

Effects of Breastfeeding on Postpartum Depression and Anxiety

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Introduction

- Postpartum depression (PPD) is a serious mental health condition that affects an estimated 13 – 19% of mothers.¹
- PPD is associated with negative consequences on maternal and infant health.¹
- Well-documented risk factors for PPD include depression history and limited social support.¹
- Breastfeeding as a risk factor for PPD remains understudied.
- Recent research has found mixed findings on the relationship between breastfeeding and PPD, in part due to varying operationalization of breastfeeding and depression.²
- Given that depression and anxiety are comorbid, breastfeeding difficulties may be due to both depression and anxiety.³

Purpose

- Evaluate the relationship between breastfeeding and postpartum depressive symptoms and between breastfeeding and postpartum anxiety symptoms.
- We hypothesized that there will be a negative relationship between breastfeeding and depression, and between breastfeeding and anxiety.

Methods

Sample

- 3,336 postpartum women were identified based on their OBGYN clinic visit during the study period (November 1, 2014 to November 1, 2015).
- Eligible participants were:
 - Patients seen in an urban OBGYN setting at 6-weeks postpartum.
 - ≥ 18 years of age.
- Data for 623 (18.7%) participants were randomly selected from electronic medical records.
- Data for 283 (45.4%) had completed a depression measure.

Measures

Retrospective data extracted from Electronic Medical Records (EMRs):

- Demographic data, medical history, initiation of breastfeeding, and depression.

➤ Breastfeeding

❖ Postpartum mothers were separated into two groups:

(1) Breastfeeding Group (n=224):

- Exclusive breastfeeding or combined breastfeeding and formula feeding.

(2) Formula Feeding Group (n=58):

- Exclusive formula feeding or formula feeding due to early cessation of breastfeeding.

- Edinburgh Postnatal Depression Scale (EPDS)⁴: a 10 item self-report measure that asks women to report the extent to which they have experienced specific depressive symptoms within the past seven days on a 4-point Likert-type scale. Higher scores indicate higher severity.

Methods (continued)

Measures (continued)

- EPDS was divided into two subscales to measure depression and anxiety separately: **7-item subscale for depression** and **3-item subscale for anxiety**.⁵

1. I have been able to laugh and see the funny side of things.	*6. Things have been getting on top of me.
2. I have looked forward with enjoyment to things.	*7. I have been so unhappy that I have had difficulty sleeping.
*3. I have blamed myself unnecessarily when things went wrong.	*8. I have felt sad or miserable.
4. I have been anxious or worried for no good reason.	*9. I have been so unhappy that I have been crying.
*5. I have felt scared or panicky for no very good reason.	*10. The thought of harming myself has occurred to me.

*Reverse scored items

Results

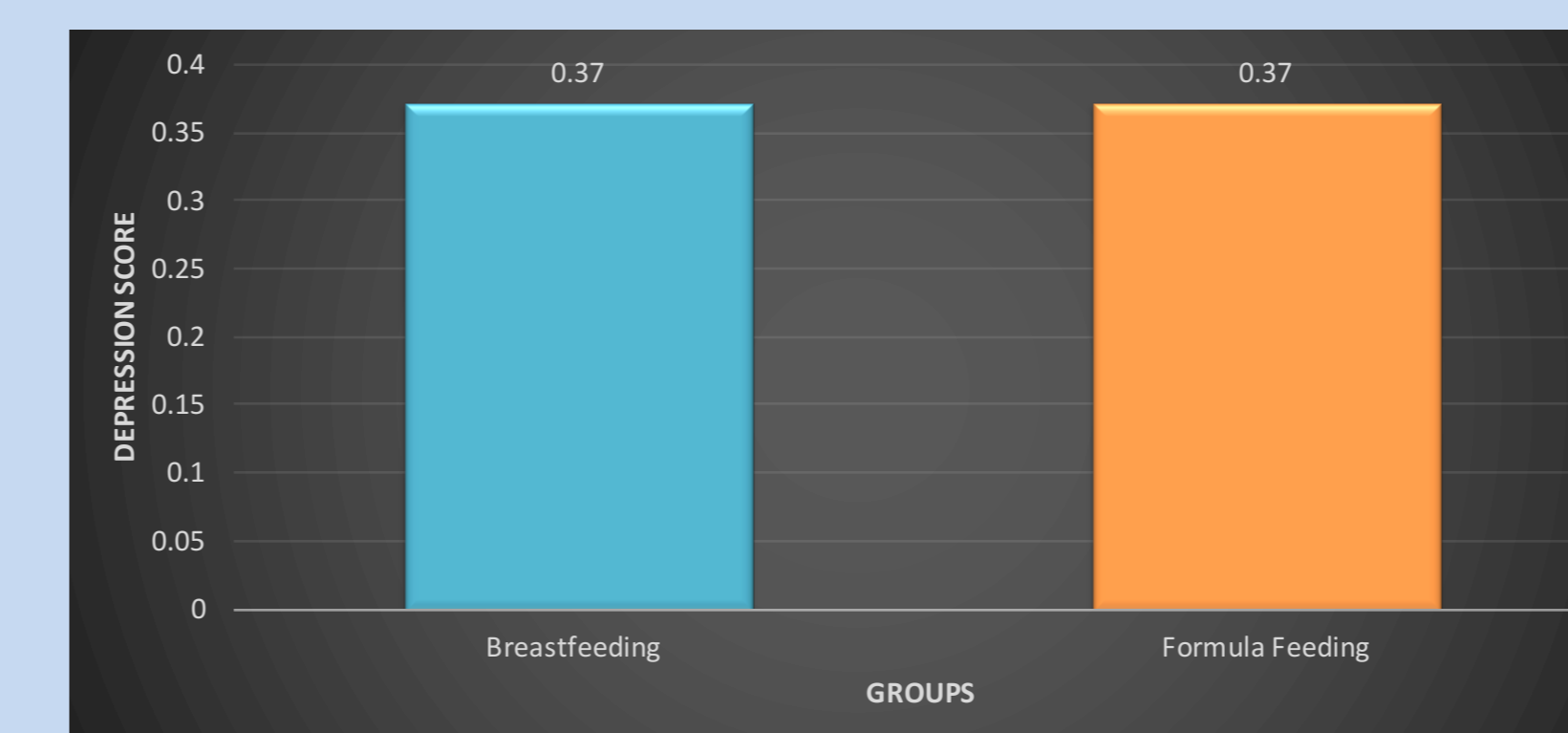
Table 1. Sample demographics

Variable	M (SD)	N (%)
Age (n=281)	31.45(5.85)	
Race (n=272)		
Af. American		132 (46.4)
White		98 (34.6)
Asian		23 (8.5)
Other		19 (10.5)
Marital Status (n=272)		
Married/Committed Relationship		172 (63.2)
Single		98 (36.1)
Separated/Divorced		2 (0.7)
Education (n=233)		
Less than High School		11 (4.7)
High School		50 (21.5)
College or higher		172 (73.8)
Employment Status (n=266)		
Employed		195 (73.7)
Unemployed		28 (10.4)
Student		23 (8.5)
Homemaker		20 (7.4)
First Time Mothers (n=280)		
Yes		108 (38.6)
No		172 (61.4)

Table 2. Descriptive results for breastfeeding groups

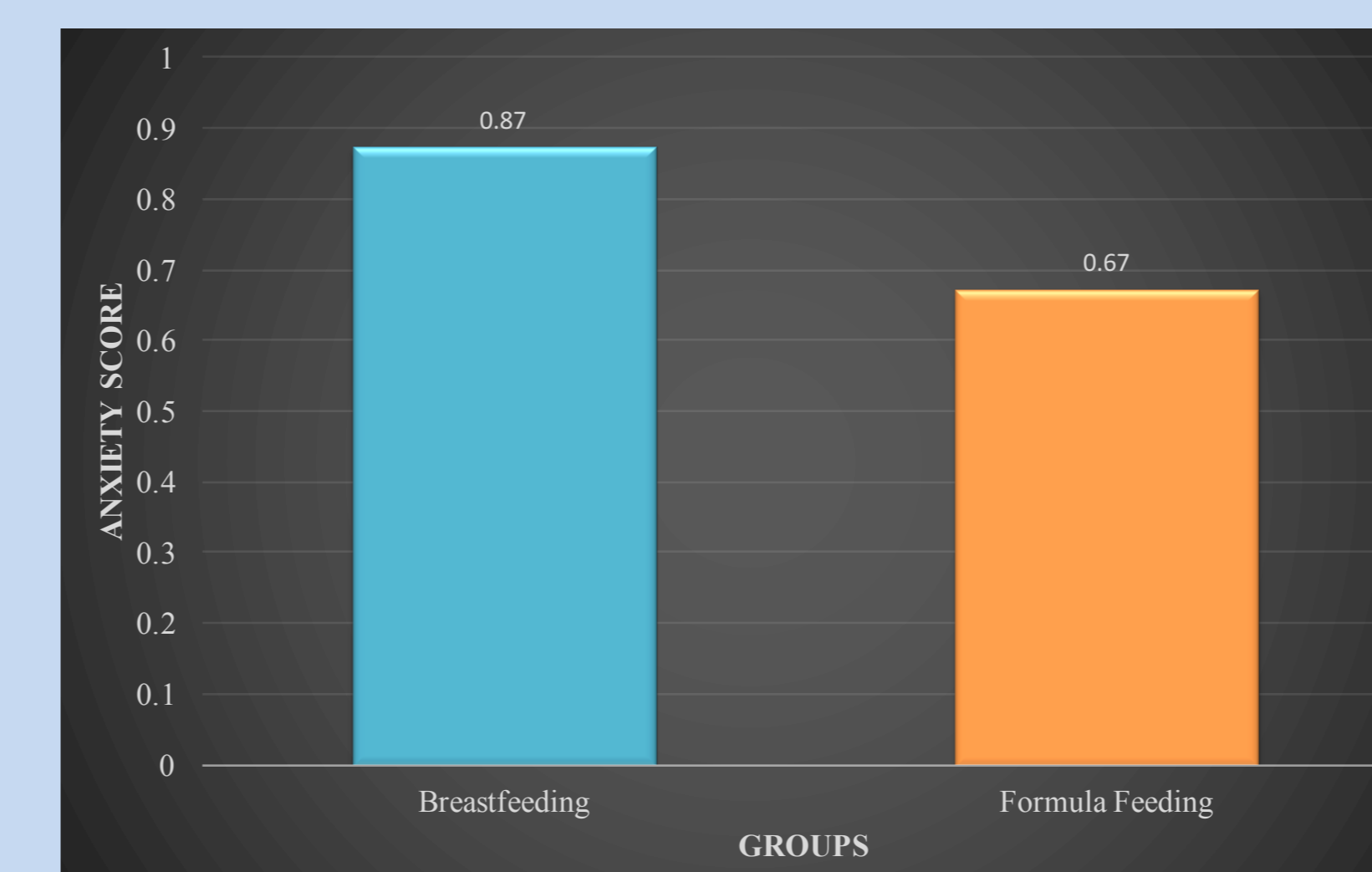
Group	Operationalization	N (%)
Breastfeeding	Exclusive Breastfeeding	152 (53.9)
	Combination Feeding	72 (25.6)
Formula Feeding	Formula Feeding due to cessation/struggled with breastfeeding	8 (2.8)
	Exclusive Formula Feeding	50 (17.7)
Correlation between depression and anxiety subscale	$r = 0.593$	$p = 0.000$

Table 3. Mean Values for Depression Subscale Between Breastfeeding and Formula Feeding Groups



$t = -0.07, p = 0.95$

Table 4. Mean Values for Anxiety Subscale Between Breastfeeding and Formula Feeding Groups



$t = 1.97, p = 0.05$

Discussion

- Consistent with previous research, we found a moderate positive relationship between depression and anxiety.
- Results indicated that there are no significant differences in depression scores between the breastfeeding and formula feeding groups.
- There was a marginally significant difference in the anxiety subscale with the breastfeeding group reporting more anxiety symptoms than the formula feeding group.
- More anxiety in the breastfeeding group may be caused by societal pressures from OBGYN providers and friends to breastfeed their infant.
- Our results suggest the importance of screening for both PPD and anxiety, and encouraging mothers to make decisions about breastfeeding that are best for them to decrease risk for maternal depression and anxiety.

Limitations

- The sample was predominantly well-educated White and African American women. Therefore, results may not be generalizable.
- The sample was overrepresented with more mothers initiating breastfeeding than formula feeding.
- The EPDS is a screening instrument that is used to detect depression and anxiety in mothers, which differs from a clinical diagnostic instrument that is able to establish the presence of mental health conditions.

Future Directions

- Research should be conducted to understand the extent of comorbidity between anxiety and depression in relation to breastfeeding.
- Research should focus on the role of anxiety in PPD to understand why higher anxiety scores in relation to breastfeeding may occur for postpartum mothers who either breastfeed or formula feed their infant.
- Conduct research that operationalizes breastfeeding in different ways.

References

1. O'Hara, M. W., & McCabe, J. E. (2013). Postpartum depression: Current status and future directions. *Annual Review of Clinical Psychology, 9*, 379-407. doi:10.1146/annurev-clinpsy-050212-185612.
2. Dias, C. C., & Figueiredo, B. (2015). Breastfeeding and depression: A systematic review of the literature. *Journal of Affective Disorders, 171*, 142-154. doi:10.1016/j.jad.2014.09.022.
3. Austin, M. P. V., Hadzi-Pavlovic, D., Priest, S. R., Reilly, N., Wilhelm, K., Saint K., Parker, G. (2010). Depressive and anxiety disorders in the postpartum period: How prevalent are they and can we improve their detection? *Archives of Women's Mental Health, 13*(5), 395-401. doi:10.1007/s00737-010-0153-7.
4. Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. *The British Journal of Psychiatry, 150*, 782-786. doi:10.1192/bjp.150.6.782.
5. Kabir, K., Sheeder, J., & Kelly, L. S. (2008). Identifying postpartum depression: Are 3 questions as good as 10? *Pediatrics, 122*(3), 696-702. doi:10.1542/peds.2007-1759