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Editorial

Christiana Rebelle, PhD, Editor-in-Chief

I am excited to present the Spring 2024 issue of *JOPPPAH*, featuring a diverse range of informative and thought-provoking articles. First, I am thrilled to introduce our new Assistant Editor, Dr. Emily Sauer, whose research and clinical focus include perinatal health psychology, women's health, Acceptance and Commitment Therapy and Compassion-Focused interventions, health psychology, and eating disorders. Her expertise and talent will undoubtedly enhance our journal. I would also like to bid farewell to our Managing Editor, Jess Kimball. We wish her all the best.

The first article, "Psychological Outcomes Associated with Severe Placenta Accreta Spectrum Disorder with Cesarean Hysterectomy," by Noall et al., sheds light on rates of postpartum depression and post-traumatic stress disorder in patients with prior hysterectomy for severe placenta accreta spectrum. This study emphasizes the need for standardized interventions for high-risk patients.

Next, Rebelle et al. present a cross-sectional study, "Examining Beliefs, Behaviors, and Provider Counseling on Physical Activity During Pregnancy," which discusses physical inactivity, obesity, and chronic disease rates among pregnant women in the Southern United States. The study found that pregnant patients across social and demographic factors face similar barriers to physical activity and lack knowledge of its benefits and susceptibility to chronic disease, underscoring the need to enhance provider counseling with evidence-based methods.

"Black Maternal Mental Health," by Herrick and Burkhard, delves into the elevated rates of maternal mental health disorders among Black women, highlighting the impact of chronic stress from racism, higher levels of lifetime trauma exposure, and discrimination in the maternity care system. The authors discuss the barriers Black women face in accessing mental health care and emphasize the importance of addressing these challenges on individual, organizational, sociocultural, and structural levels. The article offers policy

recommendations to address these challenges and promote holistic and equitable approaches to maternal mental health care for Black women, as well as supporting community health workers and promoting shared decision-making by patients in their treatment and care.

Additionally, Cortizo introduces the Calming Womb Family Therapy Model, an integrative approach designed to treat mothers and their babies from conception through the first year postnatally. It is based on Murray Bowen's family systems model, attachment theory, and Selma Fraiberg's psychodynamic work. This model aims to strengthen the bond between mother and baby and address maternal trauma.

"The Case Against Cesareans on Demand: What Doctors Do Not Tell You," by Dr. Verny, examines the rising rates of cesarean births worldwide and the contributing factors, raising important questions about cultural norms and differences in cesarean birth rates across countries. Verny maintains that while C-section delivery may be necessary in some cases, it is important to understand the risks and to promote safer delivery methods when possible.

We also feature Stephanie Cloutman's review of *New Parenting Can Change Your World* by Karlton Terry. Cloutman emphasizes the book's advocacy for babies' well-being and healthy development, highlighting the significance of birth experiences in shaping human culture. The review discusses the book's main themes, including the importance of accurate empathy, meeting a baby's emotional needs, and the cultural impact of relating to babies.

We are also honored to feature award-winning poet Linda Albert's poem "When They Were Born," which reflects on the profound experience of childbirth and the journey of motherhood. Lastly, we highlight Dr. Janus' new book, *The Enduring Effects of Prenatal Experiences: Echoes from the Womb*, which explores how our time in the womb shapes our personalities and influences behavior, culture, and society.

These diverse perspectives and innovative approaches reflect our commitment to advancing the field of prenatal and perinatal psychology. Thank you to all authors, reviewers, and readers who contributed to this issue.

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Psychological Outcomes Associated with Severe Placenta Accreta Spectrum Disorder with Cesarean Hysterectomy: A Retrospective Survey Study

Madison P. Noall, MA, Annastacia R. Woytash, DO, Laura L. Sorabella, MD, Britany R. Raymond, MD, Lisa C. Zuckerwise, MD, Susanna Sutherland, PhD, MS, MEd, Holly B. Ende, MD, MS

This retrospective survey study assesses rates of postpartum depression (PPD) and postpartum post-traumatic stress disorder (PTSD) in patients with prior hysterectomy for severe placenta accreta spectrum. Half of the patients met the Edinburgh Postnatal Depression Scale threshold for PPD, and 35% met the Post-traumatic Stress Disorder Checklist-5 (PCL-5) threshold for PTSD. Patients who underwent a delayed hysterectomy were more likely to report symptoms of PTSD (75% vs. 8%, $p<0.01$) and had higher median PCL-5 scores than an immediate hysterectomy (51 [IQR 16,61]) vs. 11 [IQR 2,21], $p=0.01$). Larger, prospective studies are needed to confirm these findings and determine standardized interventions for patients at high risk of psychological sequelae.

This study was approved by the Vanderbilt University Medical Center Human Subjects Protection Program. The authors have no conflicts of interests to disclose. **Madison Noall, MA,** is a medical student at the University of Cincinnati College of Medicine. **Dr. Woytash** is an Instructor at Brigham and Women's Hospital and Boston Children's Hospital. **Dr. Sorabella** is an Assistant Professor of Anesthesiology and Medical Director of Obstetric Anesthesia at Vanderbilt University Medical Center. **Dr. Raymond** is an Assistant Professor of Anesthesiology and Obstetric Anesthesia Fellowship Program Director at Vanderbilt University Medical Center. **Dr. Zuckerwise** is the Division Chief of Maternal Fetal Medicine at the University of Virginia. **Dr. Sutherland** is an Assistant Professor in the Department of Physical Medicine and Rehabilitation at Vanderbilt University Medical Center. **Dr. Ende** is an Associate Professor of Anesthesiology and Division Chief of Obstetric Anesthesia at Vanderbilt University Medical Center. Address all correspondence to Madison Noall, noallmp@mail.uc.edu.

Keywords: placenta accreta spectrum, postpartum depression, post-traumatic stress disorder, cesarean hysterectomy

Placenta accreta spectrum (PAS) describes a pathologic condition of abnormal placental invasion in which the trophoblastic tissue of the placenta invades the uterine myometrium. The incidence of PAS has increased as a consequence of rising cesarean delivery rates, now affecting up to 1 in 272 pregnancies (Marshall et al., 2011; Mogos et al., 2016). As the name implies, PAS represents a spectrum of conditions, from the least invasive form of placenta accreta (adherence to the myometrium) to the more highly invasive and severe forms of placenta increta (invasion into the myometrium) and placenta percreta (invasion through the myometrium and serosa with potential involvement of surrounding structures like the bladder and bowel) (Berhan et al., 2020). Severe PAS (placenta increta and placenta percreta) is associated with life-threatening hemorrhage, severe morbidity, and maternal mortality as high as 7% (O'Brien et al., 1996). While placenta accreta is typically managed by planned simultaneous cesarean delivery and hysterectomy, management of severe PAS can include either immediate hysterectomy or delayed hysterectomy, where the placenta remains in situ, and surgical resection occurs following placental involution over multiple weeks. Delayed hysterectomy may specifically benefit select patients at higher surgical risk, as interval delayed hysterectomy has been associated with lower total median blood loss, lower median units of packed red blood cells transfused, and fewer percentage of patients requiring transfusion (Society of Gynecologic Oncology, 2018; Zuckerwise et al., 2020).

Psychological sequelae of pregnancy, including postpartum depression (PPD) and post-traumatic stress disorder (PTSD), have been shown to occur more commonly following deliveries complicated by PAS and emergency peripartum hysterectomy (Tol et al., 2019). This may be due to fear of death or complications, perceived helplessness regarding the need for medical intervention, birth-related trauma, loss of fertility, or the overall emotional weight of such a significant diagnosis coupled with the birth of a child (Bartels et al., 2020; Grover et al., 2022). However, despite mounting evidence of this significant psychological burden, little is known regarding potential modifiable risk factors for PPD or postpartum PTSD. Specifically, no current evidence demonstrates a difference between immediate versus delayed hysterectomy on

these important psychological outcomes. Delayed hysterectomy could represent a risk factor for postpartum psychological conditions, given the ongoing threat to life in the weeks postpartum, prolonged hospitalization, and separation from the infant. This study aimed to provide additional data on rates of PPD and PTSD in a cohort of patients who underwent hysterectomy for severe PAS and to compare the rates of these psychological conditions among patients who underwent immediate versus delayed hysterectomy.

Methods

Following approval by the institutional Human Subjects Protection Program at Vanderbilt University Medical Center (Institutional Review Board #220868), we conducted a retrospective survey study evaluating self-reported psychological outcomes in patients with severe PAS (placenta increta or percreta) over ten years. Patients diagnosed prenatally with severe PAS who underwent cesarean delivery with either an immediate or delayed hysterectomy between January 2012 and May 2022 were identified by query of the institutional PAS database. We included patients only with severe PAS due to the association with greater morbidity and mortality and because those patients were eligible for our institution's best practice clinical pathway that allows for consideration of delayed versus immediate hysterectomy based on the clinical presentation. The clinical algorithm used in deciding between immediate versus delayed hysterectomy has been previously described by our group (Zuckerwise et al., 2020). We excluded patients who were deceased or who had insufficient (missing or inaccurate) contact information in the electronic health record.

After identifying the study cohort, eligible patients were initially contacted by phone. In cases where a patient's phone number was missing or inaccurate, we subsequently attempted contact via email. A total of three contact attempts were made before a subject was deemed not reachable, and no further contact attempts were made. Once phone contact was made, subjects were offered the option to participate or decline participation in the study. Those opting to participate provided written electronic consent via Research Electronic Data Capture (REDCap). REDCap is a secure, web-based software platform designed to support data capture for research studies, providing 1) an intuitive interface for validated data capture; 2) audit trails for tracking data manipulation and export procedures; 3) automated export procedures for seamless data downloads to common statistical packages; and 4) procedures for

data integration and interoperability with external sources (Harris et al., 2009; Harris et al., 2019).

Once subjects were enrolled in the study, they were offered the option to complete a brief survey via phone interview or independently via emailed hyperlink. Study data were collected and managed directly in REDCap. A full copy of the data collection survey is presented in Supplemental Material A. Baseline characteristics and delivery-related data were collected by study investigators via manual chart review. This included the type of hysterectomy (immediate or delayed), patient age at delivery, gravidity, parity, the urgency of cesarean delivery (elective, indicated, urgent, emergent), and the interval between hysterectomy and survey completion. The remainder of the questions were answered directly by subjects (either during phone interviews or electronically). Subjects were first asked about any baseline psychiatric diagnoses (e.g., preexisting depression or anxiety) or psychiatric treatment before, during, or within one year of the PAS-affected pregnancy. Subjects then completed three previously published and validated questionnaires on psychological diagnoses—the Edinburgh Postnatal Depression Scale (EPDS), the Post-traumatic Stress Disorder Checklist-5 (PCL-5), and the Life Events Checklist (LEC-5). Finally, subjects were asked to self-report at-tempted breastfeeding (yes/no) and the duration of successful breastfeeding.

PPD was assessed using the EPDS, a 10-item questionnaire with scores ranging from 0 to 3 for each question. A score $\geq$10 is considered significant for possible PPD. Postpartum PTSD was assessed using the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5), which is a 20-item questionnaire with scores that range from 0 to 4 for each question. A score of $\geq$31 is considered significant for possible PTSD (Orbach-Zinger et al., 2021). The LEC-5 evaluated for possible confounding life events, which could have accounted for differences between groups in PPD or PTSD. Participants were asked to retrospectively report their symptoms in the three months following cesarean delivery for all scales. Univariate comparisons between immediate and delayed hysterectomy were performed using Mann-Whitney and Fisher's Exact tests, as appropriate. All statistical analyses were conducted using IBM SPSS Statistics version 28 (IBM Corp., 2021).

Results

Of the 47 patients considered for inclusion, 32 were successfully contacted, and 20 completed the survey (12 immediate hysterectomy and 8 delayed hysterectomy), giving a response rate of 43% (63% of those reached) (Figure 1). Baseline characteristics are reported in Table 1. There were no significant differences in baseline characteristics between immediate and delayed hysterectomy. Patient outcomes are reported in Table 2. Overall, 50% of patients ($n = 10$) with severe PAS met the EPDS threshold for PPD (score ≥10), with median scores in the overall cohort of 10 [6,21]. There was no statistically significant difference in median PPD scores between groups (immediate hysterectomy 8 [5,12] vs. delayed hysterectomy 24 [6,26], $p = 0.08$).

Considering postpartum PTSD, 35% ($n = 7$) of patients in the overall cohort met the PCL-5 threshold for PTSD (score ≥31). Patients who underwent delayed hysterectomy were more likely to retrospectively report symptoms of PTSD than those who underwent immediate hysterectomy (75% vs. 8%, $p<0.01$). Median PCL-5 scores were also significantly higher in patients with delayed hysterectomy (51 [IQR 16,61] vs. 11 [IQR 2,21], $p = 0.01$). There were no significant differences between immediate and delayed hysterectomy groups regarding concurrent life events, as measured by the LEC-5 ($p = 0.47$). Rates of attempted breastfeeding and duration of breastfeeding were similar in both groups (Table 2).

Figure 1

Flow Chart of Study Participation

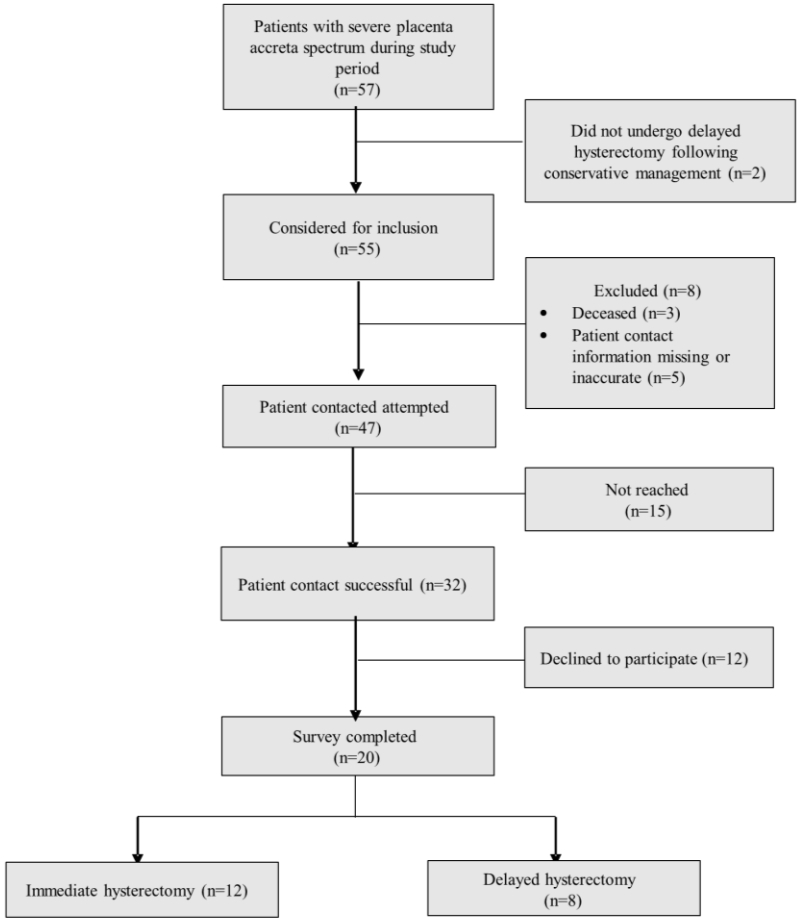

Table 1

Baseline Characteristics

	Full Cohort (N = 20)	Immediate Hysterectomy (n = 12)	Delayed Hysterectomy (n = 8)	p value
Patient age (years)	30 [27, 37]	30 [28,37]	31 [26,37]	0.92
Gravidity	4 [2,5]	4 [2,5]	4 [2,5]	0.85
Parity	2 [1,3]	2 [1,3]	2 [1,3]	0.85
Urgency of cesarean delivery Indicated Urgent Emergent	18 (90%) 2 (10%) 0 (0%)	11 (92%) 1 (8%) 0 (0%)	7 (88%) 1 (13%) 0 (0%)	0.76
Time interval between hysterectomy and survey completion (days)	1563 [1089,2676]	1563 [271,2166]	2110 [1157,2871]	0.21
Preexisting depression or anxiety	4 (20%)	2 (17%)	2 (25%)	1.00
Preexisting post-traumatic stress disorder	2 (10%)	1 (8%)	1 (13%)	1.00

Values reported as n(%) or median [interquartile range].

Table 2

Patient Outcomes

	Full Cohort (*N* = 20)	Immediate Hysterectomy (*n* = 12)	Delayed Hysterectomy (*n* = 8)	*p* value
Postpartum Anxiety				
Postpartum anxiety by patient report	4 (20%)	3 (25%)	1 (13%)	0.62
Postpartum Depression				
EPDS Score	10 [6,21]	8 [5,12]	24 [6,26]	0.08
Postpartum Depression by EPDS Score ≥10	10 (50%)	5 (42%)	5 (63%)	0.65
Postpartum depression by patient report	5 (25%)	4 (33%)	1 (13%)	0.60
Postpartum Posttraumatic Stress Disorder				
PCL-5 Score	18 [4,47]	11 [2,21]	51 [16,61]	0.01
Postpartum post-traumatic stress disorder by PCL-5 Score ≥31	7 (35%)	1 (8%)	6 (75%)	<0.01
Breastfeeding				
Breastfeeding attempted	15 (75%)	9 (75%)	6 (75%)	1.00
Duration of breastfeeding (months)	1 [0, 4]	3 [0,5]	0 [0,2]	0.11
Life Events				
LEC-5*	1 [0,2]	1 [0,2]	2 [1,2]	0.47

*There is no standard scoring for the LEC-5. Values recorded are median number of reports of an event "happening to me."
Values reported as n(%) or median [interquartile range].

Discussion

This retrospective survey study adds to a small body of literature describing the psychologic burden associated with severe PAS, with unacceptably high rates of PPD and PTSD identified compared to the reported rates after uncomplicated cesarean delivery (Lin et al., 2022; Chen et al., 2020). Our findings also suggest an association between delayed hysterectomy and postpartum PTSD. Grover et al. (2022) previously reported on general health

and quality of life at 6, 12, 24, and 36 months after delivery, collected via a prospective survey of patients after cesarean hysterectomy (immediate hysterectomy) for PAS. They found higher incidences of anxiety and depression at 12 and 36 months postpartum compared to those undergoing uncomplicated cesarean delivery, demonstrating the profound and long-lasting impact of PAS. Similarly, Tol et al. (2019) demonstrated significantly higher PTSD scores for women with PAS compared to uncomplicated cesarean delivery controls. Whether the psychologic impacts result from PAS itself or rather the peripartum hysterectomy is debatable, as the study also found no significant difference in PTSD scores between those with emergent peripartum hysterectomy for PAS versus other indications.

While all patients with severe PAS are at risk of psychological sequelae from the factors previously mentioned (fear, perceived helplessness, birth trauma, and loss of fertility) (Grover et al., 2022; Bartels et al., 2020), those with delayed hysterectomy may be at even greater risk due to prolonged hospitalization, separation from neonate, and ongoing risks to health and life while awaiting hysterectomy (Lefkowitz et al., 2010). Although previous studies have highlighted the potential benefits of delaying hysterectomy to allow placental involution prior to surgical resection (Zuckerwise et al., 2020), the psychological implications of these decisions must also be considered, including a potentially higher risk of PPD or PTSD. While this small, retrospective survey study of self-reported patient outcomes does not definitively address this question, it provides preliminary data to inform future larger studies of these outcomes.

Our study results present an opportunity to critically evaluate both clinical risk evaluations of peripartum patients and potential interventions aimed at altering outcomes. The psychological measures employed are widely accessible screening tools, easily integrated into established electronic medical record workflows. They do not require advanced psychological training to interpret and impose a relatively low burden on patients. Moreover, within the burgeoning field of behavioral medicine, efforts to advance the integration of psychological intervention in medical settings require a nuanced understanding of risk pathways for the empirically driven development of interventions. Psychological interventions are efficacious in both preventing and treating post-traumatic stress following traumatic injury (Guimmarra et al., 2018) and are ripe for modification in this setting, with psychological interventionists for medically induced traumatic stress actively seeking collaboration and training

across disciplines (McBain et al., 2023). For example, psychological interventions developed for cardiac surgery or cancer diagnoses that include coping skills or mindfulness instruction may well be appropriate for patients with PAS-related hysterectomy, but to the authors' knowledge, such interventions have not yet been tested in this population (Birk et al., 2019; Salama et al., 2023).

There are many limitations to consider when interpreting the results of our study. Most importantly, the study included a small sample size of 20 patients with PAS. That, coupled with a relatively low survey response rate, likely introduced some selection bias into our results, with patients who had negative experiences following delivery more likely to agree to be surveyed. Additionally, we surveyed patients up to 8 years after their hysterectomy; therefore, recall bias likely influenced the measured rates of PPD and PTSD. Importantly, the average time between hysterectomy and survey was no different between the immediate and delayed groups, so this was unlikely to have influenced the measured difference. Despite these limitations, patients' memories of potentially traumatic birth experiences months to years later are an important and patient-centered outcome that warrants reporting in the current study.

Conclusion

In this small retrospective survey study of patients undergoing cesarean delivery and either immediate or delayed hysterectomy for severe PAS, self-reported rates of PPD and PTSD in the three months following delivery were unacceptably high, with 50% and 35% meeting established screening criteria for PPD and PTSD, respectively. Furthermore, delayed hysterectomy was associated with a greater incidence of PTSD. Larger studies and cross-disciplined collaboration are needed to elaborate on our findings and explore ways to mitigate psychological sequelae of severe PAS.

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Examining Beliefs, Behaviors, and Provider Counseling on Physical Activity During Pregnancy: A Cross-Sectional Study in the Southern United States

Christiana C. Rebelle, PhD, Shannon L. Jette, PhD, John Michael Mills, BS, Rachel A. Tinius, PhD

Physical inactivity, obesity, and chronic disease rates are high among pregnant women in the Southern United States. This study aimed to understand the beliefs and behaviors of women in the South regarding physical activity (PA) during pregnancy and whether provider counseling was associated with these beliefs and behaviors. The study included 292 women from the South who completed an online survey, providing sociodemographic data and recalling their health beliefs and PA during pregnancy. Descriptive statistics and correlation analyses were used to describe and assess the relationships between variables. The study found that feeling tired and lacking motivation were common barriers to PA, while improved health was the main benefit. The participants felt most susceptible to anxiety and depression. Providers were the primary source of support for PA, but provider counseling was not significantly correlated with increased PA. Participants engaged mostly in light household and caregiving activities. Sociodemographic factors had a stronger association with

The authors have no relevant financial or non-financial interests to disclose. **Dr. Rebelle** is a prenatal health educator and Editor-in-Chief of *JOPPPAH*. **Dr. Jette** is an associate professor and the director of graduate studies in the kinesiology department at the University of Maryland School of Public Health. **Mr. Mills** is a medical student at the University of Kentucky College of Medicine, Bowling Green Campus. **Dr. Tinius** is a certified exercise physiologist and an associate professor in Exercise Science at Western Kentucky University. This is an updated article of previously published research (Rebelle et al., 2022). Address all correspondence to Christiana Rebelle, christianarebelle@gmail.com

beliefs and behaviors than provider counseling. The study suggests that provider counseling should be enhanced with established techniques such as motivational interviewing to support PA.

Keywords: physical activity, pregnancy, south, provider counseling, health beliefs

Physical inactivity is a primary contributor to cardiovascular disease (CVD), diabetes, cancer, and mortality, as reported by the World Health Organization (WHO, 2020). Despite extensive research highlighting the benefits of prenatal physical activity (PA) and the importance of healthy gestational weight gain (GWG) during pregnancy, only 10% to 15% of women achieve the recommended level of PA (Garland, 2017; Newton & May, 2017; Santo et al., 2017). This low adherence to PA guidelines is concerning, especially in the context of increasing maternal morbidity and mortality rates in the United States, which are linked to rising obesity rates, chronic medical conditions, and cesarean deliveries (Chinn et al., 2020; Hirshberg & Srinivas, 2017).

Excess GWG can lead to long-term obesity, metabolic dysfunction, and CVD for both mother and baby, making it a significant concern in maternal health (Subhan et al., 2019; Berggren et al., 2016). Recent studies suggest that PA during pregnancy can help prevent CVD, highlighting the need for pregnant women to be informed about the health risks of inactivity and the benefits of PA (Collings et al., 2020; Vyas et al., 2019).

PA during pregnancy is not only crucial for managing GWG but also offers additional benefits such as reducing anxiety and blood pressure, improving neonatal outcomes, and decreasing the risk of cesarean section (Baena-Garcia et al., 2020; Yan et al., 2020). Furthermore, PA can reduce insulin resistance, the risk of gestational diabetes, and systemic inflammation (Tinius et al., 2017; Wang et al., 2017). Despite these benefits, counseling on PA is often limited and not aligned with national guidelines, though many pregnant women express a desire for clear and specific guidance (Harrison et al., 2019; Lott et al., 2019; Whitaker et al., 2019).

In the Southern United States, where physical activity levels are lowest and rates of overweight and obesity, as well as chronic health conditions, are highest, sociodemographic factors may influence beliefs and behaviors

regarding PA during pregnancy (CDC, 2021). Understanding these factors is crucial for promoting healthy behaviors and reducing chronic disease. Despite the potential benefits, PA during pregnancy remains uncommon, and there are significant barriers to effective counseling by providers, including lack of time, patient attitudes, and accessibility to resources (Murray-Davis et al., 2020).

Given the low levels of PA and high rates of chronic disease in the South, examining how sociodemographic factors and provider counseling are related to PA beliefs and behaviors may provide valuable insights to improve provider messaging and patient outcomes. This retrospective cross-sectional correlational study aims to address these issues by examining 1) sociodemographic factors related to beliefs and behaviors regarding PA during pregnancy in the South and 2) whether women's beliefs and behaviors during pregnancy are associated with provider counseling.

Methods

The study analyzed a cross-sectional predictive correlational study evaluating PA during pregnancy in the Southern United States (as defined by the United States Bureau of the Census, 1995) and Washington, DC. The study utilized the Health Belief Model as the theoretical framework. The anonymous and voluntary online sample was recruited via Qualtrics from June 2021 through August 2021 using an open online survey. The final sample broadly represented recently pregnant women throughout the South, including women from every southern state. Participants were eligible for inclusion if they were at least 18 years of age at the start of their last pregnancy beginning in 2016 or later, identified as a cisgender woman, lived and gave birth in the South, and had an uncomplicated pregnancy. Each participant signed an online consent. Participants were allowed to terminate the survey, although incomplete surveys were not included in the final data. Although retrospective self-reported data is prone to error or recall bias, studies have shown that recalling information from past pregnancies may be less susceptible (Carter et al., 2015; Chin et al., 2017; Headen et al., 2017). Additionally, the broad sample reduced the risk of homogeneity, which can be present in self-selecting samples from specific locations. Institutional Review Board approval was obtained before all data collection (IRB-2021-3551).

G*Power (Faul et al., 2009) analysis determined that a minimum sample size of n=184 provided ample power (.95) to establish significant associations

at a .05 a-level and medium effect size (f = .15). All analyses were conducted using Statistical Package for the Social Sciences V28 (SPSS Inc., Chicago, IL).

Protocol

In the analysis, the criterion variables included beliefs (perceived barriers and benefits of PA, perceived susceptibility to health conditions, and exercise self-efficacy) and behaviors (PA (light and above) and sedentary activity) during pregnancy. Beliefs were measured using the Health Belief Model Scales for adult physical activity (Hayslip et al., 1996) and the Physical Exercise Self-Efficacy Scale (Schwarzer & Renner, 2005). Beliefs were measured on ordinal Likert scales and treated as continuous variables. Although this method has some debate, using Likert data on interval scales in parametric testing is an accurate and robust method of analysis (Meyers et al., 2016). The behavior variables were measured retrospectively using the Pregnancy Physical Activity Questionnaire (PPAQ) (Chasan-Taber et al., 2004) with permission from the author. The original authors showed each instrument to be valid and reliable (Chasan-Taber et al., 2004; Hayslip et al., 1996; Schwarzer & Renner, 2005). The PPAQ measured the overall intensity (light, moderate, and vigorous) of PA during pregnancy across four categories (household/caregiving, occupational, sports/exercise, transportation) and sedentary activity. In this article, PA includes all four activity categories, while exercise refers to the single subcategory of sports/exercise.

For this study, provider counseling was defined as provider advice (yes or no) and means from two subscales of the Health Belief Model Scales, including provider cue to action and provider support for PA. Participants were asked whether their provider's recommendation was a major reason for starting exercise (cue to action) and a source of influence or approval (support). Women responded on a 1-5 scale, from strongly disagree to strongly agree. The initial study reported Cronbach's alphas for the Health Belief Model Scales and PPAQ, showing excellent reliability ranging from .80 to .93 (Rebelle, 2022).

We included several a priori sociodemographic factors that have been shown to confound PA beliefs and behaviors in previous studies, including age, BMI, race and ethnicity, education, household income, parity, marital status, exercise before pregnancy, and perceived health status during pregnancy. A detailed description of these variables was included in the initial study (Rebelle, 2022). Self-reported race and ethnicity data were a series of dichotomous

variables consisting of non-Hispanic American Indian or Alaska Native, non-Hispanic Asian or Pacific Islander, non-Hispanic Black, Hispanic, non-Hispanic White, and participants that identified as other or multiracial. With just 1% of the total responses, American Indian or Alaska Native was merged with other or multiracial in the regression models and used as the reference.

Statistical Analysis

For the secondary analysis, descriptive statistics were used to create a detailed profile of the sample. We also examined the subscales of the instruments to identify participants' most salient beliefs, types and intensities of PA, and accompanying sociodemographic factors to determine the sociodemographic factors related to beliefs and behaviors of women in the South regarding PA during pregnancy. Because several sociodemographic variables were not normally distributed, we performed 2-tailed Spearman's rho correlations to assess the relationships among the interval and ordinal variables. Point-biserial correlations were used when one of the variables was dichotomous.

To address the secondary aim, we assessed correlations to examine the associations between provider counseling and participants' beliefs and behavior during pregnancy. The Health Belief Model stipulates that beliefs must be considered in the context of individual factors. For this reason, pertinent sociodemographic factors were chosen a priori because of their frequency in prenatal PA literature (see Table 1). Additionally, the sociodemographic factors accurately reflect the diversity of patients in the South that prenatal care providers are expected to counsel during pregnancy.

Results

Of the 292 survey responses, there were no other missing data points. Outliers were left in the analysis as they were within range of the multiple-choice survey selections. Participants' BMI was calculated using self-reported height and weight at the onset of pregnancy, with 50% considered overweight or obese and 15% underweight.

Table 1

Sociodemographic Statistics (N = 292)

Characteristic	**Mean±*SD* or *n* (%)**
Age(y) at start of last pregnancy	29.5±5.8
BMI at start of last pregnancy	26.3±6.5
Race/Ethnicity	
American Indian or Alaska Native	3 (1.0)
Asian or Pacific Islander	17 (5.6)
Black	45 (14.8)
Hispanic	43 (14.1)
Non-Hispanic White	172 (56.4)
Other/Multiracial	25 (8.2)
Education	
Less than high school or GED	8 (2.7)
High school graduate or GED	58 (19.9)
Some college	58 (19.9)
2-year degree/Associate's degree	39 (13.4)
4-year degree/Bachelor's degree	86 (29.5)
Graduate degree	43 (14.7)
Annual household income	
Less than $10,000	21 (7.2)
$10,000 - $19,999	15 (5.1)
$20,000 - $29,999	21 (7.2)
$30,000 - $39,999	41 (14.0)
$40,000 - $49,999	24 (8.2)
$50,000 - $59,999	29 (9.9)
$60,000 - $69,999	17 (5.8)
$70,000 - $79,999	22 (7.5)
$80,000 - $89,999	20 (6.8)
$90,000 - $99,999	14 (4.8)
$100,000 - $149,999	53 (18.2)
More than $150,000	15 (5.1)
Parity	
1	126 (43.2)
2	101 (34.6)
3	44 (15.1)

Characteristic	Mean±*SD* or *n* (%)
4 or more	21 (7.2)
Marital status	
Separated/Divorced/Widowed/Never married	54 (18.5)
Married/Living with partner	238 (81.5)
Exercise before pregnancy	
Less than 150 mins of exercise per week	190 (65.1)
150 mins or more of exercise per week	102 (34.9)
Health status during your last pregnancy	
Excellent	73 (25.0)
Very good	112 (38.4)
Good or average	81 (27.7)
Fair	19 (6.5)
Poor	7 (2.4)
Advice about physical activity from prenatal health provider	
Yes	192 (65.8)
No	100 (32.4)

Descriptive statistics revealed similar beliefs among the sample, with few notable exceptions (Table 2). Most participants agreed that being too tired was their primary barrier to PA. Women in the study perceived many benefits to PA, with the overarching benefit of improved health; however, nearly all the activity among the sample was incidental rather than a conscious decision to exercise. Participants engaged in primarily light activity during pregnancy, resulting from household and caregiving (57.3%) and more moderate levels of occupational (26.8%) and transportation (11.9%) activities.

Women in the study perceived their health through their prenatal experience rather than through long-term health concerns. Participants felt most susceptible to psychological health threats. For example, most believed they were more susceptible to anxiety (183, 62.7%) and depression (153, 52.4%) during pregnancy while perceiving themselves as less susceptible to inactivity (106, 36.3%) or obesity (103, 35.3%), even though the sample engaged in little exercise and half were in the overweight or obese category at the onset of

pregnancy. Fewer considered themselves at risk of diabetes (103, 35.3%), heart attack (71, 24.4%), or stroke (54, 18.5%).

Although participants had many areas of high agreement, some perceptions varied based on sociodemographic factors. For women categorized as obese, perceived susceptibility was more physical, e.g., feeling stiff and sore, than psychological. Among non-Hispanic Black women, reducing the risk of heart attack was perceived as the greatest benefit of PA; however, just 19% felt personally susceptible to a heart attack (see Table 2).

Table 2

Salient Beliefs

Beliefs	***N* (%) *N* = 292**
Barriers	
Too Tired	247 (88.6)
Lack of Motivation	219 (75.0)
Too Lazy	175 (59.9)
Not Enough Time	149 (51.0)
Benefits	
Improved Health	258 (88.3)
Releasing Tension	233 (79.8)
Feeling Better Psychologically	229 (78.4)
Sense of Accomplishment	229 (78.4)
Increasing Mental Alertness	214 (73.3)
Getting Stronger	200 (68.5)
Reduced Risk of Heart Attack†	32 (76.2)
Cues to Action	
Not Fitting Comfortably in Clothing	154 (53.3)
Shortness of Breath	133 (45.6)
Provider Recommendation	126 (43.2)
Support from Others	
Provider	116 (39.7)
Spouse/Partner	108 (37)
Susceptibility	
Anxiety	183 (62.7)
Depression	153 (52.4)
Stiffness and Soreness††	82 (56.2)
High Blood Pressure††	77 (52.8)

Data are *n* (%) of agreeance among the total sample unless noted otherwise

†High level of agreeance only among participants that identified as Non-Hispanic Black, *n* = 45

††High level of agreeance only among participants categorized as overweight or obese, *n* = 146

The leading cues to action for PA were intrapersonal. Not fitting comfortably into clothing ranked highest, particularly among participants categorized as overweight or obese (96, 65.7%). The primary interpersonal cue to action was a provider's recommendation for PA. Perceived support for PA was generally low, yet participants agreed that providers were their main source of support for PA (116, 39.7%), the highest among non-Hispanic Black women (22, 52.4%).

Two-tailed Spearman's rho and point-biserial correlations showed that women were more likely to rate their healthcare providers as a primary source of support if they had received a provider cue to action (r_s=.462, $p<.001$) or provider advice (r_{pb} =.330, $p<.001$) for PA. Moreover, participants perceived a slight increase in the benefits of PA if they received provider counseling (advice: r_{pb}=.130, p=.026; cue to action: r_s =.264, $p<.001$; support: r_s =.179, p=.002). Although provider counseling was positively correlated with beliefs, the analysis showed that counseling was not significantly correlated with any type or intensity of PA during pregnancy. The only significant correlation between provider counseling and behavior was a small increase in sedentary behavior (advice: r_{pb} =.160, p=.006; cues to action: r_s =.153, p=.009; support: r_s =.169, p=.004).

Further examination showed that sociodemographic factors had stronger correlations with beliefs and behaviors during pregnancy than provider counseling, with exercise before pregnancy as a leading factor. Participants who reported pre-pregnancy exercise were more likely to exercise during pregnancy, perceived less fatigue, and had higher motivation for exercise than those who were less active (Table 3). The analysis also showed that feeling tired and unmotivated during pregnancy correlated with decreased self-efficacy for exercise (r_s =-.271, $p<.001$; r_s =-.383, $p<.001$), which may make it more difficult to begin exercise during pregnancy compared to maintaining or increasing pre-pregnancy activity levels.

Table 3

Sociodemographic Factors Associated with Beliefs and Behaviors

	Exercise Before Pregnancy†	**Income ††**	**Education ††**	**Hispanic †**	**Non-Hispanic Black†**	**Non-Hispanic White †**
Barriers	-.276**	-.188**	-.229**	-.034	-.079	.031
Benefits	.276**	.035	.161*	-.003	.107	-.050
Susceptibility to Serious Health Problems	-141*	-.114	-.135*	-.080	-.168*	.162
Self-Efficacy	.186**	.014	.130*	-.037	.053	-.063
Exercise/Sport Activity	.363**	.045	.039	.072	-.064	.028
Household/Caregiving Activity	-.065	-.123*	-.161**	.147*	-.049	-.140
Occupational Activity	-.065	.102	.115*	.080	.014	.000
Transportation Activity	-.031	.021	-.024	.055	.155*	-.097
Sedentary Behavior	-.017	-.222**	-.103	.076	.224**	-.266**

†Data are two-tailed point-biserial correlation (r_{pb}) coefficients

††Data are two-tailed Spearman's correlation (r_s) coefficients

*$p < 0.05$, ** $p < 0.01$

Discussion

We conducted an in-depth examination to uncover the impact of sociodemographic factors on salient beliefs and behaviors regarding PA during pregnancy among women in the South and the association of provider counseling. The descriptive statistics showed that there was a large agreement among participants. Women in the study perceived a broad range of general benefits of PA and agreed on two prominent barriers: feeling too tired and unmotivated. This finding aligns with many studies that have shown fatigue to be a prevalent barrier to PA during pregnancy (Chang et al., 2015; Downs et al., 2015; Grenier et al., 2021; Kirkwood & Leicht, 2019; Nagourney et al., 2019; Swift et al., 2017; Sytsma et al., 2018). Though PA increases energy during

pregnancy, patients are often unaware of this benefit and believe exercise will increase their fatigue (Melton et al., 2016; Tinius et al., 2020).

Participants perceived themselves as most susceptible to mental health threats and lacked specific knowledge about their susceptibility to other chronic health conditions such as diabetes and heart disease. These conditions are leading causes of pregnancy-related morbidity and mortality (CDC, 2018; CDC, 2019) in the United States, with overweight, obesity, and inactivity as common antecedents. Most women perceived themselves as susceptible to anxiety and depression and viewed PA as a way to release tension and feel better psychologically. This finding aligns with recent studies that have described anxiety and depression as growing concerns among pregnant women (Basu et al., 2021; Liu et al., 2021). Additionally, providers in the South have reported an increase in pregnant patients' anxiety and negative mental health outcomes (Nagpal et al., 2021). To address patients' primary perceived barriers and susceptibility, providers should encourage moderate-intensity exercise to decrease fatigue and improve mental health during pregnancy.

Sociodemographic factors were most associated with beliefs and behaviors, with exercise before pregnancy informing beliefs more than any other variable. Women who exercised before and during pregnancy reported feeling less tired and more motivated to exercise. However, most participants obtained light PA from the daily necessities of household and caregiving rather than exercise. This finding is concerning because household and caregiving activities do not offer the same health benefits as exercise during pregnancy and can contribute to adverse health effects such as poor sleep quality (Hawkins et al., 2019), while even low levels of exercise can offer improved sleep and health benefits during pregnancy (Baker et al., 2018; Rodriguez-Blanque et al., 2018).

The examination of provider counseling's association with beliefs and behaviors regarding PA during pregnancy revealed that providers were participants' main source of support, and counseling was positively perceived. However, provider counseling was not associated with increased PA. Conversely, provider advice predicted a slight increase in sedentary behavior in the regression models. This finding suggests that patients either did not follow provider advice to engage in PA or were advised to decrease activity during pregnancy. Studies report that women are often advised to restrict activity or go on bed rest even though it is not recommended (McGee et al., 2018; Whitaker et al., 2019).

Our findings also align with previous studies that found pregnant patients positively perceive provider counseling on PA (Harrison et al., 2019; Heim et al., 2019; Whitaker et al., 2016) and often initiate it (Whitaker et al., 2019); however, provider counseling on PA and behavior change is often ineffective (Blankenship et al., 2020; Chana & Haith-Cooper, 2019), highlighting the need for evidence-based counseling methods. The COVID-19 pandemic further decreased the time and energy providers have available for counseling patients, with many providers stretched to burnout (Bradford & Glaser, 2021).

This study has many strengths, including a diverse, well-powered sample of participants, which provided a broad representation of recently pregnant women and generalizability to pregnant women in the South. Moreover, the multifaceted quantitative analysis allowed for an in-depth examination of participants' beliefs and behaviors and the impact of provider counseling.

The study also had limitations. The online survey of self-reported retrospective data may have been prone to recall bias. Data collection occurred during the COVID-19 pandemic when depression and anxiety symptoms may have been higher among participants, potentially influencing perceptions of their recent pregnancy. Additionally, the length of the survey may have resulted in quality issues, and the sample provided by Qualtrics may not be truly representative of women in the South, as it excluded those without reliable internet access. Lastly, beyond the scope of this study was a consideration of how the trends identified by race are likely connected to a range of racism-related exposures in everyday life and health care spaces (Ford & Airhihenbuwa, 2010). The results echo patterns found in the existing literature on prenatal PA and provider counseling.

Conclusion and Implications for Practice

The findings of this study revealed that patients across sociodemographic factors face similar barriers to PA during pregnancy and lack knowledge of the specific benefits of PA and their susceptibility to chronic disease. Moreover, provider counseling was ineffective at increasing PA during pregnancy. Adopting established methods of behavior change communication, such as motivational interviewing (also called motivational counseling; Syed et al., 2021) could offer efficient techniques that improve provider counseling while preserving providers' energy and well-being (Endrejat, 2021), resulting in better health outcomes and patient-provider experiences (Haverfield et al.,

2020). Additionally, provider counseling should be performed with an understanding of the various societal factors that influence prenatal PA (Jette et al., 2017). For instance, Jette and colleagues' embodied conceptual framework facilitates an evaluation of how social and structural (dis)advantages accumulate during the life course and across generations and are expressed in health-related behaviors and outcomes. This framework could work with motivational interviewing to promote competent care (Avruch & Shaia, 2022) and inform larger-scale prenatal exercise interventions. Given the paucity of PA in the South and high levels of obesity-related chronic disease among expecting patients, improved provider counseling is essential to prenatal health.

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Black Maternal Mental Health

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Maternal mental health disorders, particularly prevalent in the perinatal and postpartum periods, pose a significant challenge for women, with Black women facing heightened risks due to a complex interplay of societal, systemic, and environmental factors. This paper explores the elevated rates of maternal mental health disorders among Black women, emphasizing the impact of chronic stress from racism, higher levels of lifetime trauma exposure, and discrimination in the maternity care system. We discuss the barriers Black women encounter in accessing mental health care, emphasizing the importance of addressing these challenges on individual, organizational, sociocultural, and structural levels. The paper concludes with policy recommendations aimed at increasing the number of Black and BIPOC mental health professionals, supporting community health workers, and promoting shared decision-making by patients in their treatment and care. The insights provided aim to guide policymakers, healthcare providers, and community stakeholders in developing holistic, equitable approaches to maternal mental health care for Black women.

Keywords: maternal mental health, community-based interventions, policy recommendations, chronic stress, maternity care inequities, equity, racism

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Maternal mental health disorders are the most common complication of childbirth. Up to 20% of women experience maternal depression and anxiety during the perinatal or postpartum period (Gavin et al., 2005). The estimated economic cost of untreated maternal mental health disorders over five years is $14.2 billion (Luca et al., 2019). The impact of these disorders on society is pervasive, with far-reaching consequences on early childhood development, pediatric mental health, and general family well-being (Koutra et al., 2017; "Maternal Depression and Child Development," 2004). Women of any race experience maternal mental health disorders during pregnancy and the postpartum period, but women of color are especially vulnerable. Black women have increased risk factors for maternal mental health disorders due to higher levels of trauma exposure throughout their lifetime. Research indicates that trauma exposure rates (defined as exposure to at least one traumatic event) during the perinatal period is 87% for Black women (Dailey et al., 2011). These rates are significantly higher in comparison to the range of 29-74% of trauma exposure experienced by perinatal women in general (Harris-Britt et al., 2004; Smith et al., 2006; Söderquist et al., 2004).

Higher rates of trauma exposure, combined with being three to four times more likely to experience dangerous complications during birth, significantly increase the risk of maternal mental health disorders, including birth trauma and post-traumatic stress disorder, for Black women (Markin & Coleman, 2023). Other trauma-related risk factors for maternal mental health disorders in Black women include exposure to negative drivers of health (DOH), chronic stress, and gendered racism across the lifespan (Bower et al., 2023; Chokshi et al., 2022; Office of Disease Prevention and Health Promotion; ODPHP, n.d.).

Risk Factors

Drivers of Health (DOH)

According to the US Department of Health and Human Services (HHS), social determinants of health (SDOH), now referred to as Drivers of Health (DOH), are defined as "the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks" (Abrams et al., 2023; ODPHP, n.d.). Black Americans have a higher DOH burden, which was

further exacerbated by the COVID-19 pandemic, resulting in increased health and social disparities (Dalsania et al., 2022). Additionally, Black women experience unique disparities at the intersection of gender and race that are often not shared by Black men and White women. These disparities include high levels of sexism, discrimination, gender-related violence, and racism—all risk factors for maternal mental health disorders (Chinn et al., 2021; Stockman et al., 2015).

Racism and Weathering

Chronic stress from racism, rather than race itself, is a risk factor for maternal mental health disorders (Chokshi et al., 2022). Chronic stress increases adverse health and mental health outcomes for Black women, culminating in even higher levels of stress. This cycle of persistent intergenerational stress is known as *weathering* and has been defined as "a chain of biological processes that undermine Black women's physical and mental health" (Howell et al., 2005). For example, Black women have increased stress exposure due to a higher prevalence of cardiometabolic (CM) conditions, such as hypertension, diabetes, and obesity, which are linked to elevated risk for depressive symptoms (Perez et al., 2023). At the same time, maternal depression has been linked to poor maternal and birth outcomes for Black women, resulting in a higher risk of preterm births, low birth weight, gestational diabetes, and preeclampsia (Nelson et al., 2023). This chain of biological processes that contribute to adverse mental and physical outcomes for Black women delineates the process and impact of weathering.

Discrimination, racism, and inequities in the maternity care system also greatly increase the risk for maternal mental health disorders in Black women. Research shows that Black women who felt upset due to the experience of racism in the year before delivery experienced significantly higher odds of depression during pregnancy (Bower et al., 2023). Black women, along with other women of color, reported higher rates of mistreatment, defined as "loss of autonomy; being shouted at, scolded, or threatened; and being ignored, refused, or receiving no response to requests for help" during hospital births (Vedam et al., 2019, p. 7). Women of color, as well as women with lower socioeconomic status (SES), also reported lower quality of care during hospital births (Vedam et al., 2019). It is theorized that these culminating systemic, societal, and environmental factors contribute significantly to

higher rates of maternal mental health disorders and maternal mortality among Black women compared to White women (Joseph et al., 2021).

Black women also experience one of the highest rates of intimate partner violence (IPV) in the United States. IPV is a risk factor for depression, PTSD, anxiety, and suicide and is associated with increased DOH burden. The threat or presence of IPV is yet another stress and trauma-inducing factor for Black women. Women during the perinatal period are especially vulnerable to IPV. Additionally, IPV is especially prevalent in minority and underserved populations, making it a notable risk factor for maternal mental health disorders in Black women (Stockman et al., 2015).

Due to a complex mix of DOH, racism, weathering, and increased stress due to these various factors, Black women are disproportionately at risk for poor health, which includes poor maternal mental health outcomes (Chinn et al., 2021). Therefore, risk factors for maternal mental health disorders in Black women should be examined through the lens of equity and holistic wellness to better address gaps that can support the mental and physical wellness of Black women (Chinn et al., 2021).

Prevalence

Depression and Anxiety

There is a growing recognition that rates of postpartum depression and anxiety are higher among Black women, with some estimates more than double compared to their White counterparts (Cannon & Nasrallah, 2019). The risk for postpartum depression further increases in Black women living in smaller cities or rural communities, where rates of postpartum depression are 80 percent higher for Black women than for White women (Ceballos et al., 2016).

Dysthymia and Somatic Symptoms

It should be noted that depression in Black women may often not present in psychological symptoms but manifest in somatic symptoms. While Blacks have a lower prevalence of major depressive disorder (MDD), some research shows that Blacks, especially Black women, have a higher prevalence of dysthymia, a milder but long-lasting form of depression (Riolo et al., 2005). Some clinicians have labeled this increased prevalence of dysthymia in

Blacks as *cultural dysthymia*, attributing it to historical inequities and discrimination (Vontress et al., 2007). Other researchers classify these somatic symptoms as part of a wider symptom presentation of depression that is unique to Black women (Perez et al., 2023). Clinicians and healthcare workers need to recognize the range of presentation of dysthymia and general depression in Black women so that clinical identification of these disorders is not overlooked (Perez et al., 2023).

Post-traumatic Stress Disorder (PTSD)

The correlation between race or ethnicity and PTSD among pregnant women and new mothers has not been largely studied. However, one comparative analysis of cross-sectional data from a cohort study suggests that the current prevalence of PTSD is four times higher in Black women (Seng et al., 2011). This is largely because Black women have higher rates of trauma exposure throughout their lifetime, leading to higher rates of PTSD during pregnancy (Roberts et al., 2011). The analysis also found that socioeconomic status did not play a significant role in determining PTSD risk in Black women, making trauma the greatest predictor for PTSD in Black women (Seng et al., 2011). Additionally, there is generally a lack of trust between Black women and healthcare providers, which increases the risk for birth trauma, raising the subsequent risk for PTSD and other maternal mental health disorders (Markin & Coleman, 2023).

Suicide

Suicide is a leading cause of maternal death during the postpartum period and is often associated with PPD and drug overdose (Bodnar-Deren et al., 2016). Studies approximate that 14-30% of reported maternal deaths are accounted for by suicide and accidental drug overdose (*Maternal Mortality May Be Even Higher Than We Thought*, 2019). Studies also show that Black women have higher rates of suicidal ideation, which are thoughts of suicide. In the immediate postpartum period, Black women are two times more likely to report suicidal ideation than White women (Tabb et al., 2020).

Barriers to Treatment and Care

Approximately 15% of women diagnosed with postpartum depression receive treatment (Cox et al., 2016). While undertreatment of postpartum depression is prevalent in the general population, Black women are even less likely to undergo treatment for postpartum depression (Kozhimannil et al., 2011). One study found that Black women were half as likely than White women to initiate treatment and had a longer time gap between delivery and treatment initiation (Kozhimannil et al., 2011). Women who receive delayed treatment, undertreatment, or no treatment of maternal mental health disorders are more likely to have severe symptoms and negative postpartum outcomes.

Black and other minority women face difficulties regarding access to care on four different levels - individual, organizational, sociocultural, and structural (Jankovic et al., 2020). Individual barriers include stigma or not being informed of resources, organizational barriers include lack of resources and service fragmentation, sociocultural level issues include cultural and language barriers, and structural barriers include unclear policies (Jankovic et al., 2020). Nearly 60 percent of Black mothers do not receive any support or treatment for prenatal or postnatal mental health care due to these factors (Rouland Polamnteer et al., 2018).

Sociocultural barriers play a significant role in whether or not individuals seek out care; for example, some cultures do not acknowledge mental health as a whole, creating barriers to care due to limited access to information or stigma and fear (Watson et al., 2019). These studies suggest that cultural competency training in maternal healthcare settings is a critical consideration in addressing how to treat women from all races and ethnicities.

Despite the higher rate of maternal mental health disorders among Black women, the mental health workforce is not reflective of the mothers in need of care. A 2020 American Psychological Association (APA) Center for Workforce Studies (CWS) report found that 84% of the psychology workforce identified as White, while only 4% identified as Black (APA, n.d.). These disparities highlight the importance of diversifying the mental health workforce and considering community-based behavioral health services.

The use of community-based behavioral health services is important for addressing maternal mental health issues in Black women in a culturally congruent and sensitive manner. One example is using the federal Healthy

Start Initiative, a national maternal-child health program, to implement comprehensive, culturally appropriate community-based health and behavioral health case management for Black women (Ley et al., 2009). This program integrated risk factors that are unique to Black women, such as chronic stress and racism, into its strategic plan for addressing perinatal depression for Black women, making care more sensitive to the specific needs of Black women (Ley et al., 2009).

Additionally, various studies have demonstrated the effectiveness of implementing healthcare interventions in a predominately Black church setting. As spirituality and ancestral traditions are important to Black culture, incorporating maternal mental health support and interventions in a trusted spiritual setting for Black women can be critical to better addressing the needs of Black moms (Brown et al., 2019; Dodani et al., 2009; Matthews et al., 2021; Saunders et al., 2013).

Screening for Black Women

Despite having an elevated risk for depression because of increased stress due to the high prevalence of cardiometabolic conditions, research shows that depressive symptoms in Black women may not be detected via standard depression screening tools (Perez et al., 2023). As screening tools were historically created and informed by White research participants, there has been increased discussion as to whether maternal depression screening tools such as the Patient Health Questionnaire 9 (PHQ-9) and Edinburgh Postnatal Depression Scale (EPDS) are valid or sensitive to the cultural nuances of non-White women, specifically Black women (Feldman & Pattani, 2019). Until more validated screening tools are developed to specifically address the maternal mental health screening needs of Black women and other persons of color, it has been recommended that a lower screening score cut-off be used for Black women (Tandon et al., 2012).

It is important to consider how acculturation, cultural stigmas, or immigration status may skew self-reported rates of maternal mental health disorders, increasing the need for screening protocols within healthcare settings (Wenzel et al., 2021). The Policy Center for Maternal Mental Health (2022) addressed this concern in the issue brief Universal Screening for Maternal Mental Health Disorders.

Dr. Alfiee Breland-Noble conducts research on health disparities in mental health screening, diagnosis, and treatment. She found that the screening tools referenced above are often less relevant for mothers of color. These screening tools were developed and tested with mostly white research participants and did not take cultural differences into account. In an interview with National Public Radio (NPR), Dr. Breland-Noble said Black people are less likely to use the term "depression," rather, they may say that they "do not feel like themselves." She also notes that ethnically and racially diverse people suffering from mental illness often experience symptoms as physical symptoms, such as stomach aches and migraines (Feldman & Pattani, 2019). Research has found that these screening tools are not catching as many mothers as they should, particularly when looking at moms of color or those who are low-income (Chaudron et al., 2010).

Also noted in the Policy Center for Maternal Mental Health's *Universal Screening for Maternal Mental Health Disorders* brief are several tools that are culturally appropriate and validated for the detection of maternal mental health challenges in the Black population. The Healthy Pregnancy Stress Scale (HPSS) offers a pregnancy-specific stress scale validated in a population of low-income African American women but designed for use in diverse populations. This is important for understanding the relationship between structural inequities, pregnancy stress, and pregnancy health. This internally validated tool has the potential to function as a quick assessment of the pregnancy environment (Frazier et al., 2018). Additional tools include the Perceived Pre-Natal Maternal Stress Scale (PPNMSS)(Gangadharan & Jena, 2019), the Tilburg Pregnancy Distress Scale (TPDS) (Boekhorst et al., 2020), and the Brief Pregnancy Experience Scale (PES) (DiPietro et al., 2008).

Screening, even if successful in the identification of disorders, must be followed up to initiate treatment. While follow-up is a crucial part of treating maternal mental health disorders, it is especially paramount to focus on follow-ups for Black women to maximize their chances for a successful recovery.

Community Recommendations

A recent study based on insights from Black women community members in the maternal mental health community highlighted five key pathways to

address racism and inequities for Black women in maternal health (Matthews et al., 2021). These pathways are:

- Educating and training maternity care and mental health practitioners, such as OB-GYNs, therapists, and doulas;
- Investing in the Black women's maternal health and mental health workforce, including OB-GYNs, midwives, doulas, licensed mental health providers, certified peer specialists, and certified community health workers;
- Investing in Black women-led, community-based organizations providing group support, education, and other community-based resources;
- Valuing, honoring, and investing in traditional healing/ancestral practices;
- Promoting shared decision-making by patients in their treatment and care;
- Integrating maternal mental healthcare practitioners within maternal healthcare (Matthews et al., 2021).

Policy Recommendations

1. **Increase the number of Black and BIPOC mental health and community health professionals.**
    a. Lawmakers should consider financial support to develop and recruit students into education programs for professions such as licensed counselors, certified peer support specialists, and certified community health workers through public community colleges and state universities.
    b. States should leverage funding through the federal Workforce Innovation and Opportunity Act (WIOA) to identify and enroll behavioral health training as qualified programs and target specific initiatives and programs focused on engagement and recruitment in diverse racial, ethnic, rural, and other underserved communities (US Department of Labor, n.d.).
2. **Increase the number of Black and BIPOC obstetric professionals.** Lawmakers and federal and state agencies should provide/promote existing training and scholarship funding to increase the number of

Black and BIPOC midwives, OB-GYNs, and family practice providers. Programs similar to the federal Health Resource and Services Administration's (HRSA) Rural Maternity and Obstetrics Management Strategies Program should be implemented but for Black and BIPOC obstetric providers.

3. **Support embedding CHWs and PSSs in clinical settings with protocols, incentives, and clear billing coding**. Certified community health workers (CHWs) and certified peer support specialists (CPSSs) can potentially reduce distrust of traditional clinical and mental health settings/professionals by supporting culturally competent care. These providers could support maternal mental health screening, provide brief intervention, work with the patient/OB/mental health professional in developing treatment plans, support referral and care coordination to community services, and follow up with the patient. Payors, including the Centers for Medicaid and Medicare Services (CMS), state Medicaid agencies, and private insurers, should incentivize such care by publishing guidelines for supervision and billing codes (including care coordination, integration, and other codes) for obstetricians and licensed mental health professionals.
4. **Test for proficiency in recognizing and addressing personal bias, cultural competence, and maternal mental health.** Before issuing licensure/certification/renewal, organizations and state licensing/certifying boards for midwives, doulas, and OB-GYNs should test for proficiency in addressing personal bias, cultural competence, and maternal mental health. These competencies should align with the Policy Center for Maternal Mental Health's provider core competencies for maternal mental health.
5. **Mandate insurers and health plans report provider demographics and conduct network adequacy assessments based on the population served.** Demographics such as race and ethnicity should be collected through the provider network credentials process by insurers/health plans and included in provider directories so patients can easily assess whether a provider meets a patient's race/ethnicity preferences. Insurers/plans should also conduct network adequacy assessments to ensure providers' demographics align with patient demographics.

6. **Support research and adoption of community-based organizations (CBO) Interventions.** Invest in research studying interventions led by CBOs and incentivize the adoption of promising/evidence-based practices through grants, community learning networks, and insurance billing guidance and support.

Conclusion

Addressing the complexities of maternal mental health disorders among Black women requires a multifaceted approach that considers the interplay of societal, systemic, and environmental factors. The elevated rates of these disorders highlight the urgent need to dismantle barriers to care on individual, organizational, sociocultural, and structural levels. Policy recommendations such as increasing the number of Black and BIPOC mental health professionals, supporting community health workers, and promoting shared decision-making by patients offer tangible steps towards developing holistic and equitable approaches to maternal mental health care. By implementing these recommendations, policymakers, healthcare providers, and community stakeholders can work together to create a more inclusive and supportive environment for Black women's maternal mental health.

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The Calming Womb Family Therapy Model: Bonding Mother and Baby from Pregnancy Forward

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The Calming Womb Family Therapy Model (CWFTM) is an integrative, multi-modal early intervention approach designed to treat mothers and their babies from conception through the first year postnatally. Rooted in Murray Bowen's family systems theory, CWFTM considers families as interactive systems rather than individuals. Building upon Fraiberg's approach, CWFTM extends its focus back to conception, aiming to strengthen the bond between mother and baby in utero and treating the baby in the womb and the infant as active participants in the family therapy process. Additionally, CWFTM integrates Eye Movement Desensitization and Reprocessing (EMDR) from early pregnancy through the first year of life to process maternal trauma and transference reactions to the baby. Understanding that the mother-baby dyad is part of a larger social system, CWFTM involves other caregivers in the therapy process, addresses prenatal and perinatal needs, unforeseen challenges, and traumatic incidents during and after pregnancy, and coordinates care with medical providers. A key requirement for a CWFTM psychotherapist is a thorough understanding of prenatal and infant

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development and a high capacity for relational attunement with both parents and babies.

Keywords: Calming Womb Family Therapy Model, EMDR, conception, pregnancy

The importance and benefits of providing a calm environment for the mother and her baby are numerous. Healthy mother and womb-baby bonding is necessary for the physical and emotional growth of the baby. There continues to be controversy over whether the womb-baby interacts consciously with the mother or whether these interactions are of non-conscious origins (Sivaraman et al., 2018). The model presented below honors and highlights the importance of interacting and caring for the baby beginning from conception. Mothers and fathers, partners, and single mothers can provide their babies with the greatest opportunities for success and empowerment by taking care of them in the womb.

Healing oneself is the most effective way for expectant mothers to care for their babies in utero. Strengthening or developing self-compassion, empathy, dignity, and curiosity serves mothers and their loved ones well. Therefore, the focus of prenatal and perinatal healing begins by assessing the mother's thoughts and feelings about herself, her pregnancy, and whether she feels supported by her partner. As the Dalai Lama stated during the 2017 Graduation Commencement at UCSD in San Diego, California, "The Way to World Peace is Inner Peace."

How a mother feels about herself and her pregnancy invariably impacts the bonding with her baby during pregnancy and affects the baby's attachment after delivery. This paper will use "bonding" to refer to the relationship between mother and womb baby and "attachment" to refer to the reciprocal interaction between mother and infant after birth.

The Calming Womb Family Therapy Model: Mother and Womb Baby

Family therapy is a branch of psychotherapy that works with families, couples in intimate relationships, or with the most motivated family member (Bowen, 1966) to nurture change and development. This systemic framework illuminates the power of the family and views change regarding the systems of interaction between family members. It emphasizes family relationships as an

important factor in psychological health. Salvador Minuchin, MD, wrote that family therapists recognize the pull of the past and that, to some extent, people live in the shadow of family legacies. According to Minuchin, family therapy recognizes the power of the present and addresses itself to the ongoing influence of the family. Therapy based on Minuchin's framework is directed towards changing the organization of the family because when the family organization is transformed, the life of each family member is altered accordingly (Minuchin & Nichols, 1993).

This prenatal and perinatal family therapy model focuses on the mother and womb-baby unit. CWFTM is primarily concerned with the wellness of the baby and the expectant mother from conception or from the womb baby's gestational months in utero up to the infant's first year of life.

If we want society to thrive, we must attend to children in the womb by providing mothers with the needed healing resources at conception, concretely during prenatal and perinatal care, and until the baby is at least one year of age (some [Seigel, 2012] put this at three years of age). Fathers, partners, caregivers, and the prenatal and perinatal medical care personnel all need to be embraced as a team during all the stages of the pregnancy and the babies' development. However, the mother-baby dyad will remain at the core of the prenatal treatment. Prenatal and perinatal psychotherapy is the therapy of the future. Treating a pregnant mother needs to be conceptualized as family therapy because, while the family therapist supports, educates, assesses, and treats the pregnant mother, the future of the womb baby is impacted. Thus, the healing of the pregnant mother functions as a preventive measure and intervention for her baby.

Prenatal Calming Womb Family Therapy and Maternal Challenges

While there may be ongoing moments of bliss and welcome bonding that pave the way for a glorious pregnancy, the prenatal and perinatal treatment team, support staff, and caregivers will benefit from being educated about some of the most common psychological prenatal and perinatal complications, the significant numbers of high-risk pregnancies, prenatal and perinatal myths, and other untold stories. Educating and empowering mothers to self-soothe and remain present and positive throughout the multiple unplanned events is helpful and necessary.

In the spirit of assisting mother-baby and their supportive prenatal and perinatal team, I have compiled a list of the many unexpected emotional difficulties and physical symptoms a pregnant mother may experience, be exposed to, and suffer.

Some of the psychological prenatal and perinatal complications include:

- Preexisting anxiety
- Prenatal anxiety
- Preexisting depression
- Prenatal dysphoria
- Hormone-induced affect or mood shifts accompanied by increased sensitivity
- Multiple co-existing psychological disorders (i.e., depression and acute stress)
- Substance abuse
- Exacerbated chronic pain
- Bodily-triggered traumatic memories
- Maladaptive body image
- Unexpected weight gain
- Acute stress
- Developmental, adult post-traumatic stress disorder (PTSD), flashbacks, or nightmares
- Recent romantic relationship rupture
- Sexual assault resulting in pregnancy
- Past or ongoing domestic violence with current flashbacks
- Incest resulting in pregnancy
- Unplanned teen or adult pregnancy
- Abortion indecision leading to shame
- Adoption ambivalence and guilt
- Lack of social and familial support
- Partner's lack of involvement and dismissiveness
- Loved one's over-involvement resulting in stress
- Financial limitations
- Unemployment
- Homelessness, or at risk of, due to pregnancy

- Laboratory abnormalities resulting in fear and affect dysregulation
- Prenatal medical complication(s)
- Planned or unplanned cesarean section
- Preeclampsia
- Gestational Diabetes

Many mothers experiencing the above medical and psychological difficulties are initially hesitant to be referred to a pre-perinatal psychotherapist. The reasons some mothers may refuse therapy include prenatal mood swings, feeling easily overwhelmed, fatigue, dysphoric mood, familial stigma, cultural biases, religious beliefs, not wanting to be perceived as "damaged goods," or past limited benefits from such services. Introducing pre-perinatal psychotherapy early on as a part of the integrated and comprehensive routine of preventive care reduces such discomfort and stigma.

Despite some mothers' reluctance, most pregnant women are receptive to receiving services if these enhance or provide womb-parenting skills, developmental education, and tools to become attentive mothers. Most expectant mothers embrace the opportunity to attend couples therapy, hypnobirthing groups (Mongan, 2015), and health educational classes with their significant others. Maternal developmental attachment wounds and deficits are important reasons to heal in the psychotherapy situation. Selma Fraiberg (1980) referred to these attachment wounds and deficits as "the ghost in the nursery." It is not unusual for mothers who coped with difficult life situations prior to becoming pregnant to have a hard time once pregnant due to various added pressures. Thus, current prenatal stresses and preexisting difficulties often become the port of entry to psychotherapy.

High-risk pregnant mothers (i.e., homelessness, a domestic violence history, Bipolar I-II, actively dissociated, with PTSD, suicidal thoughts, substance dependent, chronically medically ill, recently separated) with current or chronic symptoms of emotional dysregulation, exacerbated by the current pregnancy and or other factors, need to be educated, encouraged, and referred in a timely manner for pre-perinatal therapy. Pervasive multigenerational maladaptive patterns (Nicholas & Schwartz, 1991), adverse childhood events (Anda & Felitti, 2003), environmental stresses, intrapersonal incongruences or conflict caused by unresolved trauma, relational conflicts, developmental or adult post-traumatic stress disorders, acute stress disorders, prenatal medical

concerns, or unplanned pregnancies are common roadblocks to wellness and need to be assessed and treated promptly.

Since pregnancy, previous fetal or infant loss, and parenting itself can all trigger PTSD symptoms (Pullen, 2014), this article provides a clinical treatment model I have found effective when treating pregnant women with simple to moderate levels of traumatic stress. While many women feel blessed and content throughout their pregnancies, others are surprised by their pregnancy circumstances. Often, these mothers feel ashamed about their lack of prenatal happiness, as if they should or could control its emotional and, often, hormonal rollercoaster.

Calming Womb Family Therapy After Delivery

Many mothers have wonderful post-delivery support and experiences. Unfortunately, others will encounter unforeseen medical or emotional challenges. Mothers expect to hold their babies soon after delivery, to be discharged home with their newborns, and to hold their babies in the comfort of their homes. However, many mothers will not be able to do so. As much as mothers may have been educated and prepared by their health educators and lactation specialists, unplanned cesarean sections occur, and lactation challenges are common. Also, postpartum affect dysregulation often interferes with the mother's bonding and her child's attachment.

Frequent post-delivery challenges include moderate to severe postpartum depression (PPD), moderate to severe postpartum anxiety (PPA), acute stress, trauma, and moderate to severe post-traumatic stress disorder (PTSD), all of which could increase two to four weeks after delivery or over a more extended time.

Mothers who lose a child prenatally or postnatally have high rates of depression and anxiety and receive limited treatment for these conditions, if any. "Moms who were bereaved had much higher odds of depression and PTSD" (Gold et al., 2014). According to Dr. Gold, there are more perinatal deaths every year in the United States than suicides and homicides put together. Annual perinatal deaths also exceed annual motor vehicle deaths of children and adults combined.

Trauma-Informed and High-Risk Prenatal and Perinatal Family Treatment

The first year of parenthood can be a stressful time, especially for already stressed and high-risk couples. Perinatal developmental guidance and family therapy may alleviate ongoing childrearing difficulties. Having treated mild, moderate, and high-risk multicultural, bilingual, pregnant mothers and their families in different clinical settings for more than 28 years, I have come to favor a combination of Eye movement desensitization and reprocessing (EMDR) trauma-informed therapy and family-systems multigenerational work.

This treatment combination evolved over many years of prenatal and perinatal clinical observation and close collaboration with pregnant women, their babies, caregivers, and my trauma-informed training evolution and advancement.

Prenatal and perinatal psychology is a growing science that studies the psychophysiological effects and implications of the earliest experiences of the individual before birth (prenatal) as well as during and immediately after childbirth (perinatal). Prenatal and perinatal experiences are fundamental in shaping psychological development's future. Working with pregnant families and practicing prenatal and perinatal psychology before knowing such a term existed, I came to understand the vital therapeutic importance of three factors:

1. Acknowledging and involving the womb baby in the healing therapeutic process
2. Supporting the expectant mother and her womb baby as a family unit
3. Practicing the most effective, specifically tailored, "spot on" interventions and trauma-informed therapy models with the mother before her baby is born.

Based on extensive clinical observations, the following lists several mother and womb-baby bonding exercises and symptom stabilization and wellness practices for pregnant women.

The womb baby needs:

- To be talked to, said hello to, frequently

- Their mother to engage the baby and let them know about the activity they are doing together
- To be interacted with, read to, sung to, danced with;
- To experience mindfulness via mom
- To receive words of love from those around them
- To feel wanted and released from any responsibility, even if initially unplanned or unwanted
- To participate in Yoga, Tai-Chi Chuan, or other forms of movement
- To experience fun such as swimming, nature walks, or walks on the beach
- Peace sharing in a meditative state with mom
- To be acknowledged and welcomed at birth

Expectant mother practices:

- Become a vehicle of peace, love, and service for the child and others
- Become focused, grounded, and live blissfully in the present
- Monitor self-talk and practice gratitude for everyday lessons
- Practice self-compassion and dignity, facilitating empathy, tolerance, and consideration towards others, especially the baby
- Work with a registered prenatal nutritionist who will recommend life-enhancing foods
- Work with a lactation specialist to learn relevant practices
- In-utero-development guidance
- Developmental parenting education throughout the baby's first year of life
- Parallel parenting education (i.e., mom's past and baby's development will unfold side by side)
- Awareness of the ghosts (i.e., the legacies of trauma) in the baby's nursery
- Attentiveness to her own attachment wounds
- Multigenerational identification of strengths, dysfunctions, and reenactment prevention
- Bonding (mom to womb baby) and attachment genograms
- Attachment repair, if needed
- Play assessment, education, modeling, and practice

- Humor as a healing tool
- EMDR Therapy

With a few yet important prenatal and perinatal additions and adaptations, the EMDR model offers a very effective, trauma-informed treatment for the mother and her in-utero baby. EMDR therapy strives to achieve trait (permanent) versus state (temporary) change. It accomplishes this by reprocessing the originating trauma linked to the presenting symptoms and thus goes beyond symptom reduction.

The recommended therapist for this task needs to be a licensed psychotherapist who is EMDR trained by the EMDR Institute, the Humanitarian Assisted Program (HAP), or by an EMDR International Association (EMDRIA) approved entity. Optimally, the prenatal and perinatal therapists will be certified in EMDR by EMDRIA. Such trainings are rigorous, and educational updates are enforced. In addition to pre- and perinatal therapy experience, preparation and education are crucial as the EMDR clinician is expected to practice within her/his scope of clinical training and practice.

The Calming Womb Family Therapy Model: In Utero Developmental Guidance and EMDR Pre- and Perinatal Therapy

It is important to mention four main elements that inform this model and how each concept serves as the building blocks of the CWFTM. This discussion will be followed by the model's integrated conceptualization.

First: In Utero Developmental Guidance

The term *in utero developmental guidance* refers to the early prenatal education of the parent that is integrated into the psychotherapeutic work. In utero, guidance is a form of psychoeducation guided, step by step, by the pre- and perinatal therapist's clinical awareness. This intervention is adapted to alleviate the expectant mother's and womb baby's chronic external pressures and emotional distress, as well as the impact that the attendant anguish places on the mother's bonding and relationship with her in-utero baby. What is addressed in therapy is what the mother brings to therapy, including her psychological conflicts that are already distorting her relationship with her womb baby (i.e., a crisis at the time of conception or grief during gestation). In

utero, developmental guidance endeavors to enhance and promote the mother-womb baby bond, educate the parent in understanding fetal development, and assist the parents in doing their own healing before the child's birthing. Finding new, nurturing, childrearing approaches will facilitate optimal development in every stage of the baby's existence.

These are some of the possible clinical scenarios and relational challenges the EMDR pre- and perinatal family therapist needs to consider and promptly address during the expectant mother therapy visits.

Multi-intergenerational Dysfunctional Patterns. It is well documented that how a mother was cared for and nurtured in her infancy and childhood affects how she parents and interacts with others. Sansone (2018) noted that both John Bowlby and Daniel Winnicott observed and documented how a parent's own childhood nurturing and mothering experiences become an internalized model of future parenting (p. 331). The baby's needs for care, love, and attention in utero may lead the mother to discover her unsatisfied yearnings. When the mother recognizes these yearnings, they can shift her into new ways of bonding. Once the mother initiates her own reflective healing and embraces her grief over previously unmet needs, desires, and wishes to be cared for, she will be able to respond to her womb baby and infant with feeling and self-compassion. The multi-intergenerational ghosts represent the repetition of trauma from the past in the present. Thus, pre- and perinatal psychotherapy with the mother and the womb-baby benefits the whole family.

Prenatal and Perinatal Transference. The therapeutic alliance is crucial to all therapeutic work and is essential in prenatal and perinatal family therapy. When impediments to the alliance occur, the therapist would do well to view this barrier as a possible manifestation of negative transference. Negative transference is considered a defense against hurtful feelings and memories being transferred and re-experienced with the treating therapist. When these transference reenactments and painful feelings are validated and given space, the mother can find new, more adaptive responses to old struggles. When the womb baby is at the center of negative transference, the therapist has a golden opportunity to intervene caringly and assist the mother in gaining control and insight. During these negative transferences, the womb baby or small child may be given qualities and intentions that do not belong to the baby or child and often belong to other figures in the mother's past.

When the mother is helped to re-experience and reprocess loss, grief, shame, guilt, rejection, and feelings of abandonment in her own childhood, she will be less likely to project these no-longer-disowned feelings onto her child. This also increases the chances that a mother will be better able to differentiate the boundaries between her feelings and experiences and those of her child as she cares for and parents that child. Once a mother can speak about her own painful childhood experiences in a safe, nurturing place, she can move protectively toward bonding with her child (Fraiberg, 1980).

Projections. The prenatal and perinatal therapist assists the mother in identifying ways in which she defends against unconscious desires or wishes, both positive and negative, by denying their existence in herself and attributing these to others. Discussing the costs of externalizing emotions and projecting these onto others is important. An important conversation between the mother and her pre- and perinatal therapist centers on the problems associated with creating a false self-image. Disowned aspects of the mother form a denied or distorted self, and that is why it is important to identify and become aware of the types of projection that most impact the expectant mother (i.e., a person who is habitually jealous may constantly accuse other people of being jealous).

A mother who experienced a lot of pain growing up may reject her infant girl based on the prospects of raising a female who the mother anticipates will similarly experience the pain and trauma she did growing up. This is another projection that can lead, in this case, to infant rejection and poor bonding. This trauma could be cultural, religious, social, sexual, or educational, not just familial. Parenting a female may trigger many of the mother's unhealed wounds, hence the wisdom in EMDR trauma-informed treatment for expectant mothers.

Gender Preference and Expectations. In many cultures, male offspring are desired in order to inherit property, carry on the family name, and provide support for parents in old age. In countries such as India, China, Indonesia, and Nepal, sons are commonly favored over daughters. According to a 2011 survey (Guilmoto, 2015), American parents favor boys by a 28% to 40% margin. In 1941, survey results were similar (Guilmoto, 2015), when Americans preferred a boy to a girl by a 24% to 38% margin. The overall preference was driven by men, of whom 49% preferred a son compared to 22% who preferred a daughter. Men's preference for sons was most pronounced among men aged 18 to 29.

Women, on the other hand, showed no preference for either sex, with 33% stating that they preferred a girl and 31% responding that they favored a boy.

Likewise, in many countries, parents prefer sons over daughters, as evidenced by the sex ratios of children in various countries. Although biologically, the sex ratio of children is around 95 girls to every 100 boys, this number generally evens out due to the higher infant mortality rate of boy infants (Seager, 2009). Scholars argue that the expected birth sex ratio in a normal population ranges from 103 to 107 males to females at birth. However, in several countries, such as South Asia, East Asia, and the Caucasus, the sex ratio of children is severely distorted (Guilmoto, 2015; Hesketh & Xing, 2006). The problem is particularly severe in China and India. The preference for sons over daughters can be due to numerous reasons. In these countries, it is argued that son preference is linked to factors including economics, religion, and culture. Having a son ensures that families are more economically secure by not having to provide but rather receive dowry payments. In China, the one-child policy has contributed to the sex imbalance, while the dowry system in India is responsible for a strong son preference.

Furthermore, in countries where there are discriminatory practices regarding women inheriting, owning, or controlling land by law, having a son ensures that the family will not have to worry about the legal aftermath if something were to happen to them (Seager, 2009). It can also be argued that parents in these countries are aware of the potential hardship their daughter would endure in her lifetime; therefore, they prefer to have a son rather than see their daughter suffer. This son preference often results in female feticide and prenatal sex selection (Das Gupta et al., 2003).

Given the previously presented reports, it is important to assess the cultural and familial gender expectations and assist the mother in identifying her anticipated wishes. Embracing the gender of the baby openly and unconditionally is the ultimate pre-perinatal treatment objective.

Second: The Prenatal and Perinatal Psychotherapist

The prenatal and and perinatal psychotherapist must develop a close working relationship with the mother's obstetric and gynecological (OB/GYN) team. This includes regular and ongoing conversations and meetings with the OB prenatal and perinatal medical doctors, midwives, prenatal and perinatal support staff, medical assistants, coordinators, nutritionists, lactation

specialists, health educators, gestational diabetes (GDM) personnel, and front desk receptionists.

The psychotherapist needs to provide ongoing psychoeducation to the mother's OB/GYN team. These psychoeducational collaterals could be in-person or virtually provided to an individual or the whole prenatal and perinatal team. EMDR pamphlets, virtual video links, and online sites with EMDR education are some of the many readily available educational tools.

Third: Family Therapy Dyad: Mother and Womb Baby

The mother will discuss and practice multiple state change interventions that will benefit her sense of wellness during her pre-perinatal care therapy sessions, reduce her emotional discomfort, and increase her sense of self-mastery and prenatal calmness. During this time, the pregnant mother will learn to regulate her affect, remain within her window of tolerance by modulating her arousal (Ogden et al., 2006), enhance her dual awareness (Schubert et al., 2011), practice relaxation exercises (van der Kolk et al., 2014), role-play limits setting (Knell & Dasari, 2011), and learn grounding practices (Siegel, 2010; Ogden et al., 2006). All these practices will positively impact mother and womb-baby bonding. Learning the above self-care practices is also a part of EMDR phase 2 (Shapiro, 2012).

Fourth: EMDR Therapy at a Glance

EMDR treatment allows people to heal from symptoms that are the result of traumatic or disturbing life experiences. EMDR therapy reprocesses the relevant historical events causing current anguish, incidents that elicit distress, and future events requiring different, more adaptive responses. Once the treating obstetricians and midwives have been consulted and medical authorization to treat the mother has been provided, and the expectant mother has been informed about benefits, contraindications, and possible risks and has given her informed consent, the mother should be able to initiate pre-perinatal EMDR therapy. Case studies available describe EMDR treatment with expectant mothers but also pertain to women with acute or post-traumatic stress disorders (Forgash et al., 2013). For detailed information, go to www.EMDR.com

Conclusion

CWFTM In-Utero Developmental EMDR Pre- and Perinatal Therapy is a family wellness approach that includes the expectant mother and her baby in utero and the baby's first year. The goal of this model is to provide EMDR trauma-informed family therapy, which is supportive to the pregnant mother while protecting the womb baby against future maternal projections and inter-multigenerational maladaptive revivals. The hope is that pre- and perinatal psychological services and trauma-informed therapy, such as the EMDR therapy model, will be systematically embedded in the mother's OBGYN care.

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The Case Against Cesareans on Demand: What Doctors Do Not Tell You

Thomas R. Verny MD, DHL (Hon), DPsych, FRCPC, FAPA

The rising rates of cesarean section (C-section) births worldwide are concerning, especially in countries where they have become the cultural norm. This article explores the factors contributing to the increasing rates of C-sections, such as maternal age, insurance status, and societal beliefs. It also discusses the negative impacts of C-sections on maternal and child health, including disruptions to the newborn's microbiome and maternal-infant bonding. Despite the perceived safety and convenience of C-sections, evidence suggests that they should be avoided unless medically necessary. This article calls for a better understanding of the needs of women in labor and highlights the importance of informed decision-making regarding childbirth options.

Keywords: cesarean section, C-section, childbirth, health care

In many countries worldwide, C-section birth rates are rising. In some countries, such as Brazil or Taiwan, cesarean birth rates are skyrocketing because C-sections are the cultural norm (Rocha et al., 2023; Rudley et al., 2020). In the United States, more than one million women, 1 in 3, give birth by cesarean every year (Sung & Mahdy 2023). The World Health Organization

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(WHO) has stated that about 10 to 15% of all births should be C-sections (Betran et al., 2016). This raises the question of what factors contribute to the rising rates of C-sections and the differences between them.

Reasons for Increasing C-section Rates

Factors that seem to influence the rising C-section rates include:

- The growing average age at which women become pregnant
- Better-insured women have more access to C-sections
- Higher socioeconomic status of women correlates to a higher C-section rate
- Beliefs that influence medical protocols like “once a C-section, always a C-section” or “breech is equal to C-section”
- High rates of electronic fetal monitoring
- Induction of labor using medication
- Chronic health conditions, e.g., diabetes and obesity,
- Prenatal stress increases birth complications,
- Role models who choose a C-section
- Women and their partners who want to keep the so-called “honeymoon vagina” intact (Barber et al., 2011)
- Cesareans are seen as the easier and more comfortable way by many women and doctors

Negative Impact of C-sections

Many women choose to be delivered in hospitals by C-section in the belief that this method is safer and less painful than vaginal unassisted delivery in hospital or at home. Like their doctors, these women are unaware of how such a decision may negatively impact their child’s health. One of the reasons for that is that women in labor routinely receive antibiotics to ward off infection after a C-section. Antibiotics are also used to prevent a serious infection in newborns caused by Group B strep, a bacterium many pregnant women carry in the United States. Antibiotics are broad in their effects, not targeted. While they kill Group B strep, they also kill friendly bacteria, thus selecting resistant ones.

Another reason is that the first microbes colonizing the newborn begin a dynamic process. They instruct the developing immune system about what is dangerous and what is not. In this way, humans develop adaptive immunity that distinguishes self from non-self. C-sections and antibiotics disrupt this process with potentially detrimental long-term effects (Shane, 2014).

We must remember that the founding populations of microbes found in C-section infants are not those selected by hundreds of thousands of years of human evolution. Babies born by C-section harbor bacterial communities found on the skin, dominated by Staphylococcus, Corynebacterium, and Propionibacterium. Their gastrointestinal tracts do not get colonized by their mother's lactobacilli. As a result, these babies will have difficulty digesting their mothers' milk, leading to further problems.

Women who deliver by cesarean section have more negative perceptions of their birth experience, their selves (Loto et al., 2009), and their infants exhibit poorer parenting behaviors (Cornwall, 2020), and may be at higher risk for postpartum depression compared to women delivering infants vaginally (Xu et al., 2018). By restricting the control that they can exercise under normal circumstances over birth, C-sections often violate women's expectations about childbirth.

Following most C-section births, the first body contact between mother and baby is delayed for several hours. This flies in the face of attachment studies that have been well-established for a long time. Undergoing a cesarean does not trigger the release of oxytocin, which plays a key role in shaping maternal attachment behavior (Klaus, 1996). Therefore, cesarean birth not only increases psychological risk factors in women as described above, but also interferes with their bonding with their babies, thereby increasing the likelihood of child neglect and child abuse.

Summary

The main reason for the increasing rates of cesarean deliveries is a universal lack of understanding of the basic needs of women in labor and the long-term psychological consequences for them and their children. Based on the evidence, C-sections, unless indicated for medical reasons such as breech presentation, prolonged labor, or fetal distress, should be avoided when possible.

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When They Were Born

Linda Albert

She watched as though
from another country,
the mirror positioned between
her legs, a more chaste picture
than she expected. She thought
she'd be humiliated by the exposure
but all she thought about
was her baby, struggling to get out
as each have had their struggles since,
while she—still thinking they were hers,
housed as they once were inside her—
taking her all to bring them to life—
and her job always to keep them there—
in life. "Stop pushing!" the doctor warned,
the cruelest words she'd ever heard,
when all her being was made for pushing.
"I can't," she croaked, but she obeyed;
Anything for those, her most creative gifts.

Now they are grown, as impossible
to believe as the original labors, and once again
she must stop pushing: "I didn't think I was,"
she says. "It's been so long since they left home."
But freedom comes at higher and higher prices,

Linda Albert is an internationally published award-winning poet, essayist, and former theater director. This poem is from her book: Albert, L. (2020). *When they were born*. In *Charting the lost continent: Poetry and other discoveries*. 53–54. Rainbow River Press. Please address all correspondence to lalbert284@gmail.com or visit www.lindaalbert.net

both theirs and hers. These days no rituals exist
for adults to go alone into the wilderness of
their own lives, face demons and catastrophes
from which no one else can save them. No rituals
exist for mothers to let go, no midwives or
medicine men to cut belated cords.

Only fortitude and oxymorons can protect them
as they learn to share the distance
these second births demand.

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Review of New Parenting Can Change Your World

By Karlton Terry
Review by Stephanie Cloutman, RN, BSN, CPN, CLC

New Parenting Can Change Your World powerfully advocates for babies' well-being and healthy development. The book proclaims that birth is an extremely impactful experience that shapes humans in significant ways and thus shapes culture. One of the principal goals of the book is to help parents and others who spend time with babies or are considering having a baby "understand how to support their babies to heal from many (normal) challenges of prenatal life and birth" (Terry, 2022, p. 8). Terry guides the reader through understanding this significance through examples and provides information about how to relate with babies and the myriad of challenging experiences of their prenatal life and birth, which they seek to express.

"Psychological consequences from prenatal life and birth are powerful, persistent, and pervasive. Our belief systems, behavior patterns, our relationship to power, food, money, and intimacy, and even our self-esteem are primally imprinted during these times" (Terry, 2022, p. 6).

The practice of relating taught in this book helps babies process, heal, and grow beyond the traumatic experiences that otherwise can define or impact their development and lives going forward. Babies often have unrecognized emotional needs that caregivers can meet through learning attuned ways of relating with them. One of many ways Terry teaches caregivers to relate with babies is through what he calls accurate empathy.

> Accurate empathy means developing consciousness to recognize the true sources of a baby's unexplained crying and movements. Accurate empathy includes heartfelt presence and compassion, mirroring your baby's experience, and giving them support and space to express their needs and release pain. Accurate empathy is seeing your baby for who he is and not trying to make your baby a certain way. (Terry, 2022, p. 6)

When caregivers learn to understand babies' communication and truly respond, it is a great achievement. In the immediate sense, it yields short-term benefits for both baby and caregiver, for example, solving perpetual crying or colic. From a cultural perspective, tending to babies so they feel safe and supported may allow them to grow older and be well, positively impacting society. This book is filled with examples of how birth and prenatal life challenges show up in the baby's behavior and development and what to do about it. One of the ways babies express themselves is through crying, and once all the physical needs are met, Terry names and describes different types of crying, what each means, and what to do about it. This book gives permission to be real, along with ideas about supporting both self and baby through challenges.

> Even though your baby is crying like crazy, take a breath and feel into your own body. Scan for areas of your body that are holding the tension, then let yourself relax, knowing that you are doing everything your baby needs at the moment: listening emphatically and finding your own grounded center. If you can't relax, it is absolutely OK to "lose it" yourself in a moment like this. If you start crying because you can't stand it anymore, it is a truthful moment. You actually release your frustrated, pent-up feelings, and this drains the collective frustration pool you are in with your baby. (Terry, 2022, p. 82)

A valuable contribution of this book is information about how to identify different types of body language and cries, meanings, and how to listen to identify what is being expressed.

The book addresses an important gap in how we care for babies at home and in medical settings. By taking a strong stand for the experience of babies, which is too often not considered, it teaches us how to help babies heal when they go through experiences that are too overwhelming for them to process on their own. Medical professionals have a responsibility to develop their skills to support babies in the best possible way. In the inevitable event of unintentional harm, medical professionals need to use their relational skills to support repair in any way possible. Terry's advice can help caregivers learn to come into a grounded presence with babies, simply witnessing their experience and offering accurate empathy.

In the medical setting, one challenge is having enough patience and time to allow the baby's timeline with their processing. It is essential to stop trying to make it better and move into more effective support with respect for the emotional experience of the baby. "The experience of having our feelings seen and validated and accepted and addressed is all about mirroring, and it is critical for brain development, psychological stability, and emotional balance" (Terry, 2022, p. 71). This is potentially a more valuable teacher for babies on how to be human and move through emotion as they grow older than invalidating or making their emotions wrong.

Karlton Terry is a pioneer and a world-renowned expert in prenatal and perinatal psychology through his work as a baby therapist. He is the recipient of the 2022 David Chamberlain Award for the Baby Pioneer Dedicated to the Safety, Health, and Well-being of the Unborn and Born Child. Terry's experience learning from babies over decades lends itself to a book filled with illustrious examples. The author clearly explains how to relate to self and others by listening to and responding to babies in ways that not only deeply foster babies' sense of safety but also meet their emotional and physical needs, which are often misunderstood, overlooked, or ignored.

The book is organized into four parts. Part One includes chapters about being with baby, which includes teaching the adult caregiver relational skills to identify and meet baby's needs as they seek to process their experiences. Part Two of the book is titled "Crying is Communication" and focuses on explaining the different types of crying and alleviating crying through the relational skills of the caregiver. Part Three focuses on healing baby challenges, including resolving sleep and bonding problems, and offers perspective on how birth experiences impact crawling, walking, and dressing and how to support repair when needed. Part Four is about expectations, gender, and the impact of IVF and C-Section birth on babies. Lastly, Part Five is for grandparents and all who love babies.

This work is an engaging read and a powerful contribution to the prenatal and perinatal psychology field. It brings the baby's emotional needs out of the shadow by naming what is often unseen and unnamed in modern culture. Terry also brings language to new ideas that help one understand self and others in new ways, with new language creating a pathway for expansion on these ideas. He goes further by naming the perceived benefits of caregivers implementing these ways of being for both the individual and their future and the collective.

New Parenting Can Change Your World is a valuable handbook for those preparing to have or care for babies, those currently raising or caring for babies, and arguably also for those on their healing journey interested in learning and reparenting their own very young parts. As a pediatric nurse, I highly recommend this book to anyone working in or interested in the fields of prenatal and perinatal psychology and health.

Terry, K. (2022). *New parenting can change your world: More wisdom - less stress - including the cure for colic.* Independently Published. ISBN-978-0-578-31613-0; ISBN-13: 979-8842589128

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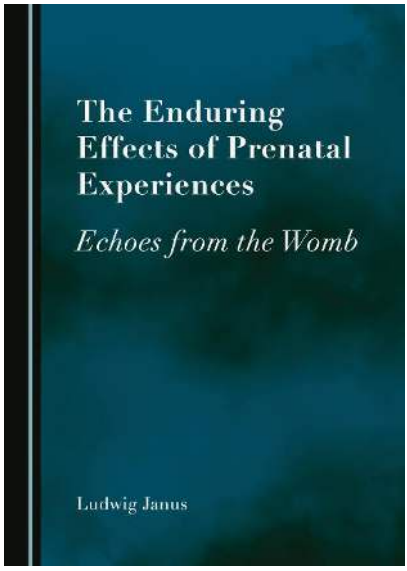
The Enduring Effects of Prenatal Experiences: Echoes From the Womb

By Ludwig Janus, PhD
Review by *JOPPPAH* Staff



How do the first nine months of our lives in the womb shape our personalities? What unfolds during and after birth, and how do these pivotal moments influence our behavior, culture, and society?

Dr. Ludwig Janus, a renowned psychotherapist with decades of experience, delves deep into these questions in *The Enduring Effects of Prenatal Experiences: Echoes from the Wombs*. Drawing on years of research, Janus offers a groundbreaking reassessment of prenatal and birth experiences, exploring their profound impact on individual experience, behavior, and cultural manifestations in art, religion, and politics.

Through exploring the stark contrast between our time in the womb and our existence in the outside world, Dr. Janus illuminates the powerful influence these experiences have on our sense of self. He draws on folk tales from various cultures to illustrate how a mother's emotional state can shape her unborn child's development, shedding new light on the idea that humans have always had an awareness of both the present world and one beyond. With numerous case studies, Dr. Janus highlights the lifelong effects of challenging birth experiences and their connection to psychological issues like phobias and depression. Ultimately, this compelling work reveals how prenatal psychology gives us a fresh perspective on our identity, culture, and relationship to the world.

Praise for *The Enduring Effects of Prenatal Experiences*

"Brilliant, comprehensive book that contains a wealth of insight into the conditions at the beginning of human life and in which the author presents how these conditions shape adult personality, culture, and society. A fascinating, rich, and rewarding read." Thomas Verny, MD, Author of *The Secret Life of the Unborn.*

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Influence of Family, Society, and Environment: Exploring the impact of familial, societal, and environmental factors.
Evidence-Based Measures: Implementing evidence-based strategies to enhance the well-being of parents, birthing individuals, and infants.
Effects of Medical Technology: Assessing the psychological and physiological impacts of medical interventions on all involved parties.
Prevention and Intervention/Resolution of Prenatal and Perinatal Trauma: Exploring methods to prevent and address prenatal and perinatal traumas in both children and adults.
Interdisciplinary Interfaces: Investigating intersections between prenatal and perinatal psychology and fields such as medicine, genetics, developmental psychology, anthropology, ethics, and law.

Visit www.BirthPsychology.com to submit your work.

Prenatal and Perinatal Educator Certificate Program

Nurture Human Potential and Optimize the Healthiest Trajectory for Developing Babies

Embark on a transformative journey toward becoming a Certified Prenatal and Perinatal Educator (PPNE) and revolutionize how we understand and support the birth process. As a PPNE or a practitioner informed by birth psychology, you'll grasp how birth imprints shape individuals, influencing their lifelong development, and learn how to positively guide parents and infants in integrating these imprints.

The PPNE program is ideal for professionals supporting fertility, pregnancy, birth, and postpartum and those aiding adults or children in reshaping their earliest life experiences.

Discover Cutting-Edge Knowledge

Delve into implicit memory, nurture science, and birth imprints, empowering yourself to foster healthy development for parents and infants.

- **12 Modules:** Anchored in the 12 Guiding Principles of Birth Psychology by Dr. Wendy Anne McCarty and Dr. Marti Glenn.
- **180+ Contact Hours:** Dive into cutting-edge science and practical applications.
- **Personal Mentorship:** Learn from seasoned professionals in the field.
- **Somatic Practices & Self-Reflective Exercises:** Develop essential interpersonal and co-regulation skills.
- **Access to Digital Library & Monthly Meetups:** Stay connected and informed throughout your journey.
- **Exclusive Membership Benefits and Discounts:** Premier Membership for access to APPPAH's resources.
- **Timeless Wisdom:** Learn from multicultural perspectives and voices from women across the globe.

The PPNE course addresses the current maternal-infant health care crisis, which is intimately intertwined with the rise of technocratic practices and obstetrical intervention in the birth setting, racial inequalities, intergenerational and generational trauma, and the lack of recognition of basic human rights of the (un)born, mother, and families.

Modules are released monthly, offering a year-long immersive experience with extension options available. Register to attend a free informational webinar about the program. Webinars are recorded if you cannot attend.

Visit BirthPsychology.com to Learn More and Enroll Now!