

PMADs:

**Are Real, Have 2 Gen Impact,
Can be Treated & Prevented**

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Columbia University
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New York



Perinatal
Mood and
Anxiety
Disorders
(PMADs)
Are Real



Mental Health Conditions are Overall More Common in Women

Nearly 50% of US adult population develop at least one mental health disorder in their lifetime, women at higher risk

Major Depressive Disorder (MDD)



Anxiety Disorder



What Contributes to Higher Rates of Mental Health Conditions in Women?



Unequal depression for equal work? How the wage gap explains gendered disparities in mood disorders

Jonathan Platt , Seth Prins , Lisa Bates , Katherine Keyes

Stressors and trauma experiences women face:

- Disproportionate burden of the care economy
- Greater emotional stress balancing paid and unpaid labor
- More workplace discrimination
- Higher rates of childhood abuse and neglect
- Higher rates of sexual and intimate partner violence
- **And biological changes in puberty, pregnancy, menopause**

What Contributes to Higher Rates of Mental Health Conditions in Women?

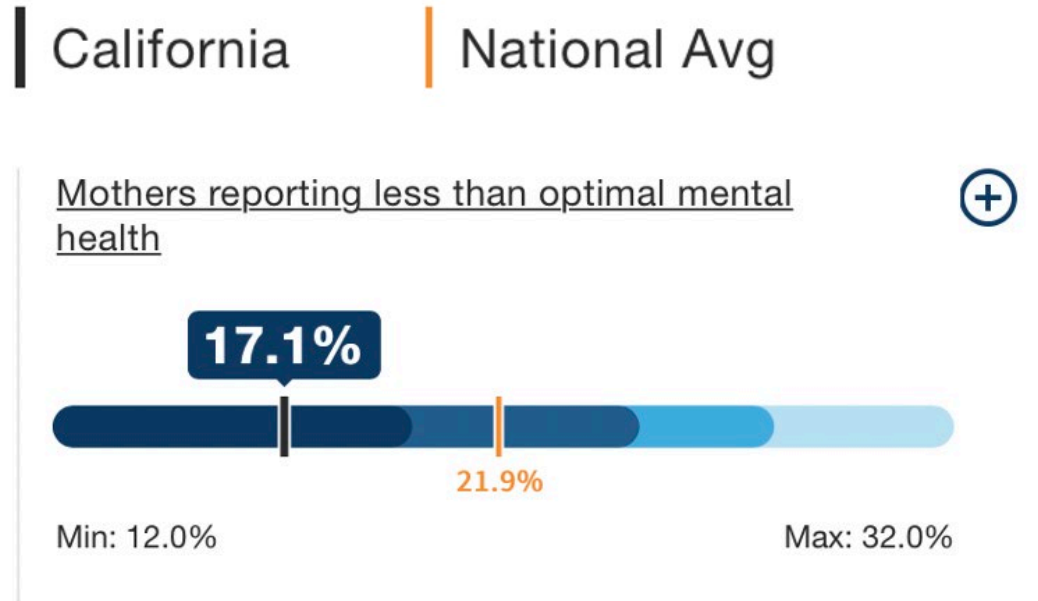
Social Determinants of Health



Social Determinants of Health
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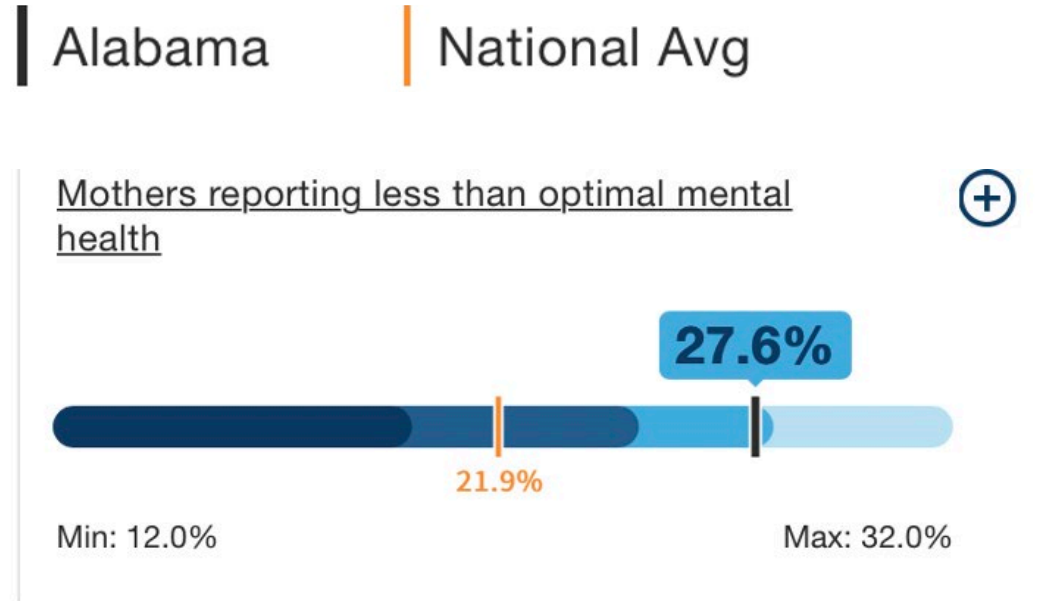
 Healthy People 2030

What Contributes to Higher Rates of Mental Health Conditions in Women?



**STATE OF BABIES
YEARBOOK 2022**

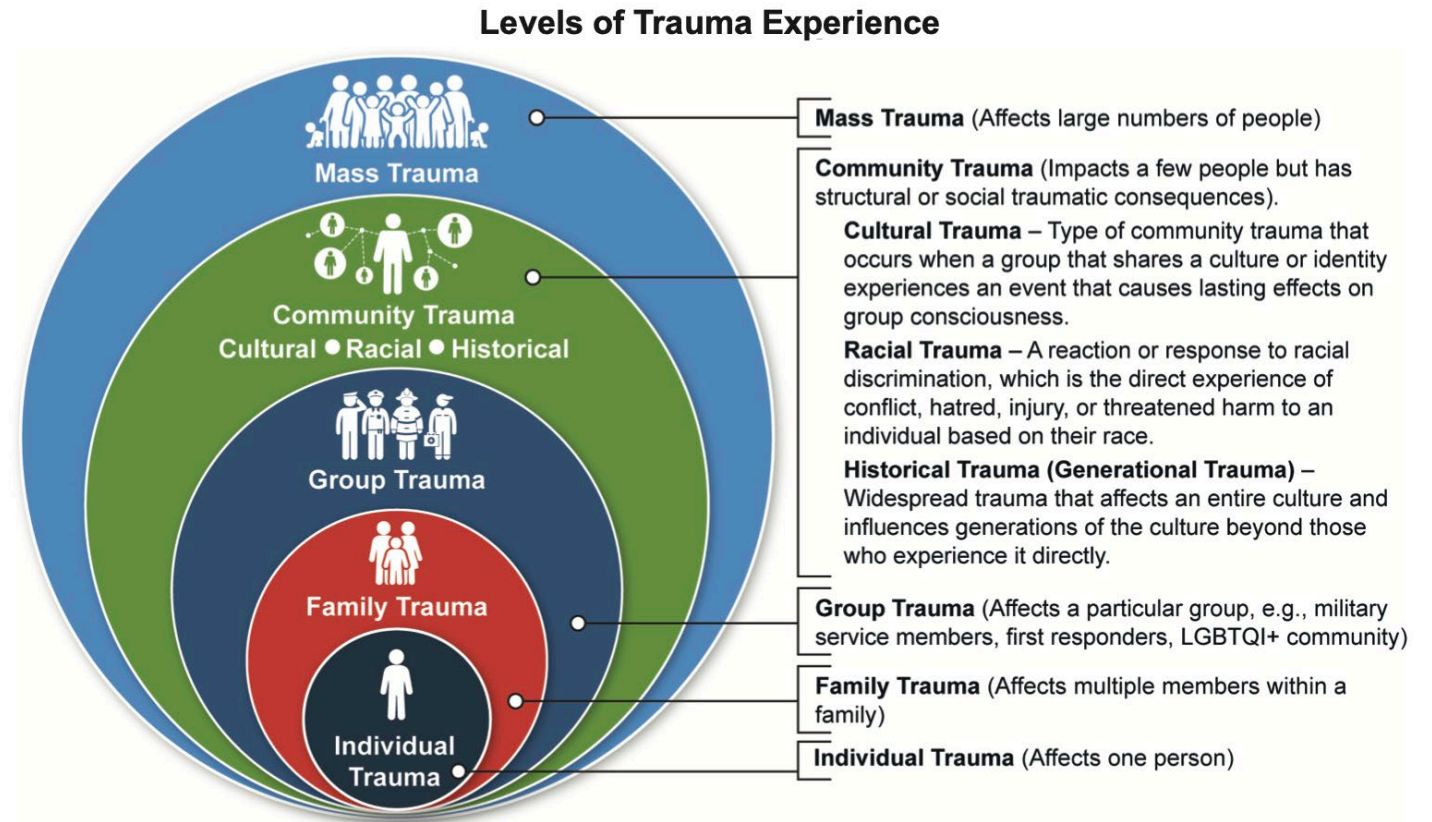
What Contributes to Higher Rates of Mental Health Conditions in Women?



**STATE OF BABIES
YEARBOOK 2022**

What Contributes to Higher Rates of Mental Health Conditions in Women?

Trauma

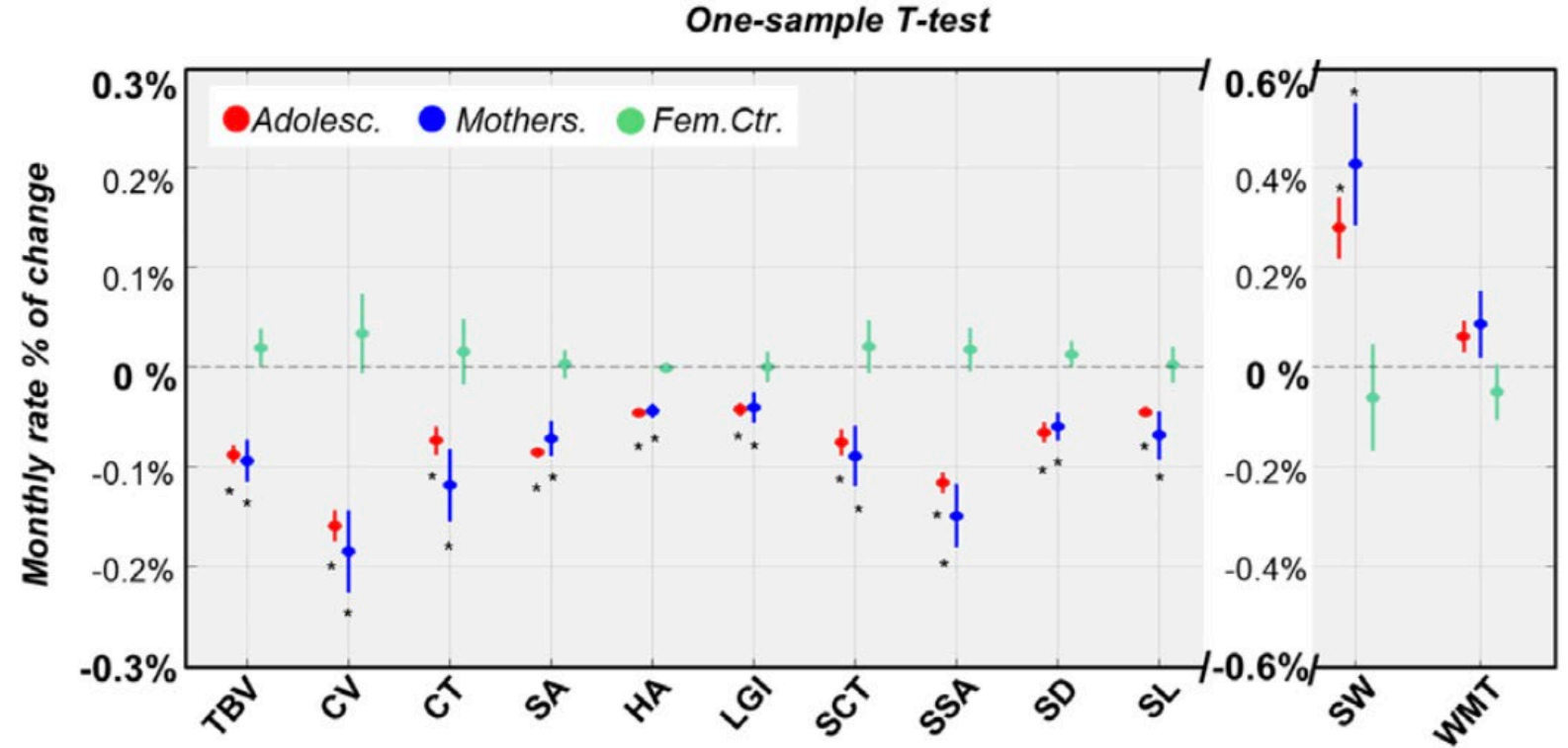


What Contributes to Higher Rates of Mental Health Conditions in Women?

Impact of Trauma on Individuals

Emotional	Behavioral	Physical	Developmental	Cognitive	Interpersonal	Spiritual
<ul style="list-style-type: none">• Difficulty regulating emotions• Emotional numbness• Depression and anxiety• Post traumatic stress disorder	<ul style="list-style-type: none">• Substance use• Self-destructive behaviors• Avoidance of situations, people, and places	<ul style="list-style-type: none">• Physical symptoms resulting from emotional distress, including headaches, high blood pressure, and fatigue• Hyperarousal resulting in muscle tension and insomnia	<ul style="list-style-type: none">• Impact varies by age group• Children and elderly at greatest risk• Changes occur in brain development	<ul style="list-style-type: none">• Impaired short-term memory• Decreased focus or concentration• Feeling alienated or ashamed• Dissociation, depersonalization, and derealization• Flashbacks or re-experiences of the event	<ul style="list-style-type: none">• Withdrawal from family, friends, community• Difficulty trusting others	<ul style="list-style-type: none">• Depression and loneliness can lead to feelings of abandonment and loss of faith• Over time can experience increased appreciation of life or enhanced spiritual well-being

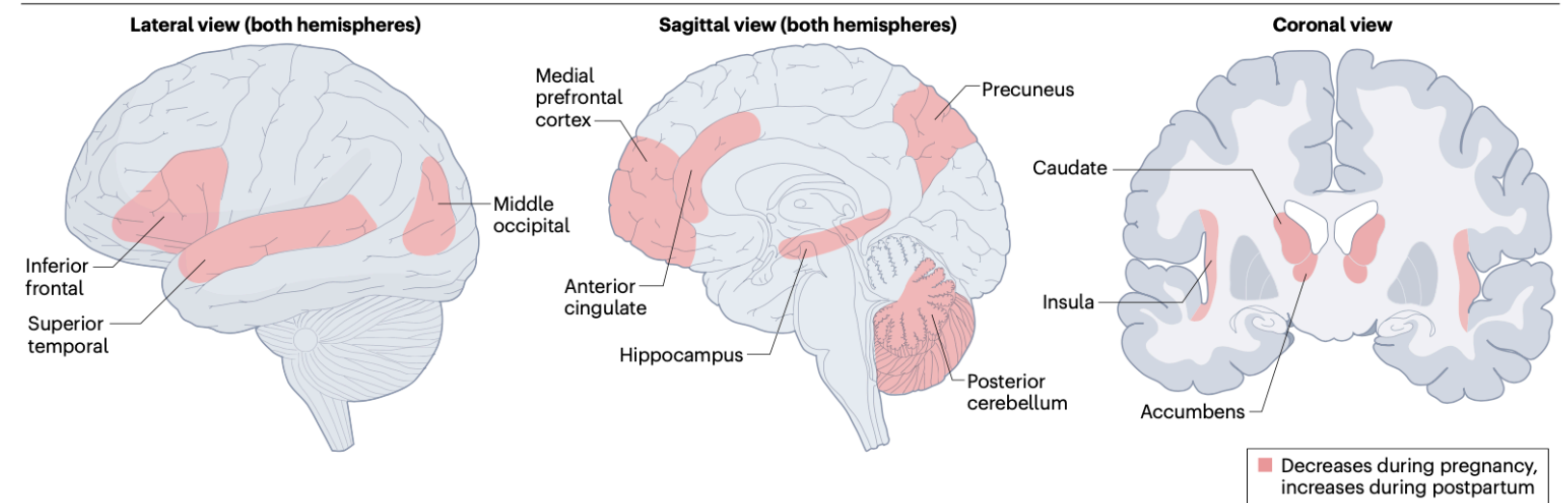
PMADs Are Real: Normative Changes in the Brain during the Transition to Motherhood



CT= cortical thickness; SA=surface area

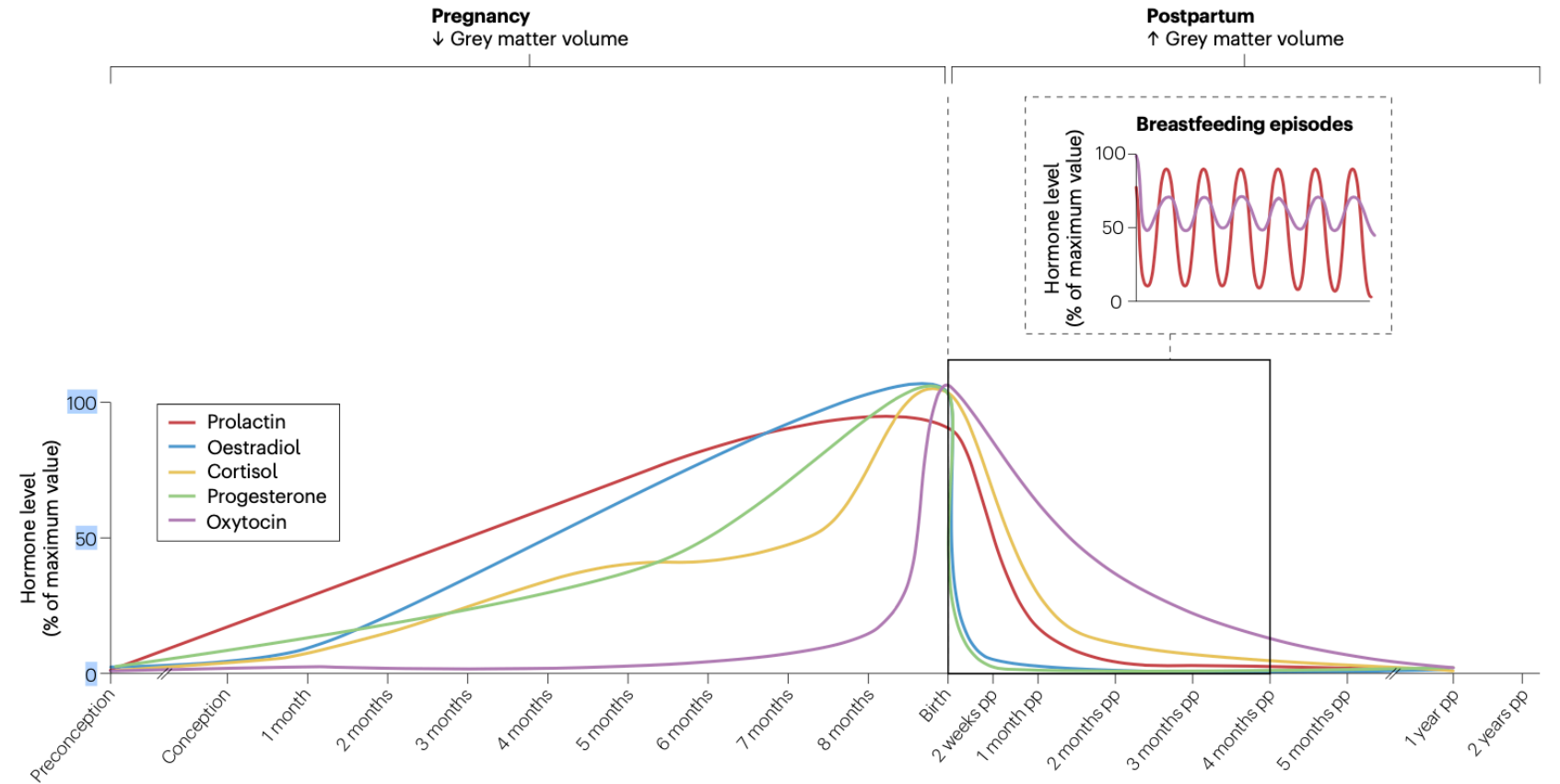
(Carmona et al., 2019)

PMADs Are Real: Normative Changes in the Brain during the Transition to Motherhood



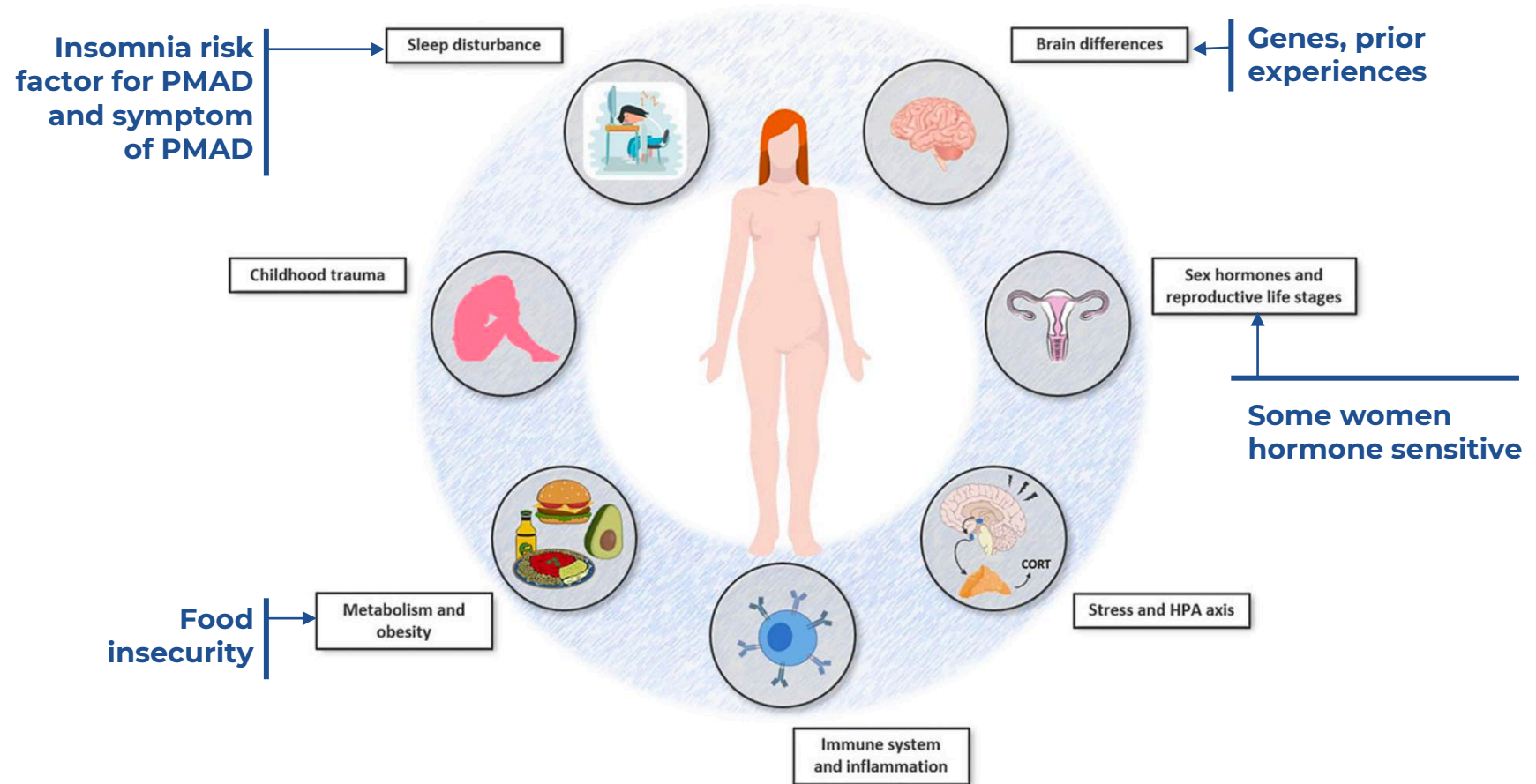
(Servin-Barthet et al., 2023)

PMADs Are Real: Normative Changes in Hormones during the Transition to Motherhood



(Servin-Barthet et al., 2023)

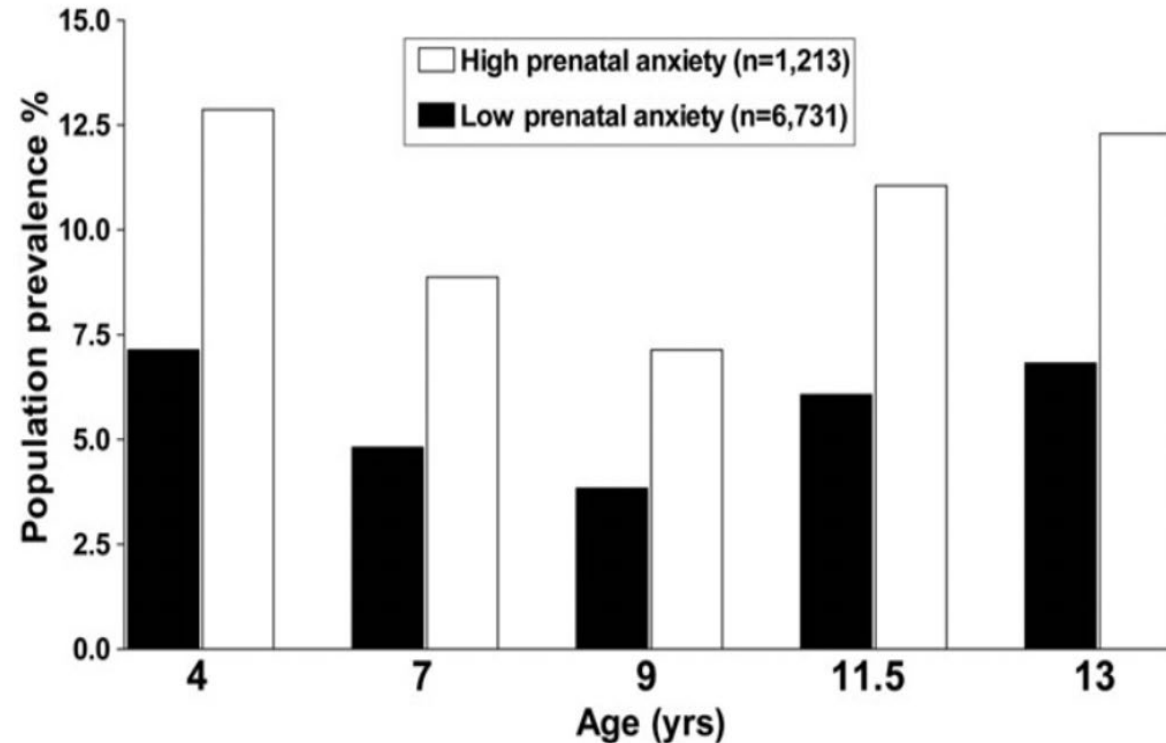
PMADs Are Real: Another Look at the Biological Level



(Grazia Di Benedetto et al., 2024)

PMADs Have 2 Gen Impact

High prenatal anxiety associated with 2x risk
for child mental health problems esp. ADHD and anxiety



***comparable results with maternal depression**

(O'Donnell et al., 2014)

PMADs Have 2 Gen Impact

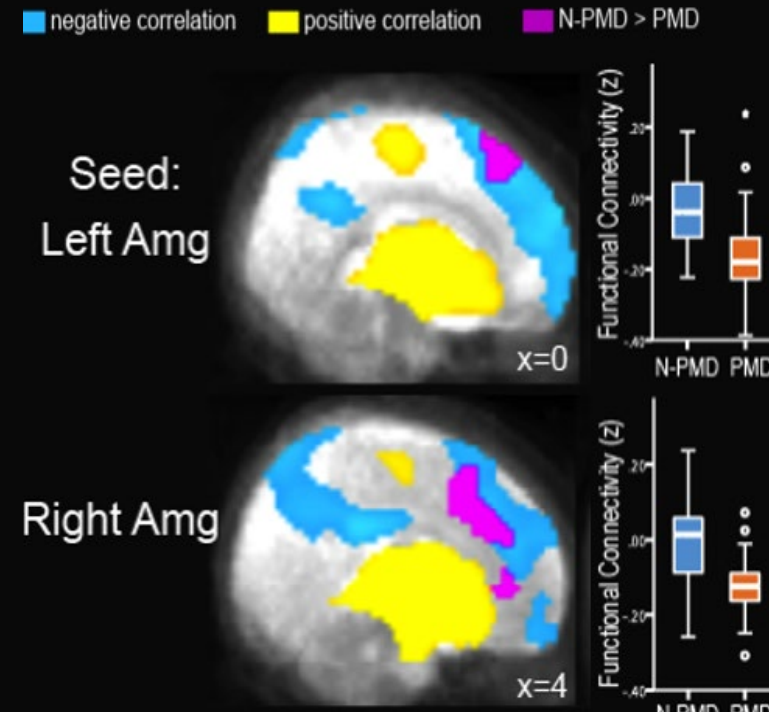
Citation: Transl Psychiatry (2016) 6, e935; doi:10.1038/tp.2016.146

www.nature.com/tp

ORIGINAL ARTICLE

Alterations in amygdala–prefrontal circuits in infants exposed to prenatal maternal depression

J Posner^{1,2,5}, J Cha^{1,2,5}, AK Roy³, BS Peterson⁴, R Bansal⁴, HC Gustafsson¹, E Raffanella², J Gingrich^{1,2} and C Monk^{1,2}



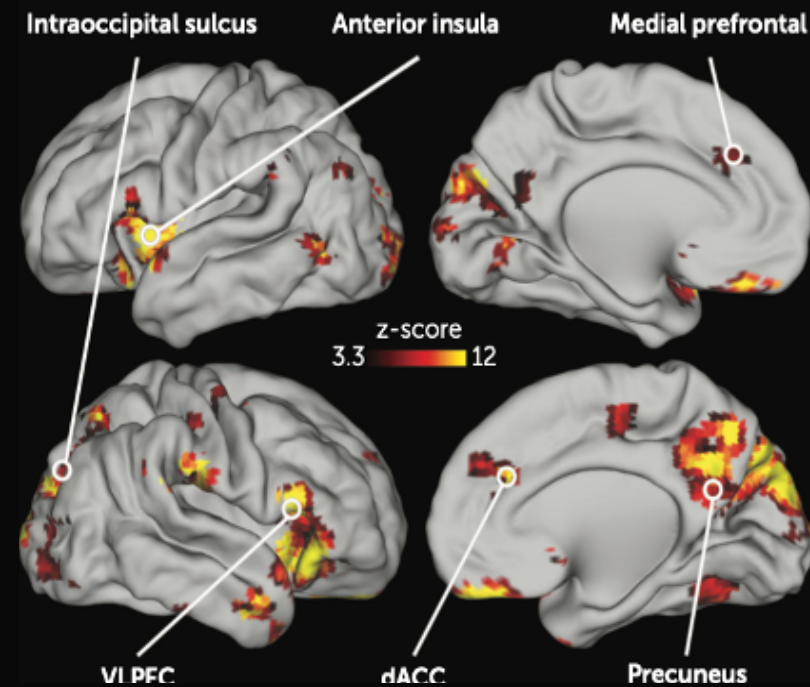
PMADs Have 2 Gen Impact

Neonatal Brain Response to Deviant Auditory Stimuli and Relation to Maternal Trait Anxiety

Chad M. Sylvester, M.D., Ph.D., Michael J. Myers, B.A., Michael T. Perino, Ph.D., Sydney Kaplan, B.S., Jeanette K. Kenley, B.S., Tara A. Smyser, M.S., Barbara B. Warner, M.D., Deanna M. Barch, Ph.D., Daniel S. Pine, M.D., Joan L. Luby, M.D., Cynthia E. Rogers, M.D., Christopher D. Smyser, M.D.

Am. Journal Psychiatry, 2021

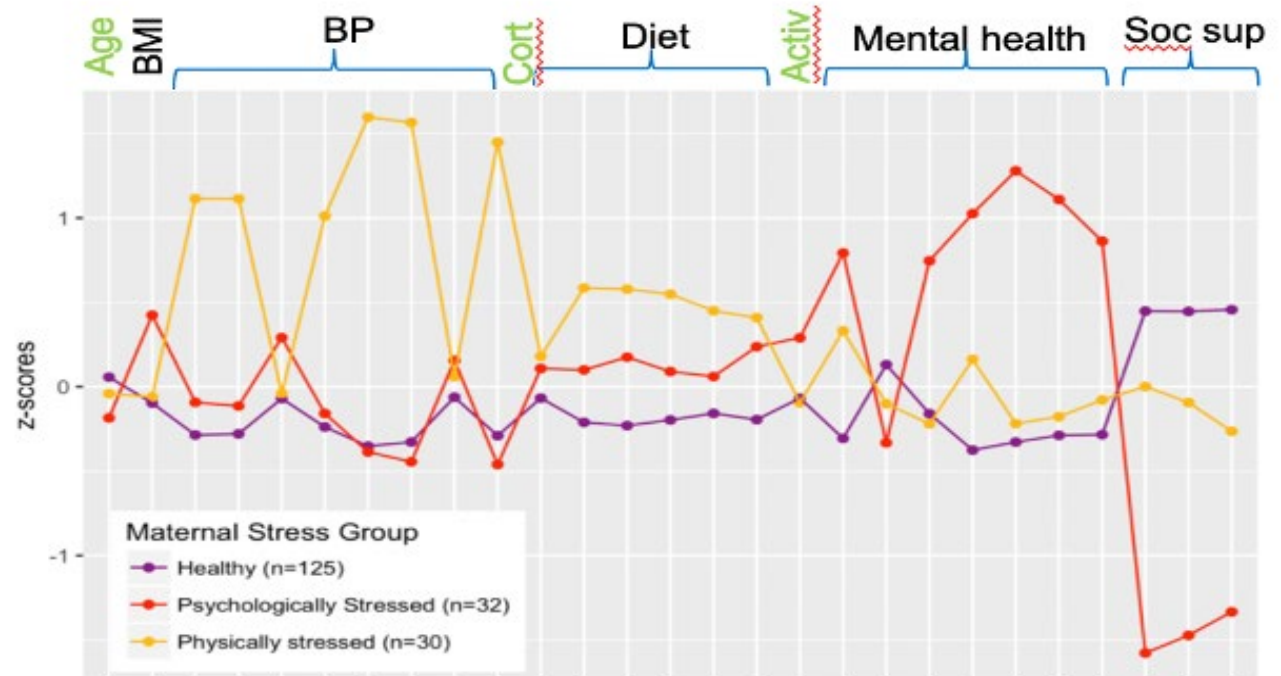
FIGURE 3. Brain areas in which neonatal neural activity following onset of deviant sounds varied depending on maternal trait anxiety^a



PMADs Have 2 Gen Impact

Maternal prenatal stress phenotypes associate with fetal neurodevelopment and birth outcomes

Kate Walsh^{a,b}, Clare A. McCormack^c, Rachel Webster^d, Anita Pinto^e, Seonjoo Lee^{f,g}, Tianshu Feng^g, H. Sloan Krakovsky^d, Sinclair M. O'Grady^d, Benjamin Tycko^h, Frances A. Champagne^{i,j}, Elizabeth A. Werner^{d,i}, Grace Liuⁱ, and Catherine Monk^{d,f,i,1}



Sample of healthy women having healthy pregnancies

PMADs Have 2 Gen Impact

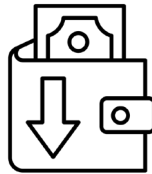
SDoH: Women in the Psychologically Stressed Group vs Other Two Groups



more likely
to be
Latina



fewer
years of
education



lower
household
income



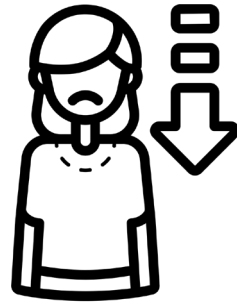
more
public
assistance



higher levels of
emotional abuse and
physical neglect

PMADs Have 2 Gen Impact

Trauma: Women Differed by Stress Groups



Childhood
Emotional
Neglect

PSYG

HIGHEST LEVELS

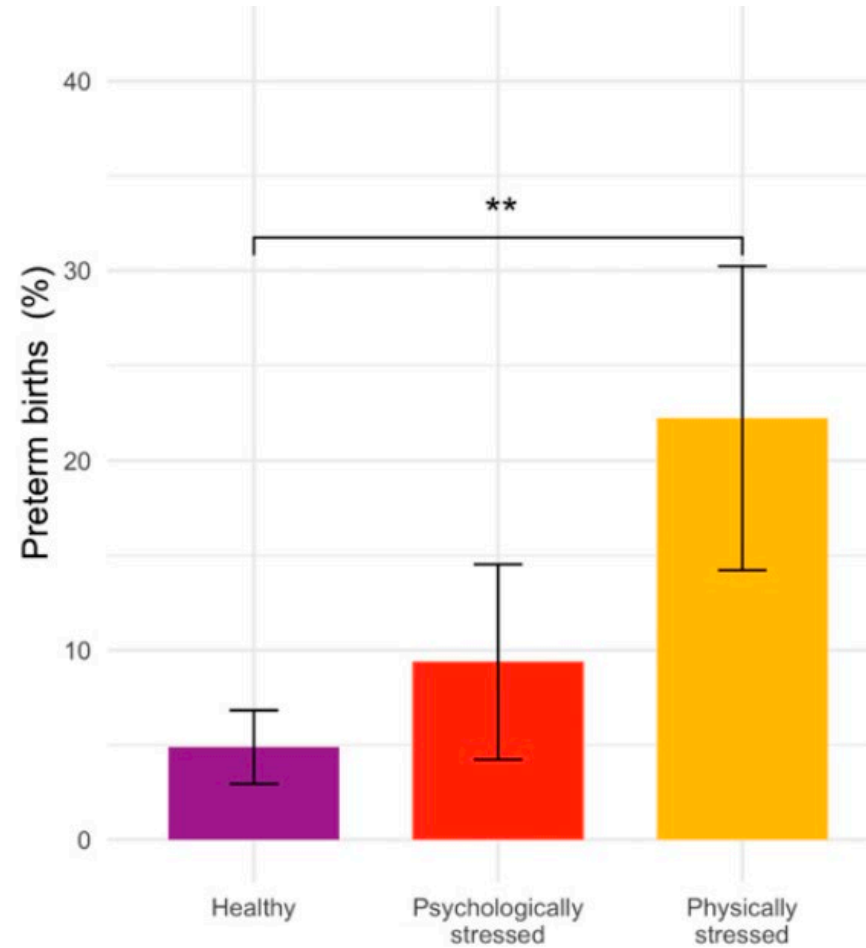
PHSG

MID LEVELS

HG

LOWEST LEVELS

PMADs Have 2 Gen Impact





PMADs Have 2 Gen Impact

DOI: 10.1111/bdi.13207

ORIGINAL ARTICLE

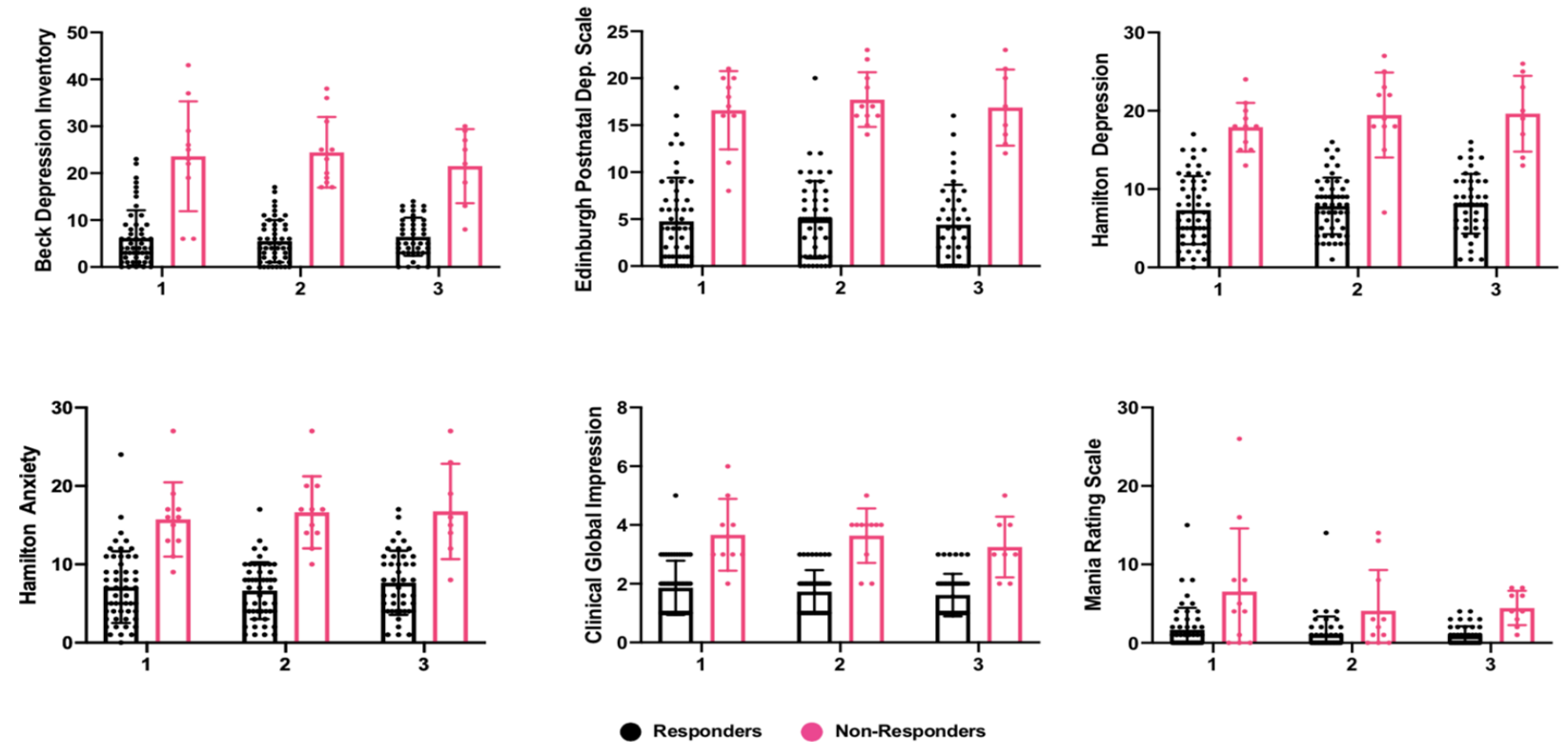
Pregnant women with bipolar disorder who have a history of childhood maltreatment: Intergenerational effects of trauma on fetal neurodevelopment and birth outcomes

Vanessa Babineau¹  | Clare A. McCormack² | Tianshu Feng³ | Seonjoo Lee^{4,5} | Obianuju Berry⁶ | Bettina T. Knight⁷ | Jeffrey D. Newport⁸  | Zachary N. Stowe⁹ | Catherine Monk¹⁰

Bipolar Disorders. 2022;00:1–12.

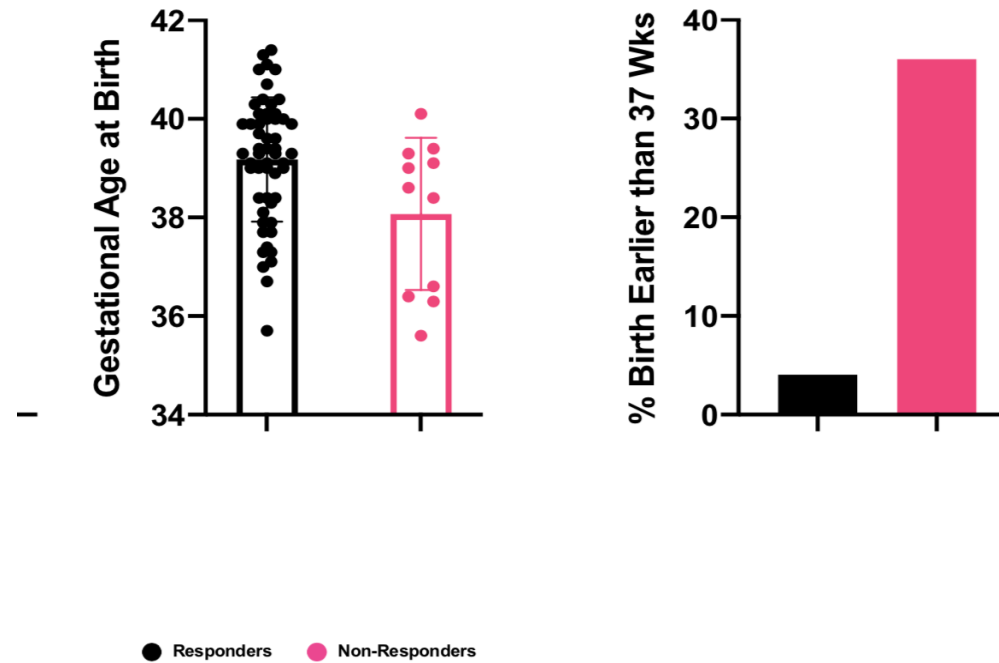
PMADs Have 2 Gen Impact

Mood Variables By Group By Session



PMADs Have 2 Gen Impact

Birthout Outcome By Group

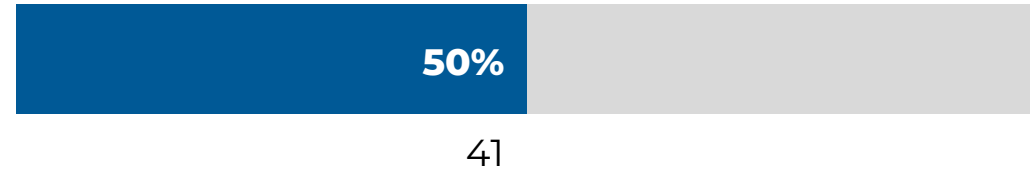


PMADs Have 2 Gen Impact

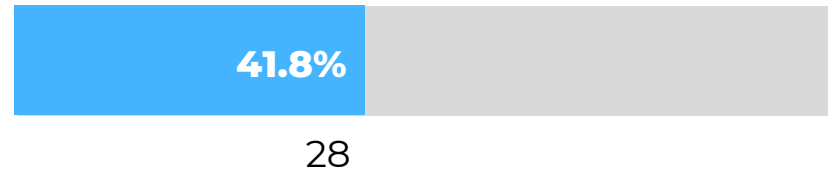


Trauma: Groups Differed by Childhood Maltreatment

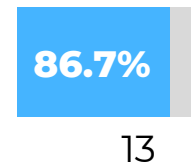
Total Sample
n=82



Responders
n=67



Non-responders
n=15



PMADs Have 2 Gen Impact

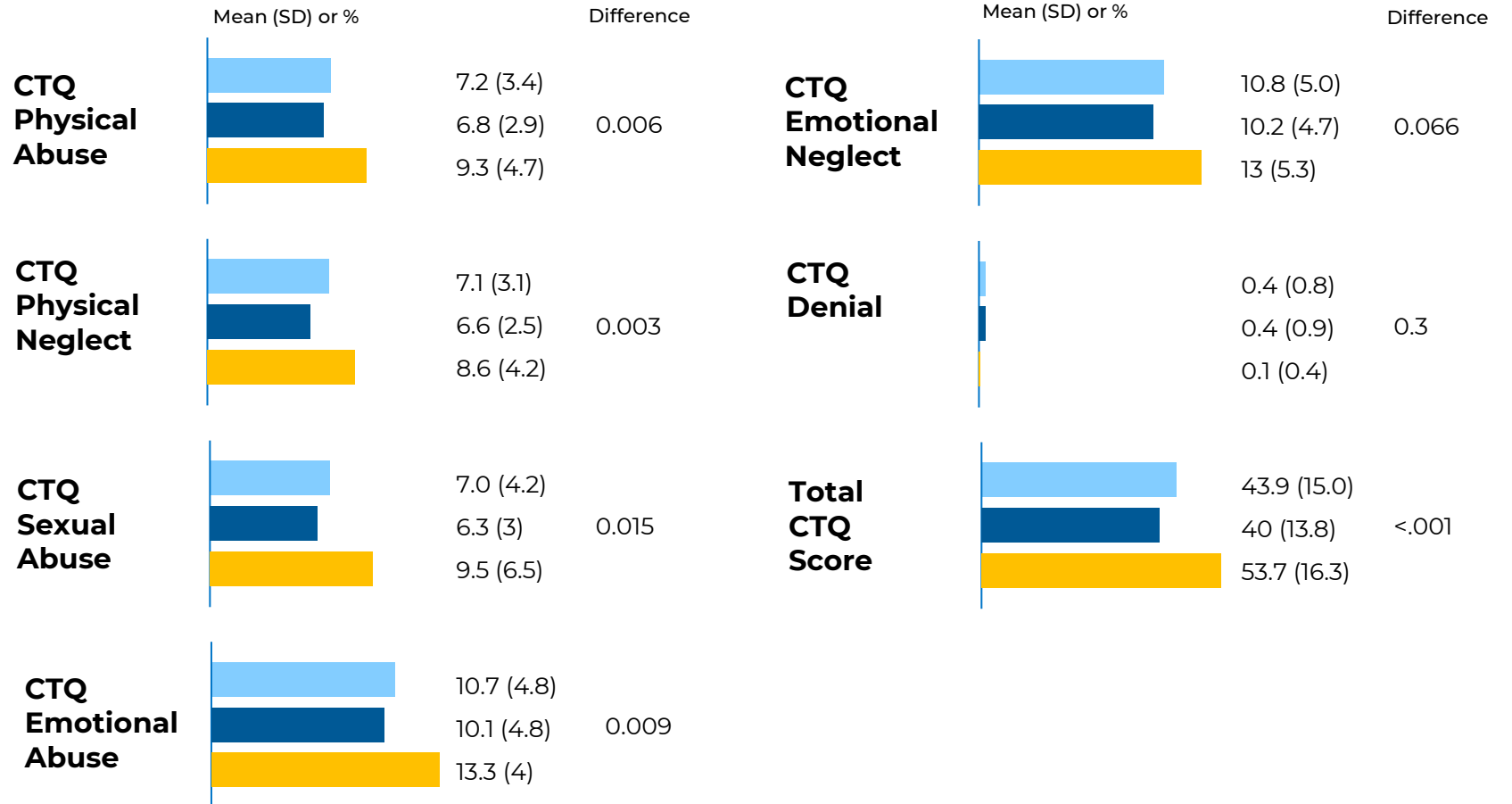


Trauma: Groups Differed by Childhood Maltreatment

■ Total n=82

■ Responders n=67

■ Non-Responders n=67



The Perinatal Period = Time of Significant
Brain and Hormone Changes
in the Context of Life Circumstances

A Time of Vulnerability — Also of Opportunity

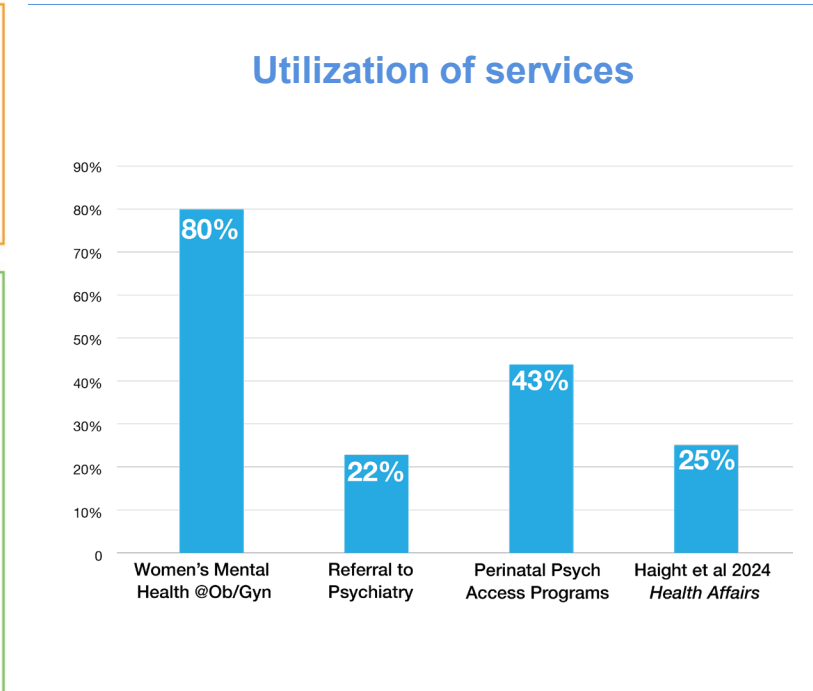
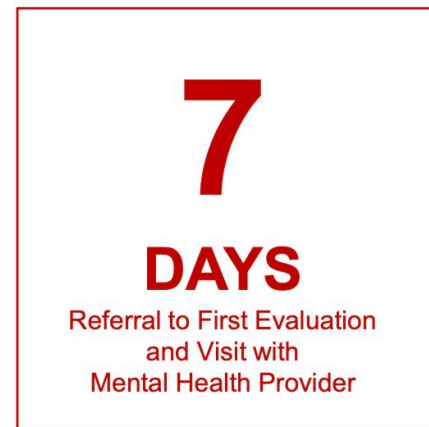
Biggest Impediment to Recovery from
PMADs is **Access to Treatment**

PMADs Are Treatable:

Access to
Care

Women's Mental Health @Ob/Gyn: Utilization Outcomes

Data reflects outcomes from February 2020 to December 2023



PMADs Are Preventable

REACH OUT STAY STRONG ESSENTIALS (ROSE) FOR NEW MOMS

Caron Zlotnick, PhD, Brown University



Ricardo Munoz, PhD

Darius Tandon, PhD

Northwestern University

PMADs Are Preventable



PREPP

PRACTICAL RESOURCES FOR
EFFECTIVE POSTPARTUM PARENTING

*A Mother-Infant Dyadic Treatment
to Prevent Postpartum Depression*

Dr. Elizabeth Werner



PMADs Are Preventable



Informational Pamphlet



PREPP
PRACTICAL RESOURCES FOR
EFFECTIVE POSTPARTUM PARENTING



 COLUMBIA UNIVERSITY
MEDICAL CENTER
CATHERINE JAVNA, PhD
COLUMBIA OB-OBSTETRIC CLINIC

Catherine Monk, PhD; Elizabeth Werner, PhD; Maia Miller, PhD;

email: cw150@cumc.columbia.edu | tel: 646.774.8945



PMADs Are Preventable

Billing:
CPT Code 90834

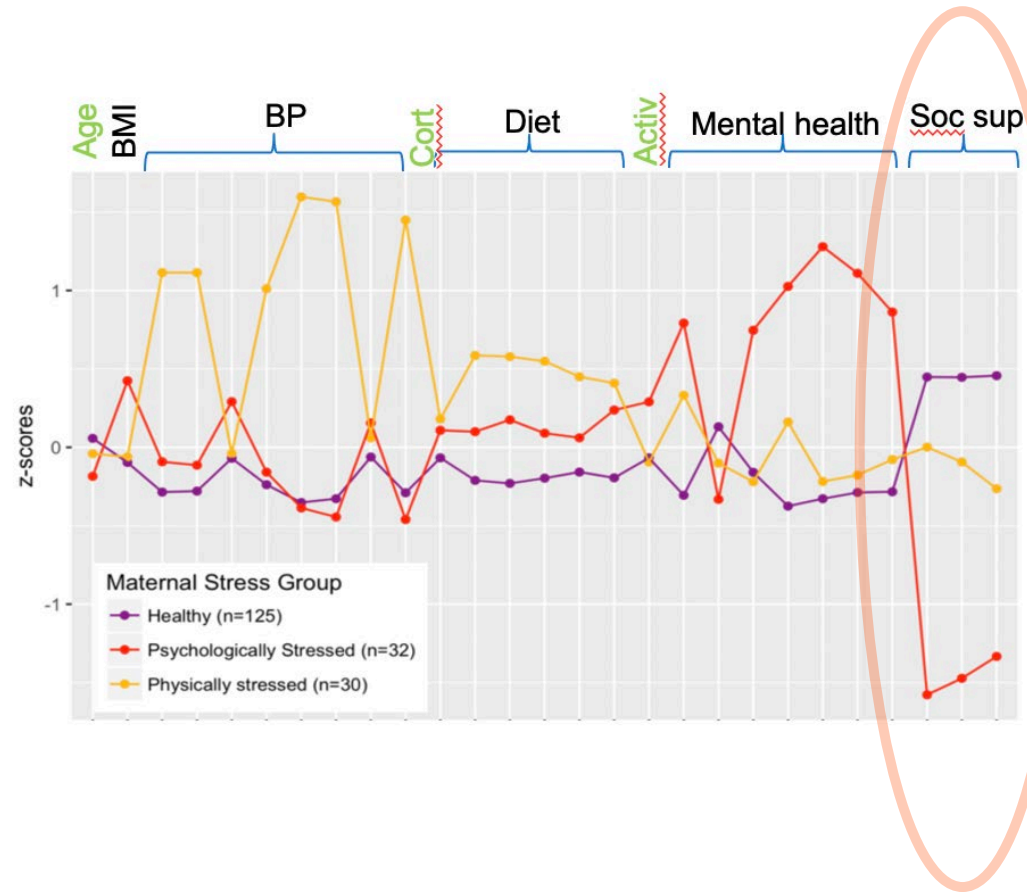
ICD-10 Adjustment
Disorder with
anxiety and/or
depression

Preventing maternal mental health disorders in the context of poverty: pilot efficacy of a dyadic intervention

Pamela Scorza, ScD; Catherine Monk, PhD; Seonjoo Lee, PhD; Tianshu Feng, PhD; Obianuju O. Berry, MD, PhD; Elizabeth Werner, PhD



PMADs Are Preventable: Social Support



Role of relationships and communities and interventions that build on these strengths to improve maternal and child health

PMADs Are Preventable: Social Support

Well-Being ▼

Housing & Relocation ▼

Child Care & Schooling ▼

Breastfeeding ▼

[Home](#)

[Events](#)

Birth of Parent, Birth of Child: Expectant Parents thro...

Events

PAST EVENT

Birth of Parent, Birth of Child: Expectant Parents through 1st Year

Add to Calendar: [Calendar / Outlook](#) [Google](#) [Yahoo](#)

PMADs Are Preventable: Social Support and Community Expertise

Join our virtual **Postpartum Drop-In Groups** designed to give postpartum patients the opportunity to connect with others, gain support, ask questions and get answers.

These weekly groups are hosted by obstetrics providers, mental health providers, and patient peers. Attendees are encouraged to join as many sessions as they would like.

Weekly Session Schedule:

Wednesdays: 10:00 - 11:00 AM

Wednesdays: 1:00 - 2:00 PM

Thursdays: 4:00 - 5:00 PM



Questions?

Contact Kiyenne Rivers at
LF2292@cumc.columbia.edu

Instagram



Kimberly Seals Allers



THANK YOU

