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Investigating Relationships of Mental Health and Treatment History with Postpartum Depression

Background and Purpose

- Past research on postpartum depression (PPD) demonstrates high prevalence among women and harmful impacts on maternal self-care and the mother-infant dyad (Beck, 1995; Beck, 2001; Moehler et al., 2006; O'Hara et al., 1996; Robertson et al., 2004).
- This study aims to investigate the relationship of mental health disorders with PPD, while also strengthening previous work on its relationship to depression and anxiety. Other aspects that have not been well-defined in the existing literature on this topic will also be examined: relationships of history of two or more mental health disorders and timeframe of diagnosis with PPD, as well as treatment of mental health diagnoses as a possible mitigator for PPD. Understanding these relationships will allow health care practitioners to recognize at-risk women early on, prompting early screening for PPD and implementing preventive measures and treatment in a timely manner.

Participants

- Participants included 299 mothers, ages 20-39, recruited from both a local obstetric clinic and postpartum and motherhood-specific Facebook groups who met study criterion. Eligible mothers were United States residents, between 2-12 weeks postpartum, English proficient, at least 18 years of age, and had a living baby resulting from the most recent childbirth. The majority of the sample were White/Caucasian (63.9%), born in the United States (94.0%), employed full-time (57.2%), married (90.6%), college educated (68.9%), had received some form of government assistance (54.5%), and had only 1 child (82.9%).

Procedure

- Participants completed an online survey that assessed PPD risk, included the Edinburgh Postpartum Depression Scale (EPDS), demographic items, and specific questions about mental health history and treatment.

Results

Descriptive Statistics for Study Variables

- 216 (72.2%) participants met the PPD cut-off score of 10 on the EPDS. A significant portion of the sample also met criteria for major PPD with 209 (69.9%) scoring a 13 or higher on the 30-point scale.
- 188 (62.9%) participants endorsed a history of mental health disorder(s) at some point in their lifetime. The most common mental health disorders among those with a history were depression (84.0%), anxiety (51.1%), and PTSD (47.9%).

Research Question 1: Depression, anxiety and PTSD to PPD risk

- A series of t-tests revealed that women who endorsed a diagnosis of depression, anxiety, or PTSD at any point in their lifetime exhibited significantly higher mean EPDS scores when compared to women who did not endorse these diagnoses (shown in Table 1).

Results (cont.)

Variable	History EPDS M (SD)	No history EPDS M (SD)	t	df	p	η_p^2
Depression	17.31 (4.28)	9.76 (4.75)	-14.324	276	< .001	.41
Anxiety disorder	15.49 (5.09)	13.06 (6.05)	-3.633	221	< .001	.04
PTSD	16.70 (3.92)	12.60 (6.14)	-6.932	257	< .001	.10

Table 1. T-tests, History of Mental Health Diagnosis on EPDS Total Scores

- A series of linear regression analysis showed that women who endorsed a diagnosis of depression, anxiety, or PTSD at any point in their lifetime were significantly more likely to screen positive for PPD. The odds of meeting the PPD cutoff if diagnosed with the disorder was greatest for anxiety (shown in Table 2).

Variable	B	SE	Wald	p	Exp(B)	95% CI
Depression	-2.994	.383	60.972	< .001	.050	[.024, .106]
Anxiety disorder	-1.124	.325	11.967	.001	.325	[.172, .614]
PTSD	-2.589	.531	23.782	< .001	.075	[.027, .213]

Table 2. Logistic regressions, History of Mental Health Diagnosis on EPDS Cut-off Scores

Research Question 2: Multiple types of mental health disorders

- Pearson correlations and logistic regression analyses were found to be nonsignificant when comparing a history of multiple types of mental health disorders to EPDS scores and overall PPD risk.

Research Question 3: Timeframe

- T-tests, ANOVA, and logistic regression analyses were conducted to understand the impact of timeframe of mental health diagnosis on PPD risk.
- T-test analyses showed that women who endorsed a diagnosis of any disorder during childhood exhibited significantly higher mean EPDS scores (shown in Table 3).
- ANOVA post hoc analyses revealed that diagnoses in childhood only predicted the highest overall mean EPDS scores within the sample when compared to other timeframes ($p<.001$).
- Logistic regression analyses revealed that women who endorsed childhood diagnoses were about five times more likely to meet the PPD cut-off than those with an adulthood only diagnosis (shown in Table 4).

Results (cont.)

Variable	History EPDS M (SD)	No history EPDS M (SD)	t	df	p	η_p^2
Childhood diagnosis only	18.26 (3.26)	15.20 (4.93)	-5.075	173	<.001	
Adulthood diagnosis only	13.89 (4.63)	17.77 (3.92)	5.456	87	<.001	
Childhood and adulthood diagnosis	16.80 (4.86)	16.58 (4.38)	-.285	186	.776	

Table 3. T-tests, Timeframe of Diagnoses on EPDS Total Scores

Variable	B	SE	Wald	p	Exp(B)	95% CI
Diagnosis variable overall				.066		
Childhood diagnosis only	1.626	.717	5.150	.023	5.09	[1.248, 20.718]
Childhood and adulthood diagnosis	.897	.725	1.530	.216	2.45	[.592, 10.166]

Table 4. Logistic regressions, Timeframe of Diagnosis on EPDS Cut-off Scores

Research Question 4: The role of treatment

- T-tests revealed that women who indicated a prior history of mental health disorders and did not receive treatment had significantly higher mean EPDS scores ($M=18.88$, $SD=3.20$) than women who did not receive treatment ($M=15.68$, $SD=4.63$), $t(147)=5.43$, $p=<.001$. Further, women who endorsed a current disorder and did not receive treatment ($M=27.50$, $SD=.71$) exhibited higher mean EPDS scores than those who did receive treatment ($M=15.10$, $SD=7.59$); however, this was not statistically significant, $t(10)=2.22$, p= .051.
- Logistic regressions conducted with both women who endorsed prior or current disorders and receipt of treatment were not significant.

Conclusions

- Study outcomes suggest that close consideration and responsiveness should be given to women who endorse a history of mental health diagnoses (especially, depression, anxiety, and PTSD), experienced diagnosis during childhood, and/or did not receive treatment for diagnoses as these were variables associated with greater PPD risk.
- Future research should attempt to identify other mental health disorders, that were unable to be examined in the present study, to PPD as research on this topic is vital for improvements in how we respond to women's health.

References

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