Humanistic Burden of Postpartum Depression in the United States: A Cross-Sectional Analysis

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KEY POINTS

Postpartum Depression significantly impacts the mental health state of women, thereby leading to a deteriorated quality of life.

BACKGROUND

- Post-partum Depression (PPD) is a prevalent yet under-diagnosed and undertreated mental health condition that adversely affects the mothers as well as their newborns [2]
- 1 out of every 8 women experience symptoms of PPD in the United States (US) [3]
- If untreated, this complication can persist for years and lead to depression in partners along with negatively affecting infant development
- There is a paucity of national-level data on the humanistic burden of PPD among women in the US

OBJECTIVES

The study examined the impact associated with PPD on Health-Related Quality of Life (HRQoL) among women with childbirth event in the US

METHODS

Study Design and Data Source

Retrospective cross-sectional study using 2016-2019 Medical Expenditure Panel Survey (MEPS) Household Component

Study Population

Women aged 18-50 years with a childbirth event and no evidence of any prior mental health conditions

Cohort Selection Criteria

- Women with childbirth event (diagnosis of pregnancy or delivery or encounter of postpartum examination (lactating women))
- Women aged 18 to 50 years
- Women with valid Physical Component Summary (PCS) and Mental Component Summary (MCS) scores
- Women who are in the scope of MEPS data between 2016-2019
- Women without evidence of onset of antidepressants usage in the year prior to survey year

Outcome Measures

HRQoL: Assessed using the PCS and MCS scores from the Short-Form 12 Health Survey Version 2 (SF12-v2) or Veterans RAND 12 Version (VR-12)

Statistical Analysis

Multivariable linear regression was utilized, adjusting the complex survey design, to assess the humanistic burden of PPD. The covariates used for Inverse Probability of Treatment Weighting (IPTW) were age, race/ethnicity, region, marital status, education, number of priority conditions, survey year, smoking status, poverty, and family size.

RESULTS

- The study sample consisted of 1,873 women (representing 4.8 million patients annually) identified with childbirth event and no prior mental disorder from MEPS data during 2016-2019
- Approximately 11% of the women had PPD in the study sample, representing 550,268 women annually

Figure 1: Sample Selection

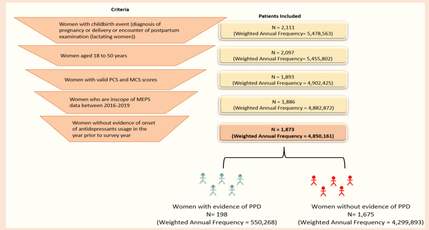
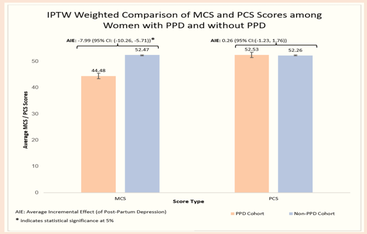


Figure 2: : IPTW Weighted Comparison of MCS and PCS scores among Women with PPD and without PPD



- Most of the women with PPD were non-Hispanic whites, married, without bachelor's degree, with high income, and non-smokers
- The IPTW adjusted regression indicated that, on average, women with PPD had approximately 8 points lower MCS scores as compared to women without PPD

LIMITATIONS

- The algorithm used to identify women with PPD relies on diagnosis codes and medications used to treat PPD, which may be prone to under-reporting. Hence, the results of this analysis may underestimate the actual burden of PPD
- The study includes prevalent non-institutionalized women with PPD who responded to the survey during the measurement year, which may be a threat to external validity
- MEPS is survey data, which comes with inherent biases such as missing data, and recall bias

CONCLUSIONS

- Women with PPD experience a significantly lower quality of life, primarily driven by their poor mental health state when compared to their counterparts
- PPD is majorly managed using a combination of therapies and medications along with antidepressants
- Effective treatment approaches for PPD may aid in improving the quality of life of mothers and, subsequently the care provided to the newborns

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Table 1: IPTW-adjusted Cohort Characteristics

Categories	Weighted Annual N= 550,268 (PPD cohort)	Weighted Annual N =4,299,893 (Non-PPD cohort)	Standardized Difference in Percent
Age, Mean (SD)	29.59 (5.15)	29.55 (5.52)	0.008
Family Size, Mean (SD)	3.54 (1.32)	3.48 (1.54)	0.052
Number of Priority Conditions, Mean (SD)	0.98 (1.21)	0.95 (1.53)	0.034
Bachelor's Degree, %			
Yes	47.5%	46.0%	3.11
No	52.5%	54.0%	-3.11
Marital Status, %			
Married	61.9%	61.2%	1.49
Widowed	0.6%	1.0%	-3.86
Divorced	4.0%	4.6%	-2.92
Separated	0.8%	1.2%	-4.69
Never Married	32.7%	32.0%	1.42
Region, %			
Northeast	21.6%	20.4%	2.90
Midwest	26.0%	25.8%	0.48
South	30.5%	30.9%	-0.89
West	21.9%	22.9%	-2.35
Smoker, %			
Yes	17.2%	20.6%	-8.74
No	82.8%	79.4%	8.74
Poverty Status, %			
Near Poor	22.9%	25.0%	-5.08
Poor	7.3%	6.1%	4.91
Low Income	11.5%	8.4%	10.48
Middle Income	20.6%	22.4%	-4.45
High Income	37.7%	38.1%	-0.75
Race, %			
Hispanic	16.4%	15.8%	1.82
Non-Hispanic white only	70.8%	71.0%	-0.62
Non-Hispanic black only	8.6%	9.4%	-2.79
Non-Hispanic Asian only	2.7%	2.0%	4.39
Non-Hispanic other or multiple race	1.5%	1.8%	-2.03
Survey Year, %			
2016	38.3%	35.5%	5.67
2017	22.0%	22.3%	-0.81
2018	20.6%	19.4%	3.12
2019	19.1%	22.8%	-8.98

PPD: Post-partum Depression SD: Standard Deviation

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