

## Supplementary Material

**Article Title:** Determinants of Immediate Postpartum Anxiety and Its Association With Postpartum Depression: A Case-Control Study Nested in a Cohort

**Authors:** Marie Arnal, MD; Elodie-Gaëlle Ngameni, MD, PhD; Sarah Tebeka, MD, PhD; and Caroline Dubertret, MD, PhD; for the IGEDEPP group

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### **DISCLAIMER**

This Supplementary Material has been provided by the authors as an enhancement to the published article. It has been approved by peer review; however, it has undergone neither editing nor formatting by in-house editorial staff. The material is presented in the manner supplied by the author.

**Supplementary Table 1:** Association between moderate to severe immediate postpartum anxiety (HAD-A>10) and sociodemographic data, childhood stressful life events, stressful events during pregnancy, obstetrical events, delivery events, personal and family psychiatric history

	Moderate to severe immediate postpartum anxiety (HAD-A>10) (N=246)	Controls (N=3057)	Immediate postpartum anxiety vs Controls	
	N (%)	N (%)	OR (95%CI)	P
Age (years)				
<25	26 (10.6)	218 (7.1)	<b>1.6 (1.0-2.4)</b>	<b>0.031</b>
between 25 and 40	200 (81.3)	2698 (88.3)	<b>1 (ref)</b>	<b>Ref</b>
>40	20 (8.1)	141 (4.6)	<b>1.9 (1.1-3.1)</b>	<b>0.009</b>
Marital status: single	10 (4.1)	93 (3.0)	1.4 (0.7-2.6)	0.376
Education level : Primary or high school	34 (13.8)	227 (7.4)	<b>2.0 (1.4-2.9)</b>	<b>&lt;0.001</b>
Unemployed	21 (8.5)	201 (6.6)	1.3 (0.8-2.1)	0.239
<b>Childhood stressful life events (CTQ, N above threshold)</b>			<b>aOR (95%CI)</b>	<b>P</b>
- Emotional abuse	11 (4.6)	89 (3.0)	1.5 (0.8-2.9)	0.225
- Physical abuse	7 (2.9)	64 (2.1)	1.2 (0.5-2.6)	0.689
- Sexual abuse	15 (6.2)	71 (2.4)	<b>2.4 (1.3-4.2)</b>	<b>&lt;0.001</b>
- Emotional neglect	29 (12.0)	167 (5.5)	<b>2.1 (1.4-3.2)</b>	<b>&lt;0.001</b>
- Physical neglect	4 (1.7)	22 (0.7)	1.8 (0.6-5.4)	0.288
- Any trauma	45 (18.7)	253 (8.4)	<b>2.3 (1.6-3.2)</b>	<b>&lt;0.001</b>
<b>Stressful events during pregnancy</b>				
At least one stressful event with negative impact during pregnancy (Paykel scale)	156 (63.4)	1422 (46.5)	2.0 (1.5-2.6)	<b>&lt;0.001</b>
<b>Obstetrical events before and during pregnancy</b>				
Infertility	25 (10.2)	374 (12.2)	0.8 (0.5-1.2)	0.257
Assisted reproductive technology	17 (6.9)	250 (8.2)	0.8 (0.5-1.3)	0.387
Physical concomitant chronic disease	48 (19.5)	403 (13.2)	<b>1.6 (1.1-2.2)</b>	<b>0.009</b>
Primiparity	127 (51.6)	1769 (57.9)	0.8 (0.6-1.0)	0.082
Multiple pregnancy	6 (2.4)	99 (3.2)	0.7 (0.3-1.7)	0.476
Emergency consultation during pregnancy	157 (63.8)	1435 (47.0)	<b>2.0 (1.5-2.6)</b>	<b>&lt;0.001</b>
Hospitalization during pregnancy	54 (22.0)	384 (12.6)	<b>1.9 (1.4-2.6)</b>	<b>&lt;0.001</b>
Threatened preterm labor	12 (22.2)	126 (32.8)	0.6 (0.3-1.1)	0.090
Hypertension during pregnancy	7 (13.0)	30 (7.8)	2.1 (0.9-5.2)	0.105
Gestational diabetes	9 (16.7)	50 (13.0)	1.6 (0.7-3.4)	0.283
Venous thromboembolic event	1 (1.9)	6 (1.6)	1.0 (0.1-9.3)	0.981
<b>Delivery events</b>				
C-section delivery	82 (33.3)	735 (24.0)	<b>1.5 (1.1-2.0)</b>	<b>0.004</b>
No obstetrical analgesia despite intention	54 (94.7)	462 (89.4)	2.0 (0.6-6.7)	0.248
Newborn related events (preterm, small for gestational age, NICU)	40 (16.3)	270 (8.8)	<b>1.9 (1.4-2.8)</b>	<b>&lt;0.001</b>
Early maternal postpartum events (hemorrhage, ICU)	14 (5.7)	166 (5.4)	1.0 (0.6-1.8)	0.87
<b>Personal psychiatric history</b>				
Any psychiatric disease	190 (77.2)	1392 (45.5)	<b>4.0 (2.9-5.4)</b>	<b>&lt;0.001</b>
Major depressive episode	151 (61.4)	1013 (33.1)	<b>3.2 (2.4-4.2)</b>	<b>&lt;0.001</b>
Suicide attempt	13 (5.3)	85 (2.8)	1.7 (0.9-3.2)	0.077
Any anxiety disorder	83 (33.7)	462 (15.1)	<b>2.9 (2.2-3.8)</b>	<b>&lt;0.001</b>
Any eating disorder	17 (6.9)	120 (3.9)	<b>1.9 (1.1-3.2)</b>	<b>0.016</b>
Any substance use disorder	31 (12.6)	248 (8.1)	<b>1.5 (1.0-2.3)</b>	<b>0.042</b>
Tobacco dependence	29 (11.8)	206 (6.7)	<b>1.7 (1.1-2.6)</b>	<b>0.011</b>
Alcohol use disorder	4 (1.6)	16 (0.5)	3.0 (1.0-9.3)	0.051
Cannabis use disorder	5 (2.0)	49 (1.6)	1.2 (0.5-3.0)	0.761
<b>Family psychiatric history</b>				
Any psychiatric disorder	181 (73.6)	1959 (64.1)	<b>1.6 (1.2-2.2)</b>	<b>&lt;0.001</b>
Mood disorder	144 (58.5)	1479 (48.4)	<b>1.6 (1.2-2.0)</b>	<b>&lt;0.001</b>
Anxiety disorder	83 (33.7)	612 (20.0)	<b>2.1 (1.6-2.8)</b>	<b>&lt;0.001</b>
Schizophrenia	3 (1.2)	44 (1.4)	0.9 (0.3-3.0)	0.879
Alcohol dependence or abuse	45 (18.3)	455 (14.9)	1.2 (0.9-1.7)	0.241
Other substance use disorder	49 (19.9)	598 (19.6)	1.0 (0.7-1.4)	0.888

Abbreviations: CTQ, Childhood Trauma Questionnaire; PPD: Postpartum Depression; ICU, Intensive care unit; NICU, newborn Intensive Care Unit; PPD, postpartum depression ; aOR: OR adjusted for age, marital status, education level and employment

**Supplementary Table 2:** Multivariable models for moderate to severe immediate postpartum anxiety  
(HAD-A>10)

	Moderate to severe immediate postpartum anxiety vs Controls	
	aOR (95%CI)	P
Personal history of any anxiety disorder	<b>2.0 (1.5-2.7)</b>	<b>&lt;0.001</b>
Personal history of MDE	<b>2.5 (1.9-3.3)</b>	<b>&lt;0.001</b>
Stressor event with negative impact during pregnancy (Paykel)	<b>1.7 (1.3-2.2)</b>	<b>&lt;0.001</b>
Childhood trauma (CTQ)	<b>1.6 (1.1-2.3)</b>	<b>0.020</b>
C-section delivery	<b>1.5 (1.1-2.0)</b>	<b>0.011</b>
Newborn related events (preterm, small for gestational age, NICU)	<b>1.7 (1.2-2.6)</b>	<b>0.008</b>
Emergency consultation during pregnancy	<b>1.8 (1.4-2.4)</b>	<b>&lt;0.001</b>
Education level : Primary or high school	<b>0.6 (0.4-0.8)</b>	<b>0.003</b>

Abbreviations: aOR, adjusted odds-ratio; CTQ, Childhood trauma questionnaire; PPD, postpartum depression.

**Supplementary Table 3:** Association between moderate to severe immediate postpartum anxiety (HAD>10) and postpartum depression among women evaluated at one year postpartum

	All (N=2401)	Moderate to severe immediate postpartum anxiety (N=178)	Controls (N= 2222)	Perinatal anxiety vs Controls		
	N (%)	N (%)	N (%)	OR (95%CI)	aOR (95%CI) <sup>1</sup>	aOR (95%CI) <sup>2</sup>
Perinatal depression						
No	1916 (79.8)	108 (60.3)	1808 (81.4)	1 (ref)	1 (ref)	1 (ref)
Postpartum depression	485 (20.2)	71 (39.7)	414 (18.6)	<b>2.9 (2.1-3.9)</b>	<b>2.8 (2.0-3.8)</b>	<b>2.4 (1.8-3.4)</b>
Early postpartum depression	250 (10.4)	44 (24.6)	206 (9.3)	<b>3.6 (2.4-5.2)</b>	<b>3.4 (2.3-5.0)</b>	<b>2.9 (2.0-4.3)</b>
Late postpartum depression	235 (9.8)	27 (15.1)	208 (9.4)	<b>2.2 (1.4-3.4)</b>	<b>2.1 (1.3-3.3)</b>	<b>1.9 (1.2-2.9)</b>

Abbreviations: aOR, adjusted odd ratio; CI, confidence interval

Significant differences are in bold.

1: multivariate model adjusted on socio-demographic covariates

2: multivariate model adjusted on the history of MDE (including during this pregnancy) and socio-demographic covariates

