrand et al. 2005). In Latino cultures, time is approximate rather than specific. In most mental health settings, appointment times are very specific and being 15 min late, which to a Latina woman may be "on time," may lead to an appointment cancellation and delayed care. Language barriers are particularly difficult for mental health assessments as the nuances of language may be lost in translation. Latino cultural norms such as individual attention, touching, and close interpersonal space, are uncommon in the provision of traditional American mental health care. Therefore, even if a Latina woman engages in care with a mental health provider, the provision of care and the system of care may seem foreign and unwelcoming and lead her to drop out of treatment (Callister et al. 2011).

As we seek to improve access to treatment for perinatal depression for all women we must understand if and where differences exist with respect to access, treatment choice, and culturally adapted evidence-based treatment for Latina women. Before reviewing the literature, it is important to note that few studies focus on Latina perinatal depressed women in the United States. Of those studies that include this population, many focus on low-income women and often compare white to nonwhite groups that might not distinguish Latina groups individually. Therefore the data that exist are limited and are not generalizable to Latina women from different regions, from different socioeconomic classes, and who are at different points in acculturation and assimilation (Beck 2006).

Treatment Seeking

Among the few studies that explore help seeking among Latina perinatal women, a study of low-income mothers in San Mateo, CA described women who self-identified as needing help with depression that arose since the birth (Chaudron et al. 2005b). Less than half (47.5 %) had spoken with their doctor and of those who did, only one in three was referred to a mental health specialist. The majority who were referred did see the specialist and received antidepressants. Another study conducted with data from the Utah Pregnancy Risk Assessment Monitory System 2004 dataset found 60.5 % of women did not seek help for PPD but that Latina women had threefold-increased odds compared to non-Latina women of not seeking help (McGarry et al. 2009).

Evidence to date suggests that Latina postpartum women engage in PPD treatment less frequently than white women. In one study of New Jersey Medicaid recipients in a retrospective cohort study, 5 % of Latino women compared to 9 % of white women initiated an antidepressant or outpatient mental health treatment within 6 months postpartum (Kozhimannil et al. 2011). When Latinas did engage in treatment, they were also less likely to receive follow-up care (OR = 0.67). The Latina women who received a prescription for an antidepressant were less likely to refill the prescription than white women (OR = 0.43). In studies where Latina women were given a choice of treatment options, they preferred talk therapy to medication management (Cooper et al. 2003; Miranda and Cooper 2004). While the studies are limited in number and generalizability, it is important information to take into account as our mental health systems and treatments are being adapted to the needs of different populations.

Prevention of and Treatment for Perinatal Depression in Latina Women

Studies focusing on the treatment of depression during pregnancy and prevention of PPD among immigrant Latina women have adapted evidence-based treatments

to the population's needs. For example, one study compared a bilingual interpersonal psychotherapy (IPT) program to a bilingual parenting education control program. For the women who remained in the study, IPT was effective in treating depression during pregnancy (Spinelli and Endicott 2003). However, it is important to note that this study also had a high attrition rate (32 % for controls, 16 % for IPT group) which the authors speculate may have been attributed to the transient nature of the women's lives, their need to return to work, childcare issues, etc. Another study with a primary aim to prevent PPD among Latina women described its cultural adaption of cognitive behavioral therapy in two different communities (Le et al. 2010, 2011). The intervention was successful in lowering depressive symptoms during pregnancy but was not successful in preventing PPD. In this study, as in previous studies, many of the women were unable to attend either any treatment or less than the number of sessions suggested to be efficacious for treatment. In another study designed to compare a Centering Pregnancy Model to traditional prenatal care among a group of Latina women, there were no differences in the impact on the prevalence of PPD despite the potential benefits of additional support during pregnancy and the postpartum period (Robertson et al. 2009). Finally, a study attempted to change the approach and paradigm to reducing postpartum depressive symptoms among black and Latina mothers living in East Harlem, NY by focusing on a behavior education intervention. In this intervention, the women were prepared for specific potential triggers of depressive symptoms and provided with specific actions and self-management skills to "buffer postpartum demands" (Howell et al. 2012). In this randomized controlled study, the subjects received either the intervention or enhanced usual care. The subjects in the intervention arm were less likely to screen positive for depression than the control group. The intervention had two components: an in-hospital education component and a 2-week postdelivery call. The success of this study must be replicated but it is important to note that the participation remained high throughout the study. Therefore, unlike other studies in which subject must come to a setting for treatment, this intervention may have been more acceptable and adaptable to the population's needs. It is this type of flexibility that is needed to truly adapt our treatments to be successful for Latina women.

Despite research that has addressed depression during pregnancy and prevention of PPD, there are no evidence-based treatments tested specifically for perinatal Latina women in the United States. Understanding the cultural norms and practices of Latina women is critical in understanding their treatment choices. It may be a challenge to engage Latina women in depression treatment if, as the literature suggests, they may present with more somatic complaints but prefer therapy to medications (Lewis-Fernandez et al. 2005; Kozhimannil et al. 2011). Much work must be done to understand the needs and preferences of perinatal Latina women experiencing depression and to educate providers to provide services that are most consistent with their preferences and therefore may lead to improved engagement and adherence to care.

Summary

There are many fundamental questions that remain unanswered and more research needs to be conducted with Latina women who are living in the United States to learn more about culturally relevant factors that may influence detection and treatment of PPD. Providers must be aware that although Latina and non-Latina women share many of the risk factors for perinatal depression, the effects of immigration, being away from an established support network of family and friends, IPV and unintended pregnancies may be particularly pertinent for Latina women. Furthermore, healthcare providers need to be sensitive to the clinical presentation of symptoms which may not track directly to the symptoms of major depression and be expressed by Latina mothers as somatic complaints or nervousness. Additionally, our healthcare systems and providers must learn ways to adapt to not only the language preferences, but be sensitive to cultural practices that may impact the willingness of Latina women to engage in mental healthcare treatment at all. Finally, healthcare systems must be adapted to provide alternative and flexible settings to screen and deliver care in order to serve the mental health and cultural needs of Latina mothers.

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Perinatal Depression in Mexican Women: Prevalence, Risk Factors, and Prevention of Postpartum Depression

María Asunción Lara

Introduction

Although affective disorders are increasingly becoming a public health concern in Mexico, the country has extreme underutilization of mental health services and unmet needs (Borges et al. 2006; Medina-Mora et al. 2005). In this context, perinatal depression has not received the importance it deserves as a mental health problem affecting large numbers of women. At the same time, research in perinatal depression is insufficient, a fact that does not contribute to raising awareness about the need to detect and treat pre- and postpartum women affected by this condition. Of particular concern is the fact that both clinical and subclinical levels of perinatal depression can result in significant short- and long-term negative effects on the mother and child (Horowitz and Goodman 2005; Fihrer et al. 2009; Sohr-Preston and Scaramella 2006; Bennett et al. 2004; Chen et al. 2004).

This chapter aims to compile and present recent findings in research on perinatal depression conducted in Mexico. Many of the studies have not been accessible to English-speaking readers because they often appear in Spanish publications. The first part of the chapter is devoted to prevalence rates and risk factors for prenatal and postnatal depression in adult women in this country. The second section summarizes the results from the randomized controlled trial (RCT) to prevent postpartum depression (PPD) in Mexican women, with particular emphasis on depression outcomes, recruitment and retention issues, and participants' perception of the impact of the intervention. The chapter concludes with a summary of the findings and implications for research, practice, and mental health policy.

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Prevalence of Perinatal Depression in Mexico

Prenatal Depression

Depression during pregnancy is also fairly common worldwide. Some 2–21 % of women are affected, as measured through structured interviews, while 8–31 % identify depressive symptoms in self-report questionnaires (Bennett et al. 2004). The prevalence found in Mexico does not differ greatly from these ranges. Two studies assessing DSM-IV-defined depression in settings that provide care for women with high-risk pregnancies (Gómez-López and Aldana-Calva 2007; Ocampo et al. 2007) found prenatal depression in 14 and 12.3 % of respondents (Table 1). Studies assessing depressive symptoms in primary care settings (Ceballos-Martínez et al. 2010; Lara et al. 2009); primary, secondary, and specialized health care facilities (Lara et al. 2006); and a specialized health care service (Ortega et al. 2001) found prenatal depressive symptoms in 6.4 %, 36.8 %, 30.7 %, and 21.7 %, respectively.

These studies show that the prevalence of prenatal depression and depressive symptoms in Mexico is very heterogeneous across the studies, apart from the one by Ceballos-Martínez et al. (2010), which reports a lower prevalence of 6.4 % of depression symptoms. This result could well be due, at least partly, to the fact that his sample comes from a small coastal city while the other studies were conducted in highly populated Mexico City. Differences in self-rating questionnaires as well as in the cutoff scores used cannot be ruled out as other possible influences on the variation found in the prevalence of depressive symptoms.

Table 1 Prenatal depression prevalence in Mexican women

Author (year)	*N*	Period assessed	Instrument	Prevalence (%)
Gómez-López and Aldana-Calva (2007)	107	First to ninth month of pregnancy	DSM-IV[a] depression: clinical interview	14
Ocampo et al. (2007)	170	30th to 35th week of pregnancy	DSM-IV[a] depression: clinical interview	12.30
Ceballos-Martínez et al. (2010)	220	18th to 32nd week of pregnancy	EPDS[b] > 13	6.40
Lara et al. (2009)	117 (Mexican subsample)	First to ninth month of pregnancy	CES-D[c] > 16 CES-D[c] > 24	36.80 23.90
Lara et al. (2006)	300	First to ninth month of pregnancy	CES-D[c] > 16	30.70
Ortega et al. (2001)	360	28th to 34th week of pregnancy	EPDS[b] > 12	21.70

[a]Diagnostic and statistical manual of mental disorders, fourth edition
[b]Edinburgh Prenatal Depression Scale
[c]Center for Epidemiologic Studies Depression Scale

Factors associated with major depression in pregnancy included history of depression, unplanned pregnancy, lack of social support, and previous miscarriages (Ocampo et al. 2007). Severe depressive symptoms (CESD≥24) were correlated with multiparous pregnancies, cohabitating (as opposed to being married), and a history of suicidal thoughts (Lara et al. 2009). Other factors correlated with depressive symptoms (CESD≥16) included unplanned pregnancy, lack of social support, previous symptoms of depression, and emotional problems in family members (father or mother) (Lara et al. 2006). Several of these risk factors have been observed in pregnant women in other countries (Lancaster et al. 2010).

Postpartum Depression

A review paper on PPD shows that during the first year postpartum, between 6.5 and 12.9 % of women suffer from major and minor depression (Gaynes et al. 2005). In Mexico, a groundbreaking longitudinal prevalence study conducted at a public general hospital in Mexico City reported that 19.3 % of women suffered from PPD 2 weeks after delivery and 22.5 % at 4 weeks postpartum (García et al. 1991) (Table 2). Women in this sample had been diagnosed with high-risk pregnancies. Another study from a specialized hospital in Mexico City for women with high-risk pregnancies found a lower rate of clinical PPD: 13.8 % of women at week 4 and 6.66 % at week 8 postpartum (Ocampo et al. 2007). Álvarez et al. (2008) found PPD in 24.6 % of women in two state prenatal care family clinics in the metropolitan area of Mexico City at 4–6 weeks after delivery, while Alvarado-Esquivel et al. (2010) reported a prevalence of 14.1 % for major and 18.5 % for minor depression (making a total of 32.6 %) from 1 to 13 weeks postpartum in women in rural and urban public hospitals in the northern state of Durango in Mexico.

Overall, PPD prevalence among Mexican women shows a wide variation, from 6.6 % at 8 weeks to 24.6 % at 4–6 weeks postpartum. This wide range can be at least partially explained by differences in sample sizes and levels of health care among the studies, as well as differences in cutoff scores used for screening for possible cases of PPD (EPDS from >7 to >14) and differences in the diagnostic instruments [e.g., structured interviews such as the MINI (Ocampo et al. 2007) or the SCID (Álvarez et al. 2008) vs. semi-structured interviews (García et al. 1991; Alvarado-Esquivel et al. 2010)]. Nevertheless, it is important to note that most of the prevalence rates found among Mexican women are higher than those for major and minor depression in other countries (Gaynes et al. 2005).

Factors associated with PPD in the aforementioned Mexico-based studies include history of depression (García et al. 1991; Alvarado-Esquivel et al. 2010; Ocampo et al. 2007), anxiety during pregnancy (Alvarado-Esquivel et al. 2010), previous pregnancies (García et al. 1991), fear of not being able to care for the baby (García et al. 1991), difficult relationship with the partner (Alvarado-Esquivel et al. 2010), low educational attainment, and living in a rural area (Alvarado-Esquivel et al. 2010). These risk factors for PPD among Mexican women are similar to those reported in other studies (O'Hara and Gorman 2004).

Table 2 Postpartum depression prevalence in Mexican women

Author (year)	*N*	Period assessed	Instrument	DSM[a] depression prevalence
Alvarado-Esquivel et al. (2010)	178 (93 urban and 85 rural)	First to 13th week postpartum	Screening: EPDS[b]	Major depression: 14.1 % Minor depression: 18.5 %
			DSM-IV[c] depression: clinical interview	Urban Major depression: 15.1 % Minor depression: 11.8 % Rural Major depression: 12.9 % Minor depression: 25.9 %
Álvarez et al. (2008)	130	Fourth to sixth week postpartum	Screening: EPDS[b] > 12 DSM-IV depression: SCID[d]	24.60 %
Ocampo et al. (2007)	101	Fourth week after delivery	Screening: EPDS[b] > 14	13.86 %
	60	Eighth postpartum week	DSM-IV depression: MINI[d]	6.66 %
García et al. (1991)	62	Second and fourth week of delivery	SM-III[e] depression: clinical interview	Second week postpartum: 19.3 % Fourth week postpartum: 22.5 %

[a]Diagnostic and statistical manual criteria for depression
[b]Edinburgh Postnatal Depression Scale
[c]Structured clinical interview for DSM disorders
[d]International mini neuropsychiatric interview
[e]Diagnostic and statistical manual of mental disorders, third edition

In all, prenatal depression in Mexican women seems to be similar to that of other countries while PPD appears to be higher. However, in the absence of a comparative study, this conclusion is only tentative.

Prevention of PPD

Both clinical and subclinical depressions have adverse consequences on the mother and her baby. Maternal PPD may be detrimental to infants, as it can impact their

cognitive and language development (Sohr-Preston and Scaramella 2006). Infants of mothers with PPD have a higher risk of deficits in early interactions with their mothers and an increased rate of insecure attachment (Murray and López 1996). These effects can last for years (Fihrer et al. 2009). Depression in pregnancy affects eating habits that may be problematic in women with low SES, leads to poor prenatal care, and may increase the potential for substance abuse (Bennett et al. 2004). Prenatal depression has also been associated with premature births and low baby weight (Bennett et al. 2004) and an increased risk for PPD (Robertson et al. 2004).

Given the consequences of pre- and postnatal depression, there is a pressing need for early detection and treatment. In particular, preventive interventions with pregnant women at risk of depression can reduce suffering and the costs produced by this affective condition; they can also decrease the long-term impact of depression on both mother and baby.

Preventive interventions for PPD delivered during pregnancy have been assessed. Varying degrees of effectiveness have been demonstrated (e.g., Zlotnick et al. 2001, 2006; Austin et al. 2008). Three studies are of particular importance as they included Latinas in their samples (Zayas et al. 2004; Muñoz et al. 2007; Le et al. 2011). Most of these interventions are based on psychoeducation and include strategies to develop or strengthen social supports. These strategies are based on cognitive behavioral therapy (CBT) or interpersonal therapy and provide information on infant development, infant care and attachment, and the development of realistic expectations about motherhood.

Based on these experiences, the National Institute of Psychiatry in Mexico supported a research initiative to study the prevention of PPD in Mexican pregnant women as there was no evidence of this type of intervention in either this country or Latin America. The following is a description of the prevention intervention that was developed and assessed. The results included in this chapter are a summary of two publications on the outcomes of the intervention (Lara et al. 2010a) and the retention of subjects in the study (Lara et al. 2010b).

Postpartum Depression Prevention Study

Lara and García (2009a, b) outlined the preventive intervention to be delivered to pregnant women at high risk of PPD. Specifically, the intervention aimed to reduce the number of depression cases in the intervention group at follow-up. Some parts of the content and structure were intentionally developed on the basis of general literature on perinatal depression, while others were based on a previous experience to prevent depression in nonpregnant women (Lara et al. 1997, 2003a, b, 2004) and others from the "Mamás y Bebés" (Mothers and Babies) course by Muñoz et al. (2007) for Spanish-speaking Latinas.

Study Design

The intervention was assessed for effectiveness using a randomized controlled design (Lara et al. 2010a). Participants in the study were pregnant women from three institutions in Mexico City: (1) a hospital setting that provides intensive care for women with high-risk pregnancies, (2) a clinic that provides obstetric and gynecological services, and (3) a community health care center providing prenatal care for local women. Subjects were screened and selected if they met the following criteria: (1) 18 years or older, (2) pregnant up to 26 weeks gestation, (3) complete elementary education, (4) no indication of bipolar disorder or substance abuse, and (5) depressive symptomatology ≥16 on the Center for Epidemiological Studies Depression Scale (CES-D; Radloff 1977) and/or a history of depression. Eligible women who agreed to participate completed a written consent form and were randomized into either the intervention or usual care group. All the women were interviewed during pregnancy (Time 1), at 6 weeks (Time 2), and 4–6 months postpartum (Time 3).

The intervention was highly structured and guided by two manuals, one for the participant (Lara and García 2009a) and one for the facilitator (Lara and García 2009b). These included all the information, checklists, and worksheets necessary for completion. The intervention orientation was psychoeducational, multitheoretical, and multicomponent, including (1) an educational component, with a discussion of changes and feelings in the "normal" perinatal period and psychosocial risk factors for PPD; (2) a psychological component, aimed at reducing depressive symptoms through a variety of strategies (e.g., increasing positive thinking and pleasant activities, improving self-esteem, increasing self-care); and (3) a group component involving the creation of an atmosphere of trust, sharing, and support. The control participants received the usual care provided by their respective institutions.

Sample

Lara et al. (2010a) screened 6,484 women across the three settings, with 8.3 % meeting eligibility criteria. Of those eligible, 377 agreed to participate and were randomized into intervention and control groups (Fig. 1). As is common in this type of study, attrition was high; only 68 participants in each group completed the study (i.e., completed the intervention defined as attending ≥4 sessions and were assessed at Times 2 and 3).

The sample had a mean age of 26.9 (SD = 5.9), with 11.3 years of education (SD = 3.1); family income was $5,398 pesos (approximately 12 pesos to US$1 at the time of the study), representing a lower-middle socioeconomic status; 32 % were classified as having a low socioeconomic status and most (85.7 %) had a partner.

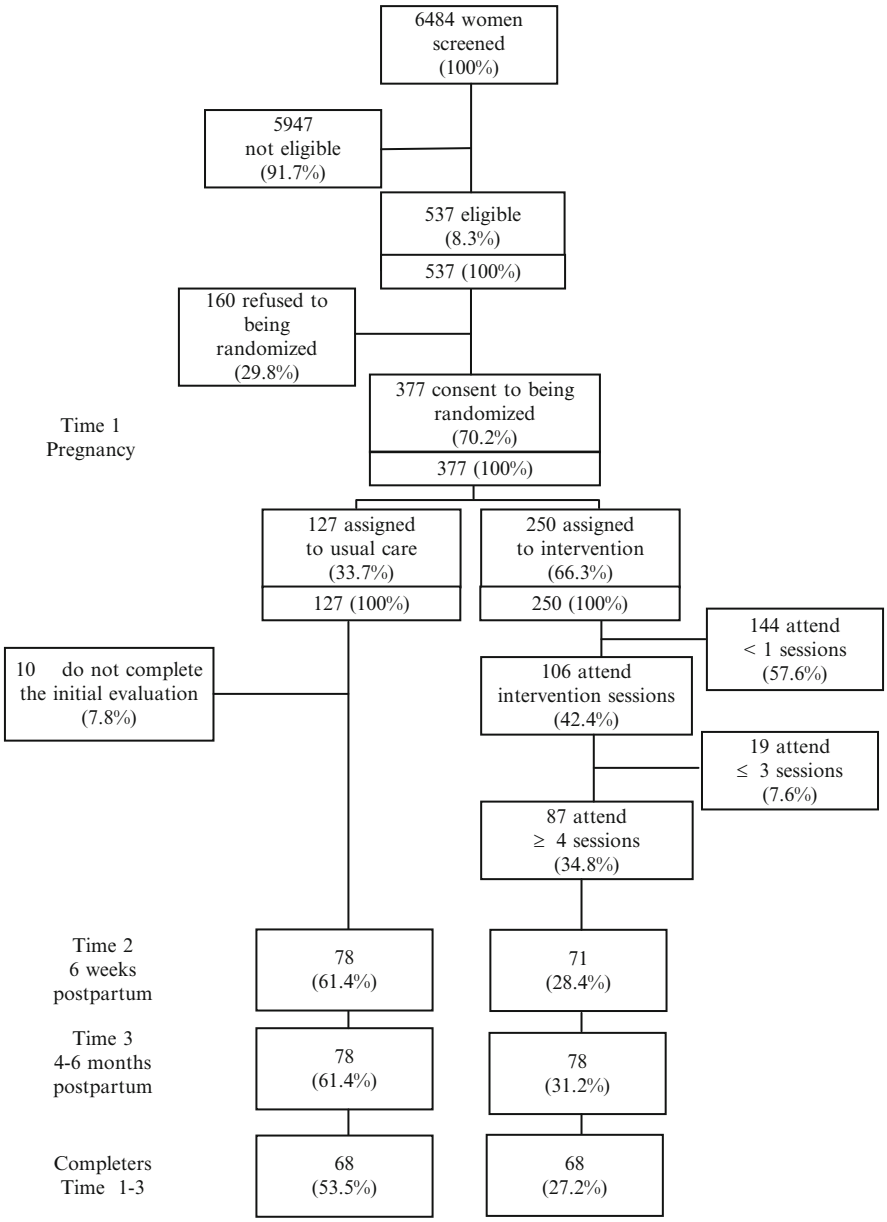

Fig. 1 Participants flow from screening (pregnancy) to assessment 4–6 weeks postpartum

Results

Effectiveness of the Intervention

Clinical depression was the main outcome measure. It was assessed using the mood disorders module of the Structured Clinical Interview (SCID; First 1999). Two hypotheses were tested: (1) fewer new cases of clinical depression would occur at Times 2 and 3 in the intervention compared to the control group, and (2) fewer women with depression would be identified at Times 2 and 3 as compared to Time l in the intervention condition as compared to the control condition.[1]

With respect to the first hypothesis, the cumulative incidence of major depression was assessed by adding the new cases at both Time 2 and Time 3. The results showed that there were significantly fewer new cases of depression in the intervention group (6/56 = 10.7 %) than in the control group (15/60 = 25 %) [$X^2(1) = 5.356$, $p < 0.05$]. A test of the second hypothesis assessed the effect of the intervention on cases of depression at Time 1 (12 intervention; 8 control), which were excluded from the previous analysis. It revealed a significantly greater reduction in depressive symptoms in the intervention group (two-sample test of proportion: $Z = 1.59$; $p < 0.05$) at Time 2, 2/12, and at Time 3, 1/12, than in the control group at Time 2, 2/8, and at Time 3, 3/8 (Lara et al. 2010a).

Perceived Impact of Intervention on Women's Role as Mothers

Lara et al. (2010a) also evaluated the impact of the intervention on mothers' self-perceived performance. Participants were asked: "Did participating in the study have an influence on your role as a mother and how you relate to your baby?" When given the option of five possible answers, very few mothers perceived a negative influence (1 and 0 %), no influence (3 and 1 %), or little influence (7 and 16 %), and most perceived a moderate (57 and 52 %) or a great influence (30 and 36 %) at Time 2 and Time 3, respectively. An open-ended question exploring the reasons for the perceived impact at both times showed that participants were able to accept and love their babies, about whom they had initially felt ambivalent or rejected (32 and 25 %), felt they were able to be better mothers (29 and 33 %), experienced improved mood (7 and 3 %), and overcame certain fears (6 and 5 %).

Predictors of Retention

Due to the high attrition rates found in the sample, a separate set of analyses was conducted to identify the factors associated with retention (Lara et al. 2010b).

[1] Some of the selected women who met DSM depression criteria were included in the prevention study, provided they showed no great distress, reported having social support, and had low anxiety symptoms.

Logistic regression analyses were performed to predict three categories of retention: (1) *total retention*: number of participants in both conditions (intervention and control) who completed the 4–6-month postpartum interview; (2) *intervention retention*: number of participants randomized into the intervention condition who attended at least one session; and (3) *retention within intervention or attendance rate*: number of intervention participants attending once and completing the intervention (defined as attending ≥4 sessions), who were interviewed at 4–6 months postpartum. The predictive variables included were sociodemographic (age, years of education, marital status, occupation, gestation trimester, first-time mother or not, intentional or unintentional pregnancy) and psychosocial (depressive symptoms, anxiety symptoms, life events, social support, and relationship with partner).

The results (Lara et al. 2010b) showed that *total retention* was 41.7 % (with 61.4 % in the control group retained and 31.2 % in the intervention group) (see Fig. 1). Significant predictors of *total retention* were marital status (single) (OR = 2.94), educational attainment (more educated) (OR = 1.63), and conflict with partner (OR = 1.69). Findings from the *intervention retention* analysis indicated that 42.4 % of participants attended at least one session, whereas 57.6 % of those who signed an informed consent form did not attend the intervention at all. Predictors of intervention retention were stressful life events (OR = 1.16) and high level of anxiety (OR = 2.43). *Retention within intervention or attendance rate* was 73.5 %. Being employed currently or in the last 6 months (OR = 8.55) was a significant predictor of retention within intervention.

Summary of the Results

The results of this prevention study in Mexican women were "consistent with the possibility that the incidence of depression may have been reduced by the intervention, but differential attrition before the intervention started makes interpretation of the findings difficult" (Lara et al. 2010a, p. 115). Attrition is a common methodological limitation on this type of study (Austin et al. 2008; Muñoz et al. 2007; Zayas et al. 2004; Zlotnick et al. 2006).

It was encouraging that most of the women who completed the intervention and follow-up reported that their participation had a moderate to large degree of influence on their role as mothers and their relationship with their infants (Lara et al. 2010a). Participants noted that the intervention helped in such aspects as accepting their babies and becoming more effective mothers. This result suggests that beyond depression issues, participants benefit from other general aspects related to pregnancy and the postpartum. Similar studies have also reported women's high degree of satisfaction with interventions for PPD prevention (Muñoz et al. 2007).

Analyses of the factors associated with retention suggest that pregnant women in more vulnerable situations (e.g., single, with poor partner quality relationships, more stressful life events, and high anxiety levels) were more committed to participating in the study (Lara et al. 2010b). These findings suggest that targeting women

with this high-risk profile might result in increased retention. Conversely, women with higher educational attainment tended to continue in the longitudinal study (Mayberry et al. 2007). The same was true of women in paid jobs who had better attendance rates. In order to attract women with low educational attainment and homemakers, it may be necessary to spend more time with them during recruitment to explain the aims of the study and understand and help them reduce the barriers to attending the intervention.

The loss of subjects who, despite signing informed consent forms, failed to participate in the interviews or the intervention may be linked to cultural issues. It has been observed that prospective subjects find it difficult to directly decline an invitation to participate. This indirect communication is a behavior commonly found among Mexicans, as analyzed by Le et al. (2008). These participants may have preferred to express their refusal indirectly, resulting in the initial recruitment of significant numbers of women who were not actually eager to participate, but agreed to do so and then failed to return. Nevertheless, it is important to stress that once women attended one session, they were committed to staying, suggesting that they valued the intervention.

Implications

Some of the implications of the data presented regarding prevalence rates of perinatal depression in Mexico and the results of a RCT to assess the effectiveness of a prevention intervention for PPD are discussed below.

Implications for Research

Studies conducted in Mexico to date on the prevalence of pre- and postpartum depression have contributed to assessing the magnitude of this disorder in this country. However, it is worth considering their representativeness, as most of them were conducted in Mexico City and in specialized obstetric services. In future research, it will be important to include women from other geographical areas and from rural and indigenous groups, as well as samples with non-high-risk pregnancies. Adequate sample size and the use of structured interviews to diagnose depression are needed in future studies to determine the full scope of the problem.

An unaddressed area of research in this country relates to the effects of pre- and postnatal depression on the woman's and baby's health. Evidence in this matter would be useful in raising awareness about the consequences of this disorder to make a stronger case for the promotion of mental health care for Mexican perinatal women.

Findings from the RCT (Lara et al. 2010a) suggest that PPD could be decreased by having pregnant women at risk of depression participate in a multicomponent

psychoeducational intervention. These results are an important initial step toward implementing programs to reduce the suffering and disability associated with this disorder in Mexican mothers. However, further evidence is necessary in relation to effectiveness, as attrition was a major methodological problem in this study. In this respect, new research could improve retention rates by addressing vulnerable groups such as single women with poor partner quality relationship, more stressful life events, and high anxiety levels (Lara et al. 2010b). Conversely, a new line of research could investigate the effect of a briefer version of the intervention for the less vulnerable (with a partner and less stressful life events and anxiety) but still at high risk of depression, due to their depressive symptoms or history of depression. As our results indicate, these women are less likely to participate in an intervention.

The orientation of the preventive intervention developed by Lara and García (2009a, b) is defined as psychoeducational, multi-theoretical, and multicomponent, including educational, psychological, and group components. Examining the importance of each component in reducing depression and women's satisfaction and perception of the relevance of each of the components in the intervention would be extremely useful for making the intervention a more efficient one, by stressing the most influential components.

Implications for Practice

Prevalence studies show that a significant number of Mexican women suffer from perinatal depression: 12.3–14 % during pregnancy and 6.6–24.6 % after giving birth (Ocampo et al. 2007; Gómez-López and Aldana-Calva 2007; Álvarez et al. 2008). These data suggest that there is an urgent need in this country to detect and treat perinatal depression to prevent its negative effects on the mother and baby.

Implementing preventive interventions such as the one presented here (Lara et al. 2010a) for pregnant women with a high risk of depression within prenatal care services can reduce the incidence of PPD and may have particular benefits as regards increasing mothers' acceptance of their babies by helping them to overcome fears about giving birth and being mothers, as well as educating them about mental health issues during this period. Nurses and social workers can easily be trained in the intervention proposed here (Lara et al. 2010a) as it is highly structured and all the steps and materials are included in manuals.

Implications for Policy

Depression is one of the leading causes of disability worldwide, with Mexico facing enormous challenges in providing mental health services for people affected with this disorder. In this context, perinatal depression has received very little attention. Current evidence shows that perinatal depression can be prevented and treated to

diminish its negative physical and mental health consequences for both mothers and babies (Le et al. 2011; Lara et al. 2010a, b; Stevenson et al. 2010). The implications of these facts are that perinatal women suffering from depression should receive attention. In order to bring effective care to Mexican women, it is necessary for the official norms regulating the health care of women and babies during pregnancy, delivery, and postpartum to include care for mental health disorders and for training and support to be given to perinatal health providers so they can systematically screen and treat cases of perinatal depression.

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The Culture of Treating Latinas with Postpartum Depression: Two Case Reports

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Introduction

There is growing interest in determining the prevalence of depression among postpartum women in general and among immigrant Spanish-speaking women in particular. Identifying and treating Spanish-speaking women with postpartum depression presents unique challenges as this population possesses unique linguistic and cultural traits that must be considered in order to provide effective care. Physicians, psychiatrists, psychologists, and community service providers are working to meet the mental health needs of both English- and Spanish-speaking mothers, and investigators in these fields are performing research to determine the etiology contributing to postpartum depression. While our understanding of this debilitating disease continues to grow and our engagement of women in research continues to inform our findings, the perspective of those treating immigrant and Spanish-speaking women is not well documented. To address this gap, we invited

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Dr. Laura Sirulnik, a board certified psychiatrist, to share her perspective and insights on treating Spanish-speaking Latinas in New York City. Dr. Sirulnik also provides us with two case reports that illustrate her approach to treatment. Case reports illustrate phenomena observed in treatment settings and emphasize the cultural competence and sensitivity that experienced health care providers bring to interventions. Such information is scarce in both the literature and in our understanding about diagnosing and treating Spanish-speaking women suffering with postpartum depression. We also hear about the roles that culture, religion, and gender play in Dr. Sirulnik's own conceptualization of the disease and the treatment needs of the women in these case studies.

Before we address the issue of treating Spanish-speaking, depressed postpartum Latinas, it is important that we provide readers with some personal background that is relevant to Dr. Sirulnik's work. She is a native Spanish-speaker, born and raised in Argentina. A mother of two children, Dr. Sirulnik immigrated to the United States to seek specialized training in psychiatry that would complement her medical training and work as a gynecologist.

Dr. Sirulnik's professional experiences include both inpatient and outpatient treatment in the public and private sector. While working at a Bronx hospital affiliated with the Albert Einstein Medical School, she treated severely ill and underserved populations. Her current work focuses on outpatient care. Her time is divided between maintaining her private practice in Manhattan, working as an attending psychiatrist at the Washington Heights Community Center (part of New York State Psychiatric Institute), and supervising and teaching as an Assistant Professor of Psychiatry at the Women's Mental Health program at New York Presbyterian Hospital (at Columbia University). Most of her patients are Latinas, either US- or foreign-born. As a Spanish-speaking immigrant treating other Spanish-speaking Latinas who represent different economic and educational levels, Dr. Sirulnik is able to draw from her intimate understanding of Latino culture, and her patients benefit from her understanding of their use of idioms when describing their depressive symptoms. In her experience, having a deep understanding of the Latino culture and the language are among her most important attributes in successfully treating perinatal Latina women with mood disorders.

Chapter Overview

The purpose of this chapter is to share Dr. Sirulnik's experience with what she identifies as the culturally specific reactions of Latinas. She details her interactions with two perinatal women, describes their symptoms, illness, and reactions to their depression. She then discusses her treatment recommendations, as well as the role cultural factors played in the treatment. Dr. Sirulnik also shows, as others have previously found, that a patient's perceptions of her mental illness will impact her willingness to seek treatment, adhere to treatment plans, interface with health care providers, and respond to the treatment (Satcher 2001).

Defining and Experiencing Depression/Mental Illness Among Latinos

Mental illness in Latinos differs from that of other racial/ethnic groups in the manifestation of the illness due to their cultural beliefs and value systems. While there are particular idiosyncrasies depending on place of birth, Latinos share a common and usually very negative perception of mental illness and its treatment. For instance, the general Latino view on the use of psychotropic medications and/or consulting psychiatrists, for any purpose, is that such remedies are reserved for very ill "crazy" people and there is a significant stigma associated with seeking treatment. Latinos often personify mental illness as those "crazy" aunts or uncles who were not able to function in their community who lived disheveled lives or in the best-case scenario were confined to an institution apart from their families (Martínez et al. 2007). Mental illness becomes the "big ghost" no one talks about, something that provokes fear and disbelief. It may be difficult for some mental health providers to trace the family history of mental illness among Latinos, because it was neither talked about within the family, nor was it described as "mental illness."

With regard to manifestation of symptoms, Latino culture has traditionally promoted the expression of emotional pain or mental illness through the body, resulting in a tendency toward somatization (Lopez and Guarnaccia 2000). For some, depression may be expressed through headaches, stomach aches, back pain, nausea, allergies, gastrointestinal or digestive difficulties, diarrhea, and constipation. Another common presentation of symptoms is "ataque de nervios" or a nervous or panic attack (Lopez and Guarnaccia 2000). Despite these culturally accepted expressions of symptoms, Latinos suffer from the same symptoms associated with depression as do people from other ethnic backgrounds, including sleep disruption, changes in appetite, irritability, body aches, loss of concentration, and memory difficulties. To avoid social rejection, Latinos are taught at a young age not to speak about one's intrusive thoughts, sadness or depressive symptoms. Instead, they are taught that sadness and depression are temporary, that they are nothing to worry about, and that such problems are normal or "no es nada, ya se te va a pasar, es normal (it's nothing, it will pass, it's normal)." While such behavior may not be representative of all Latinos, this is the general trend found in the literature and in Dr. Sirulnik's experience.

Marianismo

Because of culturally specific fears of depression and culturally accepted expectations of women, members of the Latino population often ostracize mothers who are suffering with depression. *Mariansimo* characterizes Latina women as virtuous, humble, submissive, self-sacrificing for the sake of her family, and spiritually superior to men (Castillo and Cano 2007; Castillo and Caver 2009). The notion of *Marianismo* has been studied within the context of help-seeking

behaviors and depression. However, there has been less exploration within the context of postpartum depression. As the two cases described below illustrate, Latina mothers are expected to be humble and virtuous (Castillo and Cano 2007), while being willing to forsake themselves for the good of the family (Castillo and Cano 2007). If the Latina is to exert power or strength, it is with the intention to protect and serve her family. These prescribed roles translate into expectations about what a good mother is and how a good mother behaves. For some, this means that they must endure depression in silence or face being ridiculed by their communities. Tied to this concept of *Marianismo* is *familismo* or family cohesion, which suggests that family members have responsibilities to each other that may supersede their own needs (Davila et al. 2011). Both of these cultural expectations may discourage formal help-seeking behaviors among Latina mothers.

In the case of the postpartum woman who is depressed, she may be hesitant or unwilling to talk about her sadness or depressive symptoms because this disclosure may be interpreted by her spouse or family members as selfishness or weakness. Such an admission might also cause her to lose the respect of her family, especially because she is expected to endure the pains of motherhood. Among patients with more severe pathology, there is the fear of having their children removed from their care, which has been found among low-income and ethnic minority populations (Grote et al. 2007). Latino culture encourages self-sacrifice, endurance of pain and suffering, and reliance on family only for support—"la ropa sucia se lava en casa," which translates into a common English idiom "don't air your dirty laundry." Consequently, those hearing this message learn not talk about their emotions or conflicts outside their immediate families. Secrecy can be a dangerous trap, with severe, sometimes fatal, consequences for the mother, baby, and the rest of the family and repercussions that may be felt for more than one generation. Instrumental barriers, such as a lack of insurance, limited financial resources, or an inadequate number of Spanish-speaking mental health professionals, make reaching out among Spanish-speaking Latina mothers more difficult. A third complication in diagnosing and treating Latina mothers is the ingrained message that emotional pain is not perceived to be a true illness that requires the help of health practitioner: if pain is not felt in the body, there is no illness.

For many Latina women, religious values are often embedded within cultural beliefs and practices requiring that the individuals look to their spirituality and/or religion for help. Some women are told to pray or confess their thoughts to a priest or a spiritual leader if they are to heal the poor character that has made them vulnerable to this disease. These beliefs may exacerbate a woman's depressive symptoms, because she may come to believe that her depression is a function of a personal limitation or that she is being punished by God for former sin. For some, seeking religious leaders or spiritual practices for comfort or help is preferred or encouraged by family members over the use of a trained mental health professional. These alternative treatments might range from "curanderos" (witchcrafters) who sell herbs for treatment, to exorcism performed by priests (even in the United States) when bizarre behavior or psychosis is considered the work of the devil.

Therefore, in Latino women, due to the fears described above, the stigma associated with mental illness, the complex expression of depressive symptoms, and the cultural expectations of mothers, it is virtually impossible for Spanish-speaking and/or Latina mothers to disclose their depression. If their symptoms and/or depression are revealed, they risk social segregation and shame on her family. While these fears and concerns are not exclusive to Spanish-speaking or Latina mothers, we argue that the intensity of the fears and the concern for the family is believed to be stronger among these women than with other racial/ethnic groups of women. Another factor is a potential language barrier. If the woman can only express her feelings in very limited English, she may risk being misunderstood, or worse, her descriptions may be over-interpreted, which can lead to inappropriate reactions by providers. The terms and illustrations used to describe her symptoms can be misinterpreted when native Spanish speakers are not treating the woman.

Case Illustrations

The following two cases illustrate these cultural beliefs. The first case was a woman with postpartum depression. She was referred to Dr. Sirulnik after being diagnosed by a clinician at a women's clinic. The second woman was referred to consultation for premenstrual dysphoric disorder (PMDD) and dysthymia. She had history of MDD, physical and emotional abuse, and was under Dr. Sirulnik's care for many years before she developed anxiety and depression during her pregnancy.

Case Report 1

Carolina (pseudonym) was a married, Dominican immigrant with legal US status. She was unemployed and had three children (18-year-old son, 4-year-old daughter, and 2-month-old infant) when she was referred to Dr. Sirulnik. Carolina had a college education and was fluent in English and Spanish. Carolina reported that her anxiety had started during the third trimester after being fired from her job at a hotel chain where she had worked for 18 years. Originally seen by her obstetrician following the birth of her third child, Carolina initially reported only problems with sleep and was prescribed a benzodiazepine drug. Later, Carolina reported having intrusive thoughts and continued insomnia, and she was referred to a nearby women's clinic where she was diagnosed with postpartum depression and referred for a perinatal psychiatry evaluation. During her first evaluation, she reported that she had been using prayer to cope. Carolina said that while she was able to share her feelings with God, she was afraid to disclose her symptoms to her mother or obstetrician, much less to her husband. She did not think of her depression as an illness. In addition, Carolina reported that she isolated herself and relied on a sitter, to care for her infant and 4-year-old daughter; her 18-year-old had recently left for college.

Carolina said that she spent most of the day in bed, unable to function or care for her family. As she put it, *I just wanted to be left alone…someone else needs to take care of the children…I just cannot…* She did not understand what was happening. She felt she had done something wrong, and thus was afraid to mention her feelings to anyone. She was scared of her thoughts and wanted to run away from her family. She firmly believed that her community would judge and reject her. She felt trapped and was convinced no one would understand her because, after all, she had no reason to feel sad. She had just delivered a healthy baby boy, had two other healthy children, and a loving and supportive spouse. So, Carolina remained silent about her depression for months, fighting her *bad thoughts* with faith while waiting for help from God.

Not having had a history of depression, she was unable to understand what was wrong with her and saw herself in an *endless dark tunnel*, as she described it. She felt she did not have permission to express herself, which led to feelings of shame and isolation from her immediate and extended family. After the first encounter, she was given a working diagnosis of major depressive disorder and anxiety disorder with panic attacks, with a prenatal onset. Carolina denied suicidal or homicidal ideation or intrusive thoughts of hurting herself or her child, but was having thoughts about running away. These thoughts were intensely real and ego dystonic; she was extremely distressed. In the initial meeting, Carolina (who had been prescribed benzodiazepines by her obstetrician) said, *….I want something called Xanax …that is what I want…I have a cousin who apparently took it. …What I am getting from my OB is not enough…it doesn't touch me…* It was clear that Carolina wanted to appropriately address her depressive and anxiety symptoms. Consequently, she was started on Zoloft (sertraline) and titrated up to the maximum dose of 200 mg/day. Two mg of Abilify (aripiprazole) was added to her treatment as an augmentation to sertraline treatment because of her severe symptoms. Carolina also participated in weekly psychotherapy sessions with a licensed social worker. Carolina met with Dr. Sirulnik on a weekly basis to discuss her treatment and her response to the prescribed medications. Despite being bilingual, Carolina preferred to speak and be spoken to in Spanish during the sessions. Carolina reported that finding a psychiatrist and other providers who understood her and who spoke Spanish made a contribution to her improvement. Dr. Sirulnik believed that being able to establish trust with a psychiatrist who shared her language, cultural experience, and offered an effective medication regimen helped Carolina gain confidence in Dr. Sirulnik as her treating psychiatrist and made it easier for Carolina to accept her illness. Consequently, she was better able to understand the nature of her symptoms. She could demystify depression and no longer label her symptoms as "locura" (craziness). Together, they were able to resolve the guilt she felt about her medical condition and her related feelings. As such, Carolina was able to accept medication as a form of treatment and was able to temporarily take a low dose of an antipsychotic drug, which initially frightened her deeply, not only for possible side effects and risk, but also because of the idea that her symptoms were being associated with the word "antipsychotic". Along with the language and cultural components of Carolina's care, Dr. Sirulnik made sure she discussed every aspect of her treatment with her, including the

definition of antipsychotics and the benefits of psychotropic drugs for treating severe cases of depression. Dr. Sirulnik helped her to get back to her normal self, be able to take care of her family, and start bonding with her newborn. She was also referred to reliable websites with information in Spanish (http://www.otispregnancy.org/en-espa-ol-s13050, http://www.postpartum.net/En-Español.aspx, http://www.mededppd.org/sp/default.asp) and in English (http://www.womensmentalhealth.org/, http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?LACT, http://www.motherisk.org/women/index.jsp, http://www.mededppd.org/mothers/) to learn about her prescribed medications, which helped her to distinguish between valid and misleading information available online. Given the fears associated with mental illness among mothers, Dr. Sirulnik also normalized her symptoms and treatment. Open and honest conversations, along with education about postpartum depression and medication, were vital in establishing trust with Carolina.

Within 4 weeks, Carolina responded to her treatment and became asymptomatic. She returned to her normal level of functioning and enjoyed life with her family. By the time this chapter was written, she was 4 months postpartum. Carolina reported that she was trying to lose weight, going to the gym, and enjoying her children. She remained on the antidepressant medication at the same dose that resulted in remission. While she viewed Abilify as a temporary medication, she stopped taking the medication due to poor functioning and fears about long-term side effects. She was interested in helping other Latina mothers suffering with PPD though the use of education to address stigma and lack of awareness. Her motivation to help other women stems from the realization that she had allowed ignorance about the disease, a lack of understanding of her symptoms, and fears of being judged by others to guide her.

Case Report 2

Erica (pseudonym) was a professional, US-born, Dominican woman living in New York City. Erica was referred to Dr. Sirulnik for treatment of PMDD. Since their initial meeting 5 years ago, Dr. Sirulnik had been seeing Erica in weekly psychotherapy sessions. While Erica was fluent in English and Spanish and used English for most discussions, she felt more comfortable and closer to Dr. Sirulnik by using Spanish when describing her emotional pain. In fact, during treatment, she spontaneously switched from English to Spanish as she became more distressed. Erica's PMDD was responsive to treatment, which was a combination of medication and psychotherapy. Still, it was always challenging for her to accept that she suffered from a mental illness and it was much harder for her to accept that she needed treatment. For a long time, she hid these facts from her fiancé and family. She worried that someone would find her pills in her purse or in the bathroom. During the course of their work together, Erica progressed from social isolation, constant sadness, irritability, and low self-esteem in the context of a long-term emotionally abusive relationship, to being married, becoming closer to her family and friends, and

moving forward in her professional career. Her symptoms improved with a combination of medication and weekly psychotherapy.

Shortly after getting married, she reported that she wanted to discontinue all medications prior to pregnancy. Dr. Sirulnik informed Erica about the risks associated with discontinuing medication as well as the risks of taking medication during pregnancy. Erica's decision to discontinue use of medication in pregnancy was based on the gender roles and religious and cultural values ingrained during her upbringing:

> …Most of us will eat the burnt toast and learn to crave it when perfect toast is available. That seems to be part of being a good woman. One actually feels good inside when we sacrifice one's needs for another…that is love and commitment… "….Corinthians 12:9-10 says: 'But he said to me, 'My grace is sufficient for you, for power is made perfect in weakness.' Therefore I will boast all the more gladly of my weaknesses, so that the power of Christ may rest upon me. For the sake of Christ, then, I am content with weaknesses, insults, hardships, persecutions, and calamities. For when I am weak, then I am strong.'" …Being Latina and growing up in a Catholic home meant that I was taught early that heaven is for those who endure…

Dr. Sirulnik also discussed Erica's beliefs about motherhood as well as the realities of being a mother as compared with the unrealistic depictions shown on television. After discussing these issues over a period of time, Erica decided to discontinue all medication. Over the course of 2 months, Erica was gradually tapered off all medications while attending weekly psychotherapy. Given Erica's risk for relapse during pregnancy and after birth, Dr. Sirulnik recommended that they meet twice weekly and also suggested non-medication interventions. Erica opted to meet on a weekly basis; she started weekly acupuncture, intensified the frequency of her yoga classes, and added light therapy. Once pregnant, Erica stayed off medication. Regrettably, Erica became very symptomatic during her pregnancy and refused all use of pharmacologic interventions. Her symptoms included being irritable, argumentative, depressed, and unable to function or work. She was also discontinuing prenatal vitamins, fighting with her husband frequently, regretting the pregnancy, feeling completely disconnected to the fact she was carrying a baby, hitting her belly, and seeing herself negatively: "I am *like a whale*…like a balloon…I am like a monster…I do not like when people tell me my belly is getting bigger…" She blamed the fetus for it and wanted to go back in time to erase ever becoming pregnant. Despite, or possibly given, her poor condition, Erica was not able to make the connection between her mental health status and risks to her baby. Instead, Erica held firm to her cultural beliefs that no medication should be taken in pregnancy. The first trimester was the most difficult for Erica, and she spent most of this time in silence, not talking to her family about these "embarrassing" symptoms, until 1 day she did. She described her interaction with her mother when she was brave enough to be open with her:

> ….I have been suffering from this for a while now….Therapy really had helped me. It was really hard at first. ….and there was a silence and then a quick judgment. My mother suggested that maybe I went outside immediately after blow drying my hair and caught a draft that made me crazy….She {my mother} has a distrust for medicine/doctors. She may be

> more likely to call her Tia Agueda for a "jarabe" (home remedy) and let the disease become an emergency before seeking outside medical attention… Erica knew she was going to be judged and labeled. Mental illness in Erica's family is equal to "locura," which has its origins in the most unthinkable causes. Giving examples, Erica cited her mother: …..this family doesn't go talk to strangers about their problems. They figure it out and keep things moving. The best cure…Go to church. Talk to the Priest, Pray…Ask God to help you…

Erica's symptoms were difficult but manageable toward the third trimester. Luckily, she had always had her husband's support, who understood that her presentation, behavior, and emotions were the results of her partially treated illness. She attended treatment sessions inconsistently, used yoga 5 times a week, obtained weekly acupuncture, and intermittently used light therapy, even when she noticed it was helping her. Erica's symptoms returned furiously postpartum, and her doctors were not sure if she should be discharged with the child after her C-section. Her husband reassured them that she had a psychiatric appointment scheduled. When Dr. Sirulnik met with Erica in the hospital, she continued to refuse any medication because she wanted to breastfeed and was worried her child would experience side effects from the drugs. She was not considering what effect her mental condition would have on the child. A few days following his discharge, her baby was admitted to the NICU after loss of consciousness caused by gastroesophageal reflux and dehydration. The baby was refusing to eat and moved his face away from Erica's breast. This "rejection" caused Erica great emotional pain and sadness. Yet, she was firm on the idea of "breastfeeding or nothing until the baby changed his mind." Her unyielding position regarding breastfeeding as "the only healthy option," according to Erica, was reinforced by a counselor from Liga de la leche. This crisis exacerbated Erica's symptoms. During this time Erica had ceased attending regular psychotherapy sessions and was not taking any medication. To help Erica cope and enable her to care for her baby, Dr. Sirulnik prescribed medication but she did not fill the prescription. Just the idea of taking medication and breastfeeding made her sick and she firmly refused it. *I'm not going to hurt my child…there is nothing healthier than breast milk for him…*

Finally, 3 weeks postpartum, after her husband encouraged and implored her, Erica filled a prescription. She was given Zoloft, which was titrated up to 75 mg/day as they tried to find the lowest effective dose, and regular psychotherapy resumed by phone. After a week, her family began to notice changes, and Erica reported improved mood, good sleep, good appetite, reduced anxiety, and less irritability. She felt more capable of helping her baby calm down and eat without vomiting and crying, and the baby's sleep improved. Erica started to feel more secure, confident, and able to connect with her child. Her husband was very understanding. He supported her without judging her, even when Erica was no longer ashamed of verbalizing her deepest thoughts of detachment from the baby during the first few weeks postpartum. During this time, Erica was not able to breastfeed because difficulties getting her son to latch on persisted, but she pumped and fed him breast milk while taking her medication.

After 2 months of psychotherapeutic sessions by phone, in-person sessions resumed because Erica felt comfortable bringing her baby to the sessions. Now

more sure of herself and in love with her baby boy, she cannot imagine life without him. She is focused on being the best mother she can be, raising her child with a mind opened beyond her old cultural beliefs. Still, many of those cultural values taught to her as a child live with her today and guide many of her decisions. As she put it:

> The need to put my child first also affected my treatment decisions because I would not be fulfilling my role as a mother if I injured him with medications. It was not until I was convinced that the injury would be to not medicate that I could accept taking medication…Still, my son and husband must always come first and, if my needs conflict with theirs, I will have to lose. Therapy can't change that truth and responsibility of mine.

Discussion

The first case illustrates the powerful influence gender roles and families can have on how a mother perceives and treats her depression. Carolina is a perfect example of postpartum depression with the onset was associated with an external change in her life, which occurred during the last trimester of her pregnancy. Left untreated, Carolina's depression worsened and required psychotropic drugs and psychotherapy. Once treated, Carolina's depression remitted. However, the process was not an easy one for Carolina, like many other mothers, particularly Latinas, for whom family and motherhood, as well as shame, profoundly influence how they cope with depression. *Marianismo* can best explain why Latinas have intense feelings about their role as women and mothers and how beliefs about those roles can discourage treatment-seeking behaviors. This was certainly the case for Erica, for whom medication in pregnancy and breastfeeding was unacceptable. Her beliefs about motherhood and the stigma associated with mental illness and the use of psychotropic drugs, crippled her assessment and further compromised her mental health. As Erica stated, Latina mothers are made to endure and to put their family first.

For both women, religion and faith became both resources and barriers to treating their depression. While there is some evidence to suggest that individuals with ties to religion and spirituality have better mental health outcomes than those who do not (Braam et al. 1999), these same values may prevent women from seeking help from others and may put them at increased risk for depression (Braam et al. 1999). Carolina relied on prayer. While one may consider this coping strategy passive, it was familiar and safe for her, and it gave her an opportunity to feel that she was not alone, that she could seek the compassion and help of a higher being. Erica also relied heavily on prayer and looked to religion to help her cope with the severe depression she experienced in pregnancy and postpartum. Regrettably, this was not sufficient for treating her disease. In both cases, a second line of defense, one that included the use of pharmacology and psychotherapy, was needed. Another important component was the inclusion of family support systems. Both of these women were afraid to share their symptoms with close family members, people whom they trusted. Both worried about being ostracized and abandoned by those they loved.

However, with time, they were able to disclose their suffering and were ultimately able to find solace in those close to them. This multifaceted approach to treating depression in two very different cases illustrates the importance of a comprehensive approach to treating postpartum depression. However, one must ensure that those involved in supporting and treating women, particularly Latinas, are aware of the complex factors that impact the depression and its treatment.

For many Latinas, seeking help and guidance from one's religion is very common and believed to be an effective treatment for depression (Florez et al. 2009; Givens et al. 2007). Therefore, mental health providers should be aware of the perceived and actual benefits prayer can provide while providing evidence-based treatments, such as psychotherapy and/or psychotropic drugs. Yet, while both therapy and medication are effective in treating depression, they are not always well received, particularly among Latinos. As was the case with the two illustrations provided here, Latinos often perceive antidepressants as potentially addictive (Martínez et al. 2007) and ineffective (Givens et al. 2007). Furthermore, they often believe antidepressant use "signals that the person's problems are a disorder, not a problem in living, and open the person to community stigmatization as someone who is *loco [crazy]" (*Martínez et al. 2007, p. 21). Therefore, education about potential side effects, how long the medication will be used, and the benefits that can be expected must be discussed with the patient early in the treatment.

Finally, trust is an important issue. While *familismo* is highly valued among Latinos, the family may not always be perceived as a safe network for sharing one's symptoms. This is especially true for mothers because of the way their role is perceived within the family. Therefore, clinicians treating Latina mothers must provide psycho-education to both the patient and the family. Helping others understand that depression is a treatable disease can help reduce fears about mental illness and encourage supportive strategies that complement medical interventions. Along these same lines, trust between the mental health provider and the Latina woman must be established early in order for a patient-provider alliance to be established. However, this collaboration is not always easily developed. The Latina's own fears and unfamiliarity with the use of antidepressants and/or psychotherapy may create an initial barrier to effective treatment (Martínez et al. 2007). Aware of these potential barriers, Dr. Sirulnik relied on psycho-education about the medications she was prescribing and about the benefits of psychotherapy to help build an alliance with her patients and to enable them to make well-informed decisions that are based on fact and not fears or stigma.

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Maternidad Tabú, the Silent Epidemic: An Autobiographical Story of Postpartum Depression in Mexico

Katia Thiele

Introduction to Chapter

The following is a personal account of one Mexican woman's experience with perinatal depression that began in pregnancy, worsened after the birth of her first child, and went untreated for several years. Here, Katia tells the story faced by many women who experience depression for the first time during what is expected to be one of the happiest times in a woman's life—pregnancy. Like many others, Katia experienced profound shame, isolation, and confusion during her depression. A chance exposure to a popular groundbreaking book helped Katia break her silence and set her on a journey toward recovery that took several years. During her path to recovery, Katia experienced suicidal thoughts, marital stress, and difficulty bonding with her children. Women who read Katia's powerful autobiography are encouraged to contact their health care clinician to seek treatment and to do so urgently if they experience thoughts of self-harm or hurting others. Our wish, along with Katia, is that women are strengthened and motivated to seek care by learning about her journey to recovery. Katia gives the gift of hope.

> There is no medicine like hope, no incentive so great, and no tonic so powerful as expectation of something tomorrow.
>
> Marden (1850–1924) American author and founder of *Success* magazine
> (Retrieved on 2/15/13 from http://en.proverbia.net/citastema.asp?tematica=568)

I always wanted to be a mom. I grew up with the idea that the days my children were born would be the happiest days of my life. How could they not? My mom would often tell me that these were the happiest days in her life, and our culture perpetuates the notion that a mother must be happy. There's simply no other option.

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I met my Prince Charming in the schoolyard. We dated for 6 years and married in 1997. Two years after, when I was 28 and he was 29, we were ready to become parents—or so I thought. It was a decision that was not made consciously, not thinking about the consequences of parenthood, but it was a planned and much desired pregnancy. The long awaited moment finally arrived just as I had always dreamed: I was pregnant! I was extremely happy when I heard the news, but it was not very long before I started to feel tired, irritable, angry, and weepy all the time. I did not understand why I was feeling this way. I had physical symptoms such as nausea, vomiting, and constant fatigue. I had no appetite and nothing appealed to me. I stopped working, exercising, and visiting friends, without noticing that I was isolating myself. I became unhappy because I was frustrated and always in a bad mood. My self-esteem was plummeting. Where was the happiness I was promised? Of course, I never shared my profound feelings of despair and unhappiness with anyone. I tried as hard as I could to feign happiness, health, and excitement. No one realized the lie that I was living. Deep inside, I felt sad, guilty, and very ashamed of my negative feelings. Like most mothers, I wanted to prepare myself to become the best mom in the world: I read books about motherhood, breastfeeding, and nutrition for babies. I took a course to prepare for natural childbirth. My body was changing; my belly was growing. I attended all my obstetrical appointments. My husband and I decorated the baby's room with a new cradle, freshly cleaned and ironed clothes, toys, and a bathtub. Everything was ready for her arrival… except me. As the due date drew closer, the more anxiety, fear, isolation, and sadness I felt. I was terrified of the enormous responsibility that was about to fall on my shoulders, taking care of a newborn, when I couldn't even take care of myself.

In March 2000, our beautiful millennium baby, Alexa, was born by natural childbirth. From the first moment, she was extremely demanding and cried at remarkably high decibels at all hours. Breastfeeding was complicated (it wasn't as easy as the books claimed), as was putting her to sleep. I lived as if in a trance, absent from the world. A few days after her birth, my wound from the episiotomy opened and became infected. I was ordered to stay on complete bed rest for 2 weeks. We did not have a support network (no family or friends) and consequently my husband and I were completely stressed. The situation overwhelmed us, and the shouting matches, fighting, and insults between us began. When we took Alexa to her first doctor's appointment, she was diagnosed with a dislocated hip. Life became more difficult. The worst part was that I felt no emotional bond with my baby; I began to see her as a burden. I was so ashamed of these negative feelings, and I felt extremely guilty for not enjoying her. My husband was very happy to go back to work. In my eyes, he would come home late at night to avoid a daughter and mother who cried all day. I envied him. He got to go on with his normal life; he'd work, earn a salary, enjoy business lunches, and changes of scenery. I, on the other hand, was locked up 24 h a day with a baby who would not stop crying and I could do nothing to console her. We had no social outlets and I was exhausted. I wanted to turn back the clock because I felt like a slave to my daughter and my freedom was gone. I would think, "When did I ever agree to relinquish my personal life and completely hand it over to my daughter? Why does my husband get to go on with his life as if nothing had

ever happened?" I became a kept women and he continued with his career. We would argue constantly and I would throw my situation in his face. Constantly I reminded him that he was never home, that he never helped out with Alexa, and that he went out with friends and had fun and looked at pretty women, while I was at home taking care of our daughter.

Little by little, my self-esteem began to disappear. I could not sleep, I felt abandoned, and I was very unhappy. I became very angry with life and with my family. I started to genuinely believe that having a child had ruined my life. My body had suffered the consequences of pregnancy and breastfeeding and had changed drastically: I had gained 22 lbs, my clothes did not fit, my skin was flaccid, and my breasts had augmented during lactation, but now sagged like a pair of old socks. I lost half of my hair and what used to be straight and silky was now frizzy. I felt fat and ugly. The mirror confirmed my worst suspicions. I thought I was the only mother in the world who did not enjoy motherhood. I was convinced that motherhood was not for me and felt certain I was the "worst mother in the world." In my mind, I had become horrible and dehumanized. I seldom left home, but when I did I could see other mothers smiling and enjoying their children. I was the one who was wrong. But, why did I feel so awful? The answer eluded me, but I never spoke to anyone because I was terribly ashamed and of what others would think of me. I feared being severely judged. I swallowed my anger, resentment, hate, frustration, and rage until it suffocated me. Each day seemed like an eternity, my daughter and I had nothing to do. My life was extremely boring and my dreams, hopes, and aspirations had vanished. I was sure that having a baby had completely ruined my life.

I would often wonder why no one had told me the truth about motherhood. I would wonder, "Why does everyone lie about motherhood?" Then I began to toy with the idea about writing a book to tell the world that motherhood is not the best experience for all mothers. It has a very dark side.

When my daughter was 6 months old, we moved to Edinburgh, Scotland. My husband was accepted into an MBA program. It was a very difficult year for my child and me. Although the city was beautiful and the people were friendly, my daughter and I lived the entire year alone, completely isolated from friends and family. None of the other students in the program had children and we did not know anyone else. Our routine consisted of Alexa and me, while my husband studied and was rarely home. He would party and have fun, while we were stuck in our routine. Thankfully, my daughter and I would occasionally venture out. While it was often rainy, we still managed to take walks in the beautiful parks. I would spend hours playing with Alexa, showing her the world, and teaching her to take her first steps and I would prepare nutritious meals. She reminded me how to be amazed by a bird, a tree, and a dog; however, taking care of her proved to be very challenging for me. While I pretended to be happy, inside I was very sad and could not enjoy anything in life. I desperately wanted to love Alexa, but I simply could not.

One year later, we returned to Mexico and Alexa started preschool. A great weight was lifted from my shoulders. At last I had 3 h all to myself! I became dedicated to recovering from the insomnia of new motherhood, so I slept a lot. But, Katia, the real Katia, no longer existed. I had become a person I did not recognize: sad, unkempt,

deeply angry with life, moody, and consumed with negative thoughts. I had no friends, nobody who wanted me or understood me. My life had spiraled.

When Alexa was almost three, my husband persuaded me that she needed a sibling. I was not convinced, but I decided to give it another try because I worried about Alexa being alone. In the end, siblings accompany each other and share life as well as blood and parents. I naively believed that this time things would be different because I knew what to expect. Of course now I would do better! I had learned and this time I would enjoy my baby. Alexa would be so happy to have someone to play with. I thought I had simply been naïve and immature the first time around. I also needed a second chance to be a better mother.

I soon became pregnant and, surprise! I was carrying fraternal twins. At first, I did not know whether to laugh or cry. Other people were happy with the news. No one considered what it meant to take care of two babies and a 3-year-old toddler. Not even me.

Twin pregnancy is considered high risk. During the first 2 months, I almost miscarried twice, so my obstetrician ordered complete bed rest and I spent 6 months in bed. I was ordered not to walk down the stairs. Again I felt trapped and my emotional state to decline significantly. The only help I had was a cleaning lady who worked 2 or 3 days a week. Neither family nor friends pitched in, not even to take care of Alexa. Despite slathering awful smelling lotions on my belly every day to avoid the dreaded stretch marks, 1 day my skin tore—forever—so I thought. This pregnancy was causing me even more anxiety, sadness, and despair than the previous one. Physically and emotionally, I felt distraught. I thought that if I didn't take care of myself, my children would die and I would never meet them. The closer the due date, the more I became obsessed that I would die in childbirth. I felt so weak that I was convinced that I would not survive labor. My twins, Harald and Anna, were born by natural childbirth after 37 weeks of gestation. It was a true miracle that was used as an obstetrics case study for medical students because in Mexico C-section is the most common form of childbirth, even more for twin birth. The labor room was full of students, more than 20. The twins were born very healthy, which was a huge accomplishment for me and for them. Visitors would come to the hospital for the twins, who were the center of attention. Their mother and her health did not matter to anyone. Becoming a mother is taken for granted without regard for the physical and emotional changes a woman experiences. As Latinas, this is our role as women, to bear children. It is our duty and whoever complains or asks for attention is very harshly judged as weak, insensitive, or childish. In our country there is a lot of misinformation, ignorance, taboos, and myths around motherhood.

The hour of truth soon arrived: taking care of newborns and a toddler all by myself became a titanic task that gradually ended life as I knew it. I ceased to exist and from that moment I dedicated 100 % of the time and energy to my three kids. I became a robot who would do the same tasks at the same time every day. I didn't interact with them, but would only take care of their basic needs, not their emotional needs. My husband no longer interested me. We started drifting apart; my feelings were unclear toward him and I began to consider divorce as a way out. Unconsciously I blamed him for what I was going through without taking responsibility for my

actions. I also began to believe that I was going crazy because the sleepless nights had taken their toll. Falling asleep became a problem because of insomnia, breastfeeding (which was quite a feat with twins), or a diaper change. I could no longer distinguish between reality and my intrusive thoughts. I started to have moments of psychosis, which I remember not being myself. I did terrible things. I would cry constantly and curse my life. I was incapable of laughing or seeing any positive aspect of my life. I was riddled with doubt and guilt. I was plagued with feelings of isolation and tension. I completely lost my appetite. I was certain I was being a despicable mother. I could not concentrate and my memory was poor. In my eyes, my life was worthless and had no future. I hated everyone and everything. I felt so empty, so lonely. Consequently, I started planning my suicide. I would think, "Why live?" The situation overwhelmed me. My life had become unbearable. I judged myself very harshly and was sure I was the worst mother on Earth. I was a perfectionist, and my high expectations of what it meant to be a "supermom" was not met. I would fantasize about leaving my family, fleeing to a country where no one knew me and starting a new life. I could no longer live my miserable life. I no longer felt mercy or compassion and prayed that my life would end. I started to weigh my options to take my life: throwing myself from a building, overdosing, slitting my wrists, or shooting myself. I thought, "Where would I buy the gun?" I fantasized about death. I was in despair and did not want to go on living like this. I wrote a suicide note to my husband and children. It read, "You deserve someone better." I felt I was a failure, completely devaluated as a human being. I was nothing. Absolutely nothing! I impulsively took the car and drove very fast, intending to cause an accident. I wept bitterly and I could hardly see the street. I wanted to die more than anything else in the world, but I could not because something inside prevented me from committing suicide. I parked the car and cried for hours until I had no more tears left. I dried up inside. Now my thoughts turned to what a coward I had become and I slid to a new low. I lost all objectivity.

I hated my routine. Nobody cared for me and I didn't care for anyone. I was completely paranoid. My insecurity was so rampant that I could look no one in the eyes. My face was without expression and my eyes were lifeless. I was hunchbacked, as if I carried a huge rock on my shoulders. I never spoke. At social gatherings, I would sleep on the couch, either for lack of sleep or to avoid human contact. I was scared of myself.

I made an attempt to contact my childhood friends and got the courage to express my true feelings. I told them I hated my life and that I hated being a mother. One of my friends jumped from her chair and in a stern voice told me to shut up because I was crazy and that nobody says things like that. I felt misunderstood. Nobody seemed to have any empathy. On the contrary, I was harshly judged. I stopped attending social events. No one seemed to understand my desperate situation, not even me. I was often told to "smile at life," "cheer up," "count your blessings," "God is going to punish you," and "You have such beautify children." These empty comments only confirmed how ungrateful I was.

In all of these years, I neglected my physical health (and unbeknownst to me, my mental health). I didn't eat right, get enough sleep, exercise, have friends, and I

skipped my regular doctors and dentist appointments. I sometimes didn't even shower and was disheveled. I never mentioned what I was going through to my doctors or my children's pediatrician, and, unfortunately, they never asked.

Throughout this entire ordeal, my husband stood by my side, although he did not spend as much time as I would have liked or needed. He partied with friends a lot because he felt it was his only way of coping. He was often very affectionate with me and assured me it was just a temporary phase and that everything was going to turn out fine. Only once, during my psychotic phase, he suggested that I needed professional help. I got angry and lashed out, saying, "Not only do I take care of your kids all day, now you want to send me to a complete stranger to tell them about my bad luck!" It was the only time we ever broached the topic. As I saw it, I was not mentally ill and did not need psychologists and psychiatrists.

Husbands do not know what it's like to spend an entire day with a baby, let alone, three. They are clueless about how hormones wreak havoc on women not to mention the physical and emotional changes they cause. I was judged by my husband for being too tired for sex. Our relationship was on the rocks.

My life didn't change; everything was horribly the same. I felt no joy and hated the humdrum of everyday life. I became terribly bitter, isolated, and profoundly unhappy. I no longer had a life plan. Seven years had gone by since Alexa was born. I was resigned to live in despair. Too much time had gone by.

One day I overheard two women talking about the book that Brooke Shields had written on postpartum depression. This term, which was new for me, immediately got my attention. What was postpartum depression? I needed to find out. I investigated it online. Her book "Down Came the Rain: My Journey through Postpartum Depression" dealt with her struggle through this debilitating disease (PPD). As soon as I had it in my hands, I could not put it down. It all seemed so familiar. I began to cry and cry while I read. I am passionate about reading and have been addicted to books since I was small child and this was the first book I had read in years. I couldn't believe I was reading my own story. My first reaction was to doubt. Was I sick? Was I mentally ill? But I am so healthy, I thought. Despite my doubts, the clarity of my own reflection in her story was undeniable and I diagnosed myself: for the last 7 years, I had been living with severe postpartum depression that had gone undiagnosed and untreated. PPD is a severe mental illness, but I had never even heard of it. Why had no one mentioned it to me? In hindsight, I remembered that the maternity books I had read scarcely addressed the topic. At the time, I thought that it could never happen to me and skipped to the next chapter. I felt immune to mental disorders, which according to me were only for "crazies." I reread the book with a pencil in hand and took notes. My eyes were finally opened. While it hurt deeply to accept that I was suffering from a mental illness that affects up to 20 % of mothers, I also felt a great relief. I was not alone! As I continued to research, I learned that PPD is a debilitating disease that affects not only the mother, but also her children and partner, as well as society; however, with the right diagnosis and proper treatment, it was temporary and completely treatable. That same day, I sought help. I went to my obstetrician and asked to be referred to a mental health specialist. I was

prescribed my first antidepressant. I cried so much knowing that my children, husband, and I had suffered for so long because of an unknown disease.

I made an appointment with a psychiatrist. After several sessions, I was diagnosed with severe and chronic depression with a postpartum onset. I learned that the disease was caused by numerous factors such as genetics, psychological makeup, lack of social support and, obviously, hormones. I learned that antidepressants are not addictive and help with cognitive function. I also learned that recovering from PPD would be gradual and required patience and perseverance. A weight was lifted when my doctor explained that it was not my fault. It was a huge first step toward recovery.

From this moment on, the topic of postpartum depression became my passion and slowly but surely injected vitality back into my life. I was consumed with understanding the disorder as well as the reasons no one spoke about it. I investigated extensively online and sought out Spanish-language web sites. I continued with my research in the major universities in Mexico City and inquired about PPD in the large bookstores where I lived. Reliable information in Spanish was also not to be found in specialized women's centers. I became aware that this information did not exist in Mexico and that there is no bibliography, care centers, support groups, or specialists to treat this crippling disease that afflicts so many mothers. I strongly felt that this lack of information was a disservice to women and their families, so I decided to write the first book ever to be written in Spanish exclusively about PPD. I felt a huge sense of responsibility to do so. The book is entitled *Maternidad Tabú* and describes my experience with PPD and provides information about this epidemic mental illness which continues to be stigmatized in Mexico. Misconceptions about mental health treatment and antidepressants are rampant and the progress toward improving diagnosis and appropriate treatments is low.

For the first time in 2010, the Mexican Institute of Social Security (IMSS), the public health care provider, acknowledged PPD, reporting that up to 20 % of Mexican mothers are afflicted (Official Notice 44 dated March 17, 2010). Less than 10 % of those cases are diagnosed properly and many go untreated. Yet health officials in Mexico still do not consider PPD a matter of public health, despite its devastating consequences on families and society. The Mexican public health sector does not have the means, physically or economically, to provide further assistance for this disease. Legally, mental illnesses are barely legislated. A mother with postpartum psychosis who kills her baby is incarcerated for homicide for years without taking into consideration her illness. Society is very harsh.

When my book was published, I created a website with information about PPD where mothers can write to me for guidance. I refer them to specialists; although, not many doctors are experts in this field and have the skills to treat it. Those interested in PPD can follow *Maternidad Tabú* on Twitter or Facebook, where the latest news on PPD is published.

Since starting the project 2 years ago, I have received more than 1,500 letters from mothers in Mexico and other Latin American countries and Spain. They write to release their pain to someone who listens and understands their isolation and frustration about not having a center that provides assistance. After analyzing these

letters, I have concluded that mothers suffering from PPD more or less have the same story (i.e., symptoms) and we face the same obstacles when seeking treatment.

Mental health treatment is very expensive in Mexico, not to mention the cost of medicine, which is not included in normal health insurance policies. To raise awareness to this problem, I am often invited to talk on radio and TV shows as well as podcasts. I write articles for magazines and newspapers and give conferences in bookstores, schools, and companies. Book sales have been slow because it is a difficult subject to accept. Many Mexican women deny they are suffering and are certain that they can overcome PPD by themselves. They have neither the money nor the time to go to weekly consultations or take medicines. Their families or their partners often judge them and cannot accept that they need help from mental health specialists because of the stigma surrounding mental illness.

I have become a pioneer in raising awareness in Mexico, most directly through sharing my testimony. PPD has become my passion. I am presently earning an MA degree in counseling to help mothers suffering with PPD through therapy sessions. I try to go to all PPD conferences and am constantly updating with the latest information and research on the subject. I read all the books published in English and German about PPD and related issues.

I have come into contact with many institutions and organizations worldwide that provide support and information to mothers suffering from PPD, including Postpartum Support International, which is represented in more than 40 countries. I am very proud to serve as its coordinator in Mexico.

My recovery from PPD was slow, very slow, and desperately slow. The medicines, whose side effects are different for each woman, caused me weight gain, acne, and constipation. Nevertheless, I continue to take them because I feel so much better. It is worth it. I had to practice patience and follow my psychiatrist's recommendations. Emotional therapy and medicine together have proven to be the best way to treat PPD. After more than 2 years of treatment, I can finally see the light at the end of the tunnel and I am myself again. During my years of depression and recovery, I grew and matured; it was a great lesson in life. In fact, I have transformed the worst experience in my life into the best. The *Maternidad Tabú* project has given me great joy and personal satisfaction. I found my passion and my life's calling.

My children are doing well, although, I often wonder how much my disease will affect them. They know exactly what PPD is. They saw me write the book and are my greatest fans. They are aware that their mommy suffered and that for years it was difficult for everyone. They are so proud of me when they hear me on the radio, on TV, or when someone recognizes me on the street. But, their greatest joy is to see me healthy, happy, and 100 % with them. I enjoy their company and, through thick and thin, I am there for them. More than anything else, I give them all my LOVE.

I am fully committed to continuing to learn and raise awareness about PPD in my beloved country. I am convinced that more information about this debilitating disease is urgently needed. My network grows each day. The silence must be broken and we must spread the word, so this health problem is given the attention that is

needed. My goal is for every mother in Mexico to have information about PPD before having a child. Information about PPD is one important key to prevention!

Don't let postpartum depression steal precious years from your children. Treat it, it's worth the effort!

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Estel Gelabert Arbiol, B.S., Ph.D., graduated in 2002 in Psychology at the Autonomous University of Barcelona (UAB, Spain). She obtained in 2004 her Master's Degree in Adult Clinical Psychopathology at the same university. In 2006, she received her Master's Degree in Behavioral Therapy at the Spanish National University for Distance Education (Spain). She achieved her PhD in Psychology at the UAB. Her research was focused on risk factors for postpartum depression, particularly personality traits (i.e. perfectionism, neuroticism, harm avoidance). Currently she is a postdoctoral researcher and a member of the Research Group of Gender and Psychopathology at the Department of Clinical and Health Psychology of the UAB. She is involved in a research line focused on diagnostic and identification of risk factors of psychopathology in women, such as postpartum depression or social anxiety. Her research has been published in national and international peer-reviewed journals.

Emma Robertson Blackmore, Ph.D., is a psychologist who has spent the past 14 years conducting clinical research in mood disorders related to pregnancy and the postpartum period. She has worked in perinatal psychiatry in the United Kingdom, Canada, and the USA and has published more than 50 manuscripts and book chapters in the area. Her primary research interest is in determining biological mechanisms underlying mood disorders (including depression, anxiety, and bipolar disorder) related to pregnancy and the postpartum period, as well as identifying risk for subsequent illness in high-risk women.

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María Asunción Lara is a psychologist, and holds a **Ph.D.** in Health Sciences from the National University in Mexico City. She has been a researcher at the Ramon de la Fuente National Institute of Psychiatry since 1982, where she is Head of the *Intervention Models Department*. She is part of the academic staff of the Postgraduate Program in Public Mental Health at the National University of Mexico. Among other research projects, she has developed and assessed psycho-educational interventions for depression in women, the most recent one to prevent postpartum depression. She is the main author of two online programs: one to train mental health workers in a strategy to prevent depression in women, and the other a self-help program for women with depression. She has published over seventy papers in national and international journals, fifteen chapters in books, four books, and three manuals.

Dr. Sandraluz Lara-Cinisomo, Ph.D., is currently a postdoctoral fellow at UNC Chapel Hill in the School of Medicine where she is learning about biomarkers associated with perinatal depression. Dr. Lara-Cinisomo's research focuses on English- and Spanish-speaking Latina mothers. Prior to joining UNC, Dr. Lara-Cinisomo was an assistant professor at UNC Charlotte and a researcher at the RAND Corporation. Her research includes qualitative and quantitative methods.

Ana Maria Linares, D.N.S., R.N., I.B.C.L.C., graduated in 1981 and received her degree in midwifery from the University of Chile. She earned a Doctor of Nursing Science degree in 2006 from the University of Nuevo Leon in Monterrey, Mexico. In 2009 she joined the University of Kentucky, College of Nursing as an Assistant Professor. For her trajectory as a researcher, she has been accepted as a faculty associate in the Center for Research on Violence Against Women at University of Kentucky.

Dr. Linares previously worked as Associate Professor in Chile, where she served as a Dean at the College of Midwifery and as a professor of obstetrics and neonatology. She also served as a breastfeeding consultant and specialist at Chile-Health Department.

Her research is focus in postpartum health for Hispanic women particularly depression, breastfeeding, and violence against women. Dr. Linares has disseminated findings in peer-reviewed publications and through oral/poster presentations at national and international conferences.

James F. Luther, M.A., is an applied statistician. He has worked on the analysis and reporting of mental health intervention studies for more than 15 years. During that time he has spent more than 10 years working on the Data Coordinating Center for the Sequenced Treatment Alternatives to Relieve Depression (STAR*D). More recently Mr. Luther has worked with Dr. Wisner on several projects related to the identification and treatment of postpartum depression.

Lisa Maloney, B.A., is a psychologist who has worked as an early childhood educator in a classroom settings, as well as early childhood development. Ms. Maloney

uses systematic observations to track each child's developmental milestones and set objectives based on those observations. Lisa served as Dr. Lara-Cinisomo's research assistant and a coauthor. Her research interests include depression, anxiety, and posttraumatic stress disorder.

Dr. Samantha Meltzer-Brody, M.P.H., is an Associate Professor and Director of the UNC Perinatal Psychiatry Program of the UNC Center for Women's Mood Disorders. Her current clinical and research efforts are focused primarily on Perinatal Depression. She has published numerous manuscripts in the field of women's mental health, currently participates in clinical trials research in women's mood disorders, and serves as the mental health consultant for the North Carolina Women's Health Report Card. Her current research investigates the biological markers of perinatal mood disorders including genetic, neurosteroid, and other neuroendocrine biomarkers in cohorts of women recruited during pregnancy and followed postpartum and during lactation, as well as new treatment options for depression in perinatal women. She also directs the UNC Perinatal Psychiatry Inpatient Unit (PPIU), the first unit of its kind in the USA.

Dr. Laura J. Miller, is Vice Chair for Academic Clinical Services and Director of the Women's Mental Health Division in the Department of Psychiatry at Brigham and Women's/Faulkner Hospitals. She is a Professor at Harvard Medical School. She graduated from Duke University with a B.S. in Psychology, then from Harvard Medical School. She completed a residency in Psychiatry at the University of Chicago. She has published over 60 articles and book chapters related to women's mental health, and edited the book *Postpartum Mood Disorders*, published by the American Psychiatric Press. Her work in designing models of care and teaching programs in women's mental health has been recognized by several awards, including the American Psychiatric Association's Gold Achievement Award for innovative mental health services and the American College of Psychiatrists' Award for Creativity in Psychiatric Education.

Emily A. Pinheiro, B.A., is a graduate of the University of Illinois at Urbana-Champaign with a dual Bachelor's in Economics and Latin American Studies. She is currently working with Dr. Wisner on a study to examine the efficacy of various treatments for postpartum depression. Ms. Pinheiro is enrolled in a postbaccalaureate program at Northwestern University and plans to attend medical school.

McClain Sampson, Ph.D., graduated in 1994 with a B.A. in psychology from the University of Colorado at Boulder. She graduated from the University of Tennessee, Knoxville with a Master of Science in Social Work (M.S.S.W) in 2005 and went on to complete her doctorate with the University of Texas at Austin, School of Social Work in 2009. Dr. Sampson completed a postdoctoral research fellowship with Baylor College of Medicine. In her postdoc position she worked as both a research assistant and a clinical interventionist for a CDC-funded randomized trial to prevent alcohol exposed pregnancy among women attending community health clinics. She maintains a Clinical Adjunct Professor position with Baylor College of Medicine. Through this affiliation, she teaches primary care mental health specialists

techniques of motivational interviewing for behavior change. McClain Sampson, Ph.D. joined the University of Houston-Graduate College of Social Work as a Visiting Professor in January 2011 and began her tenure track position in Fall 2011. Dr. Sampson's overarching research interest is maternal health promotion.

Prior to her UH faculty appointment, Dr. Sampson completed a postdoctoral research fellowship with Baylor College of Medicine. Dr. Sampson maintains a Clinical Adjunct Professor position with Baylor College of Medicine. Through this affiliation, she teaches primary care mental health specialists techniques of motivational interviewing for behavior change. Dr. Sampson's current research focuses on the creation of culturally relevant interventions for postpartum depression among low-income Latinas and African Americans. She is currently the lead investigator for a pilot feasibility study of a home-based intervention to prevent postpartum depression.

Dr. Laura Sirulnik, is an Assistant Professor of Clinical Psychiatry at the New York Psychiatric Institute at Columbia University; she is a board certified psychiatrist, and is part of the Women's Program in the Department of Psychiatry at Columbia University. Dr. Sirulnik is a member of a comprehensive care team funded by New York State that includes Washington Heights Community Service which services several mentally ill members of the community and a growing Latina perinatal population with mood disorders http://nyspi.org/http://columbiapsychiatry.org/clinicalservices/womens-program.

Dr. Sirulnik is also a psychiatrist in private practice in New York and focuses on patients with perinatal mood disorders and psychiatric disorders in perinatal populations. Dr. Sirulnik received her medical degree from the University of Buenos Aires and was trained as a gynecologist at the Buenos Aires University Hospital. She immigrated to the USA to train as a psychiatrist. Dr. Sirulnik completed her psychiatry training at New York-Presbyterian Hospital/Weill Cornell Medical College, Department of Psychiatry. Dr. Sirulnik offers treatment in Spanish and English.

Dr. Sirulnik would like to thank Dr. Catherine Birndorf for her many mentorship, Dr. Lowenthal, Clinical Director of New York Psychiatric Institute, Dr. Dianna Dragatsi, Director of the Washington Heights Community Service, and Dr. Jean-Marie Alves-Bradford, Director of the Audubon Clinic for their support and vision in treating Latinas with perinatal mood disorders in the NYC community.

Carlos Ascaso Terrén, Ph.D., is professor at the University of Barcelona where he teaches courses in demography, epidemiology, and statistics. He is the Director of the Public Health Department. His research interests include Geographic Information Systems, Women's Health, and International Health. He has published more than 100 articles in these areas.

Katia Thiele is a mother of three and survivor of postpartum depression. She is the author of the first book ever to be written in Spanish about postpartum depression entitled "*Maternidad Tabú*" and founded a project by the same name to raise awareness about PPD. Katia lives in Mexico City and is currently earning an **M.A.** in Counseling to help mothers suffering from PPD. She is a Coordinator of Postpartum Support International in Mexico.

Maternidad Tabú edited by Urano is also available as an ebook in 9 Latin American countries and can be purchased at http://www.amabook.com.

The website http://www.maternidadtabu.mx has relevant information about PPD in Spanish and as well as on Facebook and Twitter with the same name.

Dr. Katherine Leah Wisner, M.S., is the Norman and Helen Asher Professor of Psychiatry and Behavioral Sciences and Obstetrics and Gynecology and Director, Asher Center for the Study and Treatment of Depressive Disorders, Department of Psychiatry, Northwestern University Feinberg School of Medicine in Chicago, Illinois. Dr. Wisner is board-certified in general and child and adolescent psychiatry. Her main focus is research related to the psychiatric treatment of women of childbearing age. She is internationally recognized as an expert in the treatment of mood disorders during pregnancy and the postpartum period.

Luis H. Zayas, Ph.D., is Dean of the School of Social Work and Centennial Professor in Leadership at The University of Texas at Austin. Zayas holds a Master's in social work degree and doctorate in developmental psychology from Columbia University. His clinical and research experiences have focused on Hispanic and other minority families and their children, and the cultural basis of parenting and improving parenting practices. Through a grant from the National Institute for Mental Health, Zayas tested a cognitive-behavioral intervention for perinatal depression with low-income minority women in the south Bronx. In another NIMH-funded project, he examined the suicide attempts in young Latinas, findings for which were published in *Latinas Attempting Suicide*: *When Cultures*, *Families*, *and Daughters Collide* (Oxford, 2011). Presently, Zayas is conducting a study, funded by National Institute on Child Health and Human Development, on the mental health of the US citizen-children whose parents are deported to Mexico.

List of Resources

The following are list of resources that may help researchers, practitioners, and others interested in learning about services and information on postpartum depression available in the USA and other countries.

The American Psychological Association, a professional organization made up of practitioners and researchers, provides women and others with online brochures that define postpartum depression and steps a woman can take if she suspects she is suffering with postpartum depression. The brochure is available in several languages, including English and Spanish.

English: http: //www.apa.org/pi/women/resources/reports/postpartum-dep.aspx?item=2
Spanish: http: //www.apa.org/pi/women/resources/reports/postpartum-depression-spanish.pdf

The George Washington University Latino Health Research Center provides a wealth of references and publications related to Latino health, including maternal well-being.

Website: http://resources.columbian.gwu.edu/lhrc/research-and-publications/

The National Institute of Mental Health offers materials written in English and Spanish on suicide in the USA.

English: http: //www.nimh.nih.gov/health/publications/suicide-in-america/for-more-information-on-suicide-in-america.shtml
Spanish: http: //www.nimh.nih.gov/health/publications/espanol/el-suicidio-en-los-estados-unidos-de-am-rica/index.shtml

The MedEdPPD.org website provides professional education and peer-reviewed website designed to provide practitioners who treat women who have or are at risk for developing postpartum depression with information and resources. The website also provides women and their family and friends with helpful information in text and video about postpartum depression. The website is supported by the National Institute of Mental Health.

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English: http: //www.mededppd.org/default2.asp
Spanish: http: //www.mededppd.org/mothers/

Postpartum Support International (*PSI*) *provides women suffering with mood disorders*, *including postpartum depression*, *with information*, *local resources*, *and phone numbers to a Warmline where English- and Spanish-speaking women can call to seek support*.

English: http: //postpartum.net/
Spanish: http: //postpartum.net/En-Espa%C3%B1ol.aspx

The U.S. Department of Health and Human Services, *Office of Women's Health provides information, and other online resources in English and Spanish to women and practitioners*.

English: http: //www.womenshealth.gov/mental-health/illnesses/postpartum-depression.cfm
Spanish: http: //www.womenshealth.gov/espanol/salud-mental/enfermedades/depresion-posparto.cfm

Index

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