

# PREVALENCE AND RISK FACTORS OF POSTPARTUM DEPRESSION AMONG REFUGEES AND INTERNALLY DISPLACED WOMEN IN LEBANON

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## BACKGROUND

Postpartum depression (PPD) is a significant health concern, affecting maternal and child health outcomes. PPD is classified under major depressive disorder if onset of mood symptoms occurs during pregnancy or in the 4 weeks following delivery.<sup>1</sup> Whereas 9% of women go through a major depressive episode between conception and birth, slightly less than 7% experience PPD between delivery and the 12 months postpartum.

Refugees and internally displaced women represent a vulnerable population facing unique challenges. Lebanon hosts over 1.5 million Syrian refugees, 489,292 Palestinian refugees and 11,654 refugees of other nationalities including Iraqis and Sudanese.<sup>2</sup> Moreover, since October 2023, armed confrontations at the Southern border have led to internal displacement, reaching 92,094 Internally Displaced Persons (52% women) in April 2024.<sup>3</sup>

This study falls under core theme 3 of WHO's global research agenda, which focuses on the determinants of health of migrants, refugees and other displaced populations.<sup>4</sup> We hypothesize that security concerns, stress due to displacement, and limited access to resources during transition to motherhood affect women's likelihood of developing PPD.

## OBJECTIVES

- Investigate the prevalence and severity of PPD among refugees and internally displaced women in Lebanon
- Assess the factors associated with PPD, including individual and social determinants of health

## METHODOLOGY

**Design:** Cross-sectional

**Inclusion Criteria:** Pregnant women or new mothers (up to 12 months postpartum), 18 years of age or older, displaced Lebanese or refugee

**Ethical considerations:** Study approved by LAU Institutional Review Board (IRB #: LAU.SOM.CB1.23/Nov/2023). Informed consent obtained from all participants.

**Data collection:** Between November 2023 and March 2024, through face-to-face interviews at a public hospital and in shelters, waves of WhatsApp messages, and snowball effect. The language of the survey was Arabic.

**Measurement tool:** Questionnaire consisted of 1) sociodemographic and health-related variables, 2) social determinants of health<sup>5,6</sup>, 3) Brief Resilience Scale (BRS),<sup>7</sup> and 4) validated Arabic version of the Edinburgh Postnatal Depression Scale (EPDS).<sup>8</sup>

**Required sample size:** Using Daniel's formula,<sup>9</sup> a sample of 255 participants is required, assuming a confidence level of 95%, margin of error of 5%, and population proportion of 21%.

**Statistical Analysis:** Bivariate analysis using Pearson Chi-Square test and Student test for parametric tests and Fisher exact test for non-parametric tests.

## RESULTS

Table 1

Variable (N=368)	N	%	Association with PPD p-value
<b>Maternal Status</b>			
Pregnant	268	72.8	.013
Mothers (up to a year postpartum)	100	27.2	
<b>Age</b>			
	26.9	± 6.5*	.012
<b>Governorate</b>			
Beirut and Mount Lebanon	284	77.1	.000
Periphery: North, Bekaa, Nabatieh, South, Akkar, Baalbek	84	22.8	
<b>Nationality</b>			
Lebanese	37	10.1	.000
Syrian	325	88.3	
Palestinian or Sudanese	6	1.6	
<b>Educational level</b>			
No formal education	206	56	.000
Primary school	118	32.1	
Secondary/vocational school or above	44	12	
<b>Employment status of husband</b>			
Unemployed	135	36.7	.000
<b>Number of years in Lebanon</b>			
	9.4	± 7.6*	.000
<b>Number of displacements</b>			
	1.7	± 1.9*	.000

\* Quantitative variables are expressed as means and standard deviations

Table 2

Variable (N=368)	N	%	Association with PPD p-value
<b>Health-related issues and association with PPD</b>			
<b>Postpartum depression (score on EPDS)</b>			
Depressed (<12)	215	58.4	--
Unplanned pregnancy	114	31	.000
<b>Resilience (score on BRS)</b>			
Low (1-2.99)	236	64.1	.000
Normal (3-4.30)	126	34.2	
High (4.31-5.00)	6	1.6	
<b>Self-reported health</b>			
Very good to excellent	156	42.4	.000
Good	148	40.2	
Poor to fair	64	17.4	
<b>Emergency room admission in pregnancy</b>			
Once	156	42.4	.000
≥ 2	39	10.6	
None	173	47	
<b>History of rape in childhood</b>			
Yes	45	12.3	.000
<b>Psychiatric antecedents</b>			
Yes	42	11.4	.000
<b>Panic syndrome in the past month</b>			
Yes	26	7.1	.000
<b>Help needed in reading medical instructions</b>			
Yes	249	67.6	.000
<b>Having a regular health provider</b>			
No	339	92.1	.000

Table 3

Variable (N=368)	N	%	Association with PPD p-value
<b>Social determinants of health and association with PPD</b>			
<b>Living arrangement</b>			
Formal camp	23	6.3	.000
Collective shelter	25	6.8	
Informal settlement	6	1.6	
Rented accommodation	278	75.5	
Moved in temporarily with relatives	36	9.7	
<b>Home environment</b>			
Lack of heating	112	30.4	.000
Water leaks	158	42.9	.002
<b>Current challenges</b>			
Abuse	29	7.9	.000
Weak sense of belonging	297	80.7	.000
Trouble accessing healthcare services	277	75.3	.025
Fearing an uncertain future	124	33.7	.019
Economic struggles	29	7.9	.000
Limited info. on services and rights	73	19.8	.022
Loneliness (sometimes to always)	283	76.9	.002
Difficulty asking for help	233	63.3	.030
Difficulty paying rent	109	29.6	.002
Difficulty paying for transportation	85	23.1	.030
Lack of health coverage	114	31	.000

## DISCUSSION/CONCLUSION

High prevalence of PPD (58.4%) and associated risk factors indicate a need for:

- Routine screening for PPD among refugee and internally displaced women
- Recognition of the impact of past trauma, multiple displacements, years in exile, alienation, uncertainty, and abuse on PPD
- Awareness-raising about PPD, including symptoms, risk factors and available services to encourage help-seeking behaviors
- Resilience-building interventions, with a focus on developing coping skills and self-care strategies
- Training of health providers to communicate effectively and address health literacy barriers including the need for help in reading and understanding medical instructions
- A link to a regular health provider to foster trust and continuity of care
- Mitigation of housing insecurity through rental assistance



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