

Exclusive Breastfeeding Rates at 6 Weeks Postpartum as a Function of Preconception Body Mass Index Are Not Impacted by Postpartum Obstetrical Practices or Routines

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Abstract

Objective: Women with overweight/obesity have significantly lower rates of exclusive breastfeeding (EBF) at 6 weeks postpartum compared with women of normal weight. We sought to determine whether differences in Baby-Friendly Hospital Initiative (BFHI) adherence, obstetric practices, or social support explain these weight-related EBF disparities.

Methods: One hundred forty-two healthy women who intended EBF (61 normal weight, 50 overweight, and 31 obese by preconception body mass index [BMI]) were enrolled in a cross-sectional study. Obstetric data were collected and participants completed modified Infant Feeding Practices Study II surveys at 6 weeks postpartum.

Results: Women with obesity were significantly less likely to undergo spontaneous labor and more likely to receive synthetic oxytocin and epidural anesthesia compared with women with overweight or normal weight. Women who were overweight were less likely to report extended family support for breastfeeding compared with women with obesity or normal weight; however, BFHI components and composite BFHI score did not differ by maternal BMI. Furthermore, regardless of BMI, women with greater adherence to BFHI practices were more likely to be EBF at 6 weeks postpartum (p -value <0.001). Nonetheless, at 6 weeks postpartum, women with obesity were expressing milk more frequently and less likely to have met their own breastfeeding goals compared with women with overweight and normal weight.

Conclusions: Differences in EBF rates by BMI were not explained by BFHI adherence or obstetric practices. These data suggest physiological differences, rather than intrapartum practices and support services, may explain differences in EBF rates by maternal overweight/obesity.

Keywords: breastfeeding, obesity, Baby-Friendly, social support, obstetric practices, attitude toward breastfeeding

Introduction:

EXCLUSIVE BREASTFEEDING (EBF) is recommended for optimal infant nutrition, and is associated with numerous maternal and infant health benefits, including lower rates of obesity, type 2 diabetes, and cardiovascular disease.¹ To support establishment of breastfeeding, the Baby-Friendly Hospital Initiative (BFHI) has identified 10 steps to optimize successful breastfeeding. Revised in 2018, these recommen-

dations include immediate skin-to-skin contact, initiation of breastfeeding as soon as possible after birth, support for new mothers during initiation and maintenance of breastfeeding, rooming-in of the newborn with the mother rather than in a nursery, helping mothers to recognize infant feeding cues, and counseling on the recommended use of bottles/teats/pacifiers (dummies).² Adherence to these steps leads to higher rates of EBF and longer duration of any breastfeeding.³ Health facilities that demonstrate evidence-based maternity practices

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and policies such as the BFHI have been shown to improve breastfeeding outcomes.⁴ In addition, other studies have suggested the importance of support for breastfeeding by providers, partners, and family members.⁵ In contrast, there are several recognized barriers to EBF, including delayed lactogenesis and insufficient milk production, which may be influenced by obstetric complications and maternal factors, including age, obesity, gestational diabetes, pre-eclampsia, cesarean delivery, and separation of mothers and infants after birth.⁶ Women with obesity have higher rates of obstetric intervention, including cesarean delivery and induction of labor.^{7,8} There has been limited attention to the impact of obstetric practices on EBF, aside from inconsistent reports on the relationship between mode of delivery (vaginal versus cesarean) and breastfeeding rates,^{9–11} and, therefore, the impact of obstetric practices on EBF rates by maternal body mass index (BMI) remains unexplored.

Maternal obesity is associated with impaired lactation, including earlier introduction of formula supplementation and earlier breastfeeding cessation.^{12–14} We have reported significant differences in EBF rates by maternal BMI among women intending EBF, with undesired formula introduction starting within the first 2 weeks after delivery.¹⁵ Maternal obesity has previously been associated with decreased exposure to pro-breastfeeding hospital practices according to large retrospective survey data¹⁶ as well as psychosocial characteristics that associate with poor breastfeeding outcomes.¹⁷ Our objective in this study was to determine whether adherence to BFHI practices in the early postpartum period varied by maternal BMI, and whether there are differences in social support, obstetric practices, and breastfeeding behaviors/breast emptying by maternal BMI that may help to explain the BMI-related disparity in EBF rates.

Materials and Methods

Participants

We studied a longitudinal cohort of 190 healthy mother-baby pairs stratified by maternal prepregnancy BMI and enrolled at Oregon Health & Science University from October 2015 to April 2018, as previously described.¹⁵ The OHSU Institutional Review Board approved the study protocol, #IRB00011175, and each participant provided signed informed consent before enrollment. One hundred one women were early enrollers (12–16 weeks gestation) and 89 were late enrollers (>37 weeks gestation); both groups were followed through the first year postpartum (Fig. 1). Five early enrollers withdrew before delivery. Women who lacked lactation survey data were excluded ($n=30$), leaving 155 participants available for analysis (81 early enrollers, 74 late enrollers). One hundred forty-two women intended EBF and were included in the final sample. Women who did not intend EBF were more likely to have obesity, but otherwise were similar to women who intended EBF. Maternal prepregnancy BMI was determined by measured maternal height and self-reported prepregnancy weight, which strongly correlated with first prenatal visit weight ($p<0.0001$, $r^2=0.98$). Maternal BMI was categorized using the World Health Organization (WHO) BMI categories: normal weight (BMI 18.5–24.9 kg/m²) ($n=59$), overweight (25.0–29.9 kg/m²) ($n=50$), and obese (BMI ≥ 30.0 kg/m²) ($n=31$). Two women were

underweight (BMI <18.5 kg/m²) and were included in the normal weight category.

Breastfeeding variables

Exclusive breastfeeding of the infant was defined per the WHO criteria as no other food or drink, not even water, except human milk (including milk expressed or from a donor) for 6 months of life; the WHO criteria allows the infant to receive oral rehydration solution, vitamins, and medicines when necessary.

Obstetric data were collected from review of the electronic medical record. Participants completed modified Infant Feeding Practice Study II surveys¹⁸ online at 6 weeks postpartum to assess adherence to BFHI steps, obstetric factors, social support, and infant feeding intention (human milk, formula, and both). The survey was completed at 6 weeks postpartum as this is when the routine postpartum obstetric visit occurs for most women, and the majority of women have not yet returned to paid employment. Cessation of EBF was determined by self-report of infant age (in weeks) at first use of formula supplementation.

Analysis

The primary outcome was adherence to BFHI practices while admitted to the hospital, as defined by a composite of (1) skin-to-skin contact immediately after birth, (2) initiation of breastfeeding within 60 minutes after birth, (3) breastfeeding on demand, and (4) no pacifier use in the hospital. Two additional BFHI practices were not included in the composite score: rooming-in and assistance with breastfeeding. All women experienced rooming-in, which is the standard of care in our institution as there is no well-baby nursery available. All women who reported requesting assistance with breastfeeding (58.5%, $n=83$) reported receiving assistance (100%, $n=83$), and there was no difference by EBF status or BMI category. Secondary outcomes studied included perceived social support, labor practices, frequency of breast emptying, and attitudes about breastfeeding. Each variable was compared by BMI category.

Descriptive statistics were used to characterize the demographic profile of our cross-sectional sample. In addition to maternal BMI, we described the age, parity, race, gestational age at delivery, mode of delivery, birth weight, prior breastfeeding experience, and return to work timing. We analyzed unadjusted associations between maternal prepregnancy BMI and antepartum and postpartum factors.

Results

Among the 142 women who intended EBF, women who were overweight were slightly but significantly older than women with normal weight or obesity, and women with obesity had the lowest mean gestational weight gain (Table 1). All other demographic variables were matched between participants differing by maternal BMI.

Higher BFHI composite scores were associated with significantly higher rates of EBF at 6 weeks PP compared with lower scores (p -value <0.001) (Supplementary Fig. S1). However, maternal BMI was not significantly associated with BFHI composite score (Fig. 2) or individual BFHI components (Table 2). Similarly, there was no difference by

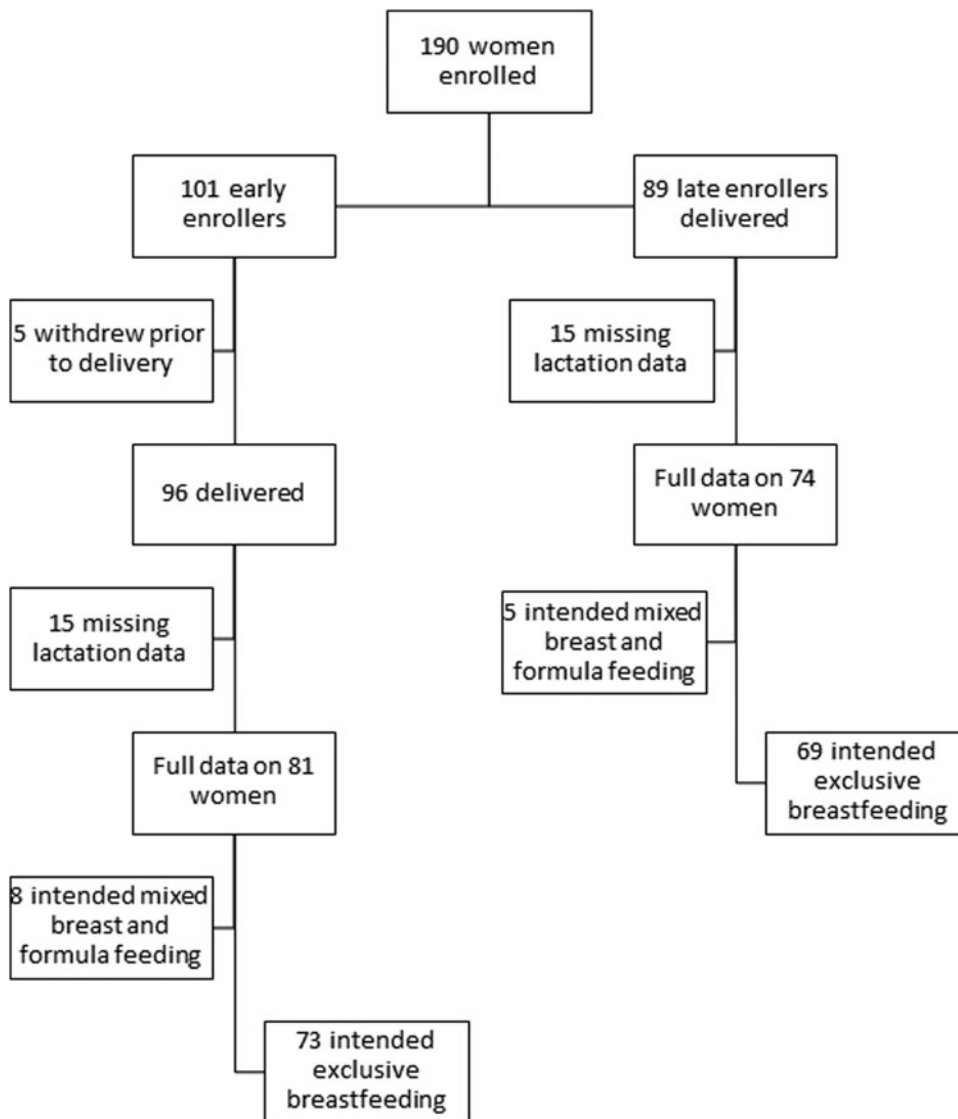


FIG. 1. Study participant flowchart.

maternal BMI on BFHI composite score when stratified by 6-week EBF status (Supplementary Tables S1 and S2).

Women with obesity experienced significantly different obstetric practices compared with women with overweight and normal weight, including lower rates of spontaneous labor ($p=0.018$), higher likelihood of receiving synthetic oxytocin in labor ($p=0.043$), and higher rates of epidural usage ($p=0.03$) (Table 3). There was no difference by maternal BMI on labor support persons at the birth (family, friends, and/or doula) or mode of delivery (Table 3).

Prenatal factors

There were no significant differences by maternal BMI on intended duration of breastfeeding, confidence to reach desired length, lactation class attendance, or prior breastfeeding experience (Table 1). Women with obesity were significantly less likely to have been breastfed themselves compared with women with normal weight and overweight (54.8% versus 83.6% versus 74.0%, $p=0.039$). The partners of women with obesity (BMI not collected) were also less likely to have been breastfed

compared with partners of women with normal weight and overweight (45.2% versus 75.4% versus 66.0%, $p=0.046$).

Social support

When asked about their perception of the attitude of others toward favoring EBF as the best way to feed their infant, there was no difference by maternal BMI on maternal provider, infant provider, partner, or partner's extended family (e.g., in-laws) support for EBF (Table 1). However, maternal BMI was associated with a difference in perceived support for breastfeeding by their own extended family members (e.g., parents, siblings) among women with overweight compared with women with normal weight or obesity (48.0% versus 75.4% versus 64.5%, $p=0.012$). Also, independent of maternal BMI, there was a significant difference in perceived familial support for breastfeeding depending on whether the woman and/or her partner had been breastfed. More than 70% of the families of women who were breastfed as infants supported breastfeeding, compared with only 41.9% of families of women who had not been breastfed as infants (p -value 0.012). Similarly, when a

TABLE 1. DEMOGRAPHICS OF WOMEN INTENDING EXCLUSIVE BREASTFEEDING

	Total (n=142)	Normal weight (n=61)	Overweight (n=50)	Obese (n=31)	p
Maternal age (years) (mean ± SD)	33.3 (4.7)	33.0 (4.5)	34.6 (4.8)	32.0 (4.6)	0.039
Race/ethnicity, ^a n (%)					
White	121 (85.2)	54 (88.5)	41 (82.0)	26 (83.9)	0.61
Black	4 (2.8)	0	3 (6.0)	1 (3.2)	0.16
Hispanic	12 (8.6)	5 (8.3)	4 (8.3)	3 (9.7)	0.87
Asian	7 (4.9)	4 (6.6)	3 (6.0)	0	0.35
American Indian	8 (5.6)	2 (3.3)	3 (6.0)	3 (9.7)	0.45
Pacific Islander	1 (0.7)	1 (1.6)	0	0	0.51
Declined/unknown	5 (3.5)	1 (1.6)	3 (6.0)	1 (3.2)	0.46
Nulliparous, n (%)	82 (58.2)	36 (59.0)	26 (52.0)	20 (66.7)	0.43
Prenatal smoking, n (%)	1 (0.7)	0	0	1 (3.2)	0.09
Gestational Weight Gain (kg) (min–max)	13.0	14.3 (7.7 – 26.0)	13.1 (–3.6 – 29)	10.2 (–5.2 – 28.4)	0.009
GA at delivery (weeks), mean (±SD)	39.4 (1.3)	39.5 (1.4)	39.2 (1.3)	39.7 (1.1)	0.20
Birth weight (kg), mean (±SD)	3.41 (0.43)	3.38 (0.47)	3.41 (0.41)	3.49 (0.39)	0.48
Fetal sex (male), n (%)	67 (47.2)	29 (47.5)	23 (46.0)	15 (48.4)	0.98
Return to work, n (%)	92 (75.4)	48 (81.4)	26 (65.0)	18 (78.3)	0.17
Breastfed as infant	105 (73.9)	51 (83.6)	37 (74.0)	17 (54.8)	0.039
Partner breastfed as infant	93 (65.5)	46 (75.4)	33 (66.0)	14 (45.2)	0.046
Favored breastfeeding					
Maternal provider	123 (86.6)	52 (85.3)	45 (90.0)	26 (83.9)	0.67
Infant provider	122 (85.9)	52 (85.3)	45 (90.0)	25 (80.7)	0.49
Partner preference	119 (85.6)	53 (88.3)	39 (81.3)	27 (87.1)	0.56
Extended family	90 (63.4)	46 (75.4)	24 (48.0)	20 (64.5)	0.012
Partner’s extended family	73 (51.8)	35 (57.4)	23 (46.0)	15 (50.0)	0.48
BF experience (%) (multiparous only)	57 (95.0)	23 (92.0)	24 (100)	10 (90.9)	0.35
Intended BF duration (months), mean (±SD)	14.0 (6.6)	15.2 (4.9) (6–24)	13.6 (8.9) (1–48)	11.9 (4.7) (6–24)	0.09
Confident to reach age (1–5 scale), mean (±SD)	4.03 (0.9)	4.1 (0.8)	4.1 (0.9)	3.8 (1.0)	0.18
Confident (%)	100 (73)	47 (78.3)	36 (75.0)	17 (58.6)	0.14
Lactation class attendance	39 (27.5)	16 (26.2)	11 (22.0)	12 (38.7)	0.25

Bold represents *p*-value <0.05.

^aReported all that apply.

BF, breastfeeding; GA, gestational age; SD, standard deviation.

partner had been breastfed, 59.1% of partner’s families supported breastfeeding compared with 37% of families of partners who had not been breastfed (*p*-value 0.051).

Postpartum breastfeeding practices and attitudes

At 6 weeks postpartum, women with obesity were expressing milk more frequently than women with overweight and normal weight (3.54×daily versus 2.25× versus 1.84×,

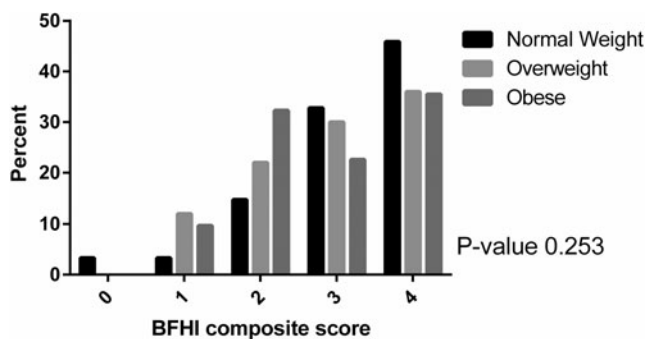


FIG. 2. Adherence to BFHI by maternal body mass index. BFHI, Baby-Friendly Hospital Initiative.

p = 0.012, Table 3). There was no difference by maternal BMI on frequency of breastfeeding sessions, whether currently expressing milk, how expressed milk was used, use of galactagogues, or longest gap between breast emptying. The majority of women felt like their babies were gaining weight well. However, women with overweight and obesity were significantly less likely to report that they enjoyed breastfeeding (liked or liked very much) compared with women with normal weight (64.6% versus 67.9% versus 85.0%, *p* = 0.037). In addition, women with obesity were significantly less likely to be satisfied or very satisfied with their current feeding method compared with women with normal weight and overweight (67.7% versus 91.8% versus 92.0%, *p* = 0.002) and less likely to feel like they had met their own goals for breastfeeding (67.7% versus 90.2% versus 88.0%, *p* = 0.013).

Discussion

In this study, we did not find significant differences in BFHI practices immediately after birth by maternal BMI that would explain discrepancies in EBF rates. We also did not find significant differences in reported social support for breastfeeding by maternal BMI aside from decreased extended family support for EBF among women with

TABLE 2. INDIVIDUAL COMPONENTS OF BABY-FRIENDLY HOSPITAL INITIATIVE BY MATERNAL BODY MASS INDEX AND EXCLUSIVE BREASTFEEDING STATUS

	Total (N=142)		Normal weight (n=61)		Overweight (n=50)		Obese (n=31)		p
	EBF (n=109)	Non-EBF (n=32)	EBF (n=55)	Non-EBF (n=5)	EBF (n=36)	Non-EBF (n=14)	EBF (n=18)	Non-EBF (n=13)	
Skin-to-skin	98 (89.9)	25 (78.1)	51 (92.7)	2 (40.0)	32 (88.9)	12 (85.7)	15 (83.3)	11 (84.6)	0.81
Breastfed in <60 minutes	82 (75.9)	14 (43.8)	43 (79.6)	2 (40.0)	26 (72.2)	7 (50.0)	13 (72.2)	5 (38.5)	0.21
Pacifier in hospital	22 (20.2)	16 (50)	9 (16.4)	2 (40.0)	9 (25.0)	8 (57.1)	4 (22.2)	6 (46.2)	0.46
Feeding on demand	82 (75.2)	18 (56.3)	40 (72.7)	2 (40.0)	26 (72.2)	9 (64.3)	16 (88.9)	7 (53.9)	0.23
Needed help nursing while in hospital ^a	60 (55.6)	23 (71.9)	28 (51.9)	4 (80.0)	22 (61.1)	10 (71.4)	10 (55.6)	9 (69.2)	0.57
Received help in hospital ^a	60 (100)	23 (100)	28 (100)	4 (100)	22 (100)	10 (100)	10 (100)	9 (100)	1.0

n (%).

^aNot included in composite score.

TABLE 3. INTRAPARTUM AND POSTPARTUM PRACTICES

	Total (N=142)	Normal weight (n=61)	Overweight (n=50)	Obese (n=31)	p
Labor support					
Partner/family friends	141 (99.3)	61 (100)	50 (100)	30 (96.8)	0.17
Doula	29 (20.4)	13 (21.3)	12 (24.0)	4 (12.9)	0.47
Spontaneous labor (not induced) ^a	62 (43.7)	35 (57.4)	22 (44.0)	5 (16.1)	0.018
Pain medication in labor					
Epidural	96 (67.6)	37 (60.7)	32 (64.0)	27 (87.1)	0.03
IV narcotics	46 (32.4)	15 (24.6)	17 (34.0)	14 (45.2)	0.13
Nitrous oxide	30 (21.1)	17 (27.9)	6 (12.0)	7 (22.6)	0.12
Unmedicated	32 (22.5)	17 (27.9)	13 (26.0)	2 (6.5)	0.052
Pitocin in labor ^a	79 (59.9)	31 (52.5)	24 (54.6)	24 (82.8)	0.017
Mode of delivery (%)					0.21
Vaginal	103 (72.5)	47 (77.1)	37 (74.0)	19 (61.3)	
Assisted vaginal	1 (0.7)	1 (1.6)	0	0	
Scheduled cesarean	10 (7.0)	2 (3.3)	6 (12.0)	2 (6.5)	
Unscheduled cesarean	28 (19.7)	11 (18.0)	7 (14.0)	10 (32.3)	
Separated from infant	33 (23.2)	13 (21.3)	11 (22.0)	9 (29.0)	0.69
Another woman's milk	28 (19.9)	11 (18.3)	7 (14.0)	10 (32.3)	0.13
Milk bank	17 (13.8)	9 (14.8)	5 (12.5)	5 (20.8)	0.54
Family/friend	4 (3.3)	2 (3.4)	1 (2.5)	1 (4.2)	0.93
Started formula before discharge	8 (5.6)	2 (3.3)	3 (6.0)	3 (9.7)	
6 Weeks postpartum					
Currently breastfeeding	137 (96.5)	60 (98.4)	48 (96.0)	29 (93.6)	0.48
How many times daily, mean (±SD)	9.15 (3.0)	9.6 (2.9)	9.25 (2.5)	8.0 (3.5)	0.06
Currently expressing milk	98 (69.0)	39 (63.9)	36 (72.0)	23 (74.2)	0.51
How many times daily, mean (±SD)	2.39 (2.2)	1.84 (1.8)	2.25 (1.9)	3.54 (3.0)	0.012
How much total milk (oz), mean (±SD)	5.16 (0.98)	5.31 (0.92)	5.09 (0.98)	5.0 (1.07)	0.44
How use expressed milk					
Give to infant now	29 (20.4)	9 (14.8)	10 (20)	10 (32.3)	0.14
Some infant, freeze some	50 (35.2)	24 (39.3)	16 (32.0)	10 (32.3)	0.67
Freeze it all	25 (17.6)	8 (13.1)	11 (22.0)	6 (19.4)	0.45
Give away/donate	6 (4.2)	3 (4.9)	2 (4.0)	1 (3.2)	0.93
Longest stretch without breastfeeding (hours), mean (±SD)	4.35 (1.4)	4.46 (1.6)	4.25 (1.1)	4.28 (1.5)	0.72
Galactagogue use	64 (45.1)	28 (45.9)	24 (48.0)	12 (38.7)	0.71
How well infant gaining weight					0.41
Not gaining enough	4 (2.8)	3 (4.9)	0	1 (3.2)	
Gaining well	136 (95.8)	57 (93.4)	50 (100)	29 (93.6)	
Gaining too much	0	0	0	0	
Not sure	2 (1.4)	1 (1.6)	0	1 (3.2)	
Satisfied with current feeding method	123 (86.6)	56 (91.8)	46 (92.0)	21 (67.7)	0.002
Like breastfeeding	101 (74.3)	51 (85.0)	31 (64.6)	19 (67.9)	0.037
Met goals for breastfeeding	120 (84.5)	55 (90.2)	44 (88.0)	21 (67.7)	0.013

Bold represents p-value <0.05.

n (%).

^aExcludes scheduled cesarean.

overweight, but not obesity. These findings could help to explain why current efforts to address maternal weight-related EBF disparities that have focused primarily on peer support and immediate postpartum practices have met with limited improvement in EBF rates.¹⁹

Our study did find significant differences in intrapartum obstetrical events and practices among women with obesity compared with women with normal weight and overweight, including lower rates of spontaneous labor, increased use of epidural anesthesia, and increased synthetic oxytocin administration. Although differences in these obstetrical events might be anticipated to account for differences in EBF rates, these obstetric differences do not explain the reduced EBF rates in women with overweight. Specifically, intrapartum obstetrical events and experiences were not different between women with normal weight and overweight, yet we have previously reported that women with overweight experienced EBF rates at 6 weeks postpartum similar to women with obesity rather than women with normal weight (69.6% versus 64.0% versus 91.8%, for overweight, obese, and normal weight, respectively, p -value 0.003).¹⁵ This suggests that factors other than intrapartum obstetrical practices may alter EBF ability, or that intrapartum obstetrical factors have an impact that varies by maternal BMI.

Consistent expression of milk on an ongoing basis is required to establish and maintain milk supply, and women seeking lactation assistance are commonly told to increase their frequency of breastfeeding and expressing milk. In this study, we found that women with obesity were emptying their breasts more frequently than women with normal weight and overweight, and this was due to greater frequency of milk expression with similar breastfeeding frequency. This is in agreement with Leonard et al. who used the Infant Feeding Practices II survey and found that at 2 months postpartum, women with obesity were more likely to be expressing milk and report that they did so to maintain adequate milk production.^{20,21} Insufficient milk supply in the early postpartum period has been postulated as one of the drivers in the association between maternal obesity and decreased EBF rates.⁶ One of the commonly cited causes of insufficient milk supply is delayed lactogenesis, as defined by onset of stage II lactogenesis beyond 72 hours postpartum, which has been reported to occur in up to 44% of primiparous women and to be more likely among women with maternal age ≥ 30 years and BMI ≥ 25 .²²

The additional maternal work related to infant feeding as demonstrated by increased milk expression in addition to breastfeeding may contributed to the difference in attitude toward breastfeeding at 6 weeks postpartum by maternal BMI. Women with overweight and obesity were less likely to report that they enjoyed breastfeeding compared with women with normal weight, and women with obesity were less likely to report feeling satisfied with their infant feeding method and to have met their breastfeeding goals compared with women with normal weight and overweight.

Importantly, in our study, women with obesity did not perceive a difference in support for breastfeeding by their health care providers or their infant's providers. Providers own biases can impact breastfeeding counseling, and Garner et al. completed a qualitative study of health care providers who reported increased challenges with providing breastfeeding-related care for women with obesity.²³ Although women reported similar breastfeeding support from providers and partners by maternal BMI, EBF ultimately is entirely dependent on

the individual women's ability (perceived and or physiological) to produce enough milk to meet all of her infant's needs, which requires time and effort.

Other factors that have been postulated to decrease the duration of breastfeeding for women with obesity include concerns about body image and embarrassment about nursing in front of other people,²⁴ although not all studies are in agreement.²⁵ Our findings align with the systematic review by Negin et al. that showed increased rates of breastfeeding and support for breastfeeding by families with breastfeeding experience, specifically grandmothers who breastfed their own children.²⁶ In addition, breastfeeding is associated with decreased rates of childhood obesity,^{27–29} and our observation that women with obesity were less likely to have been breastfed themselves compared with women with normal weight and overweight may lend additional support to the developmental origins of health and disease hypothesis that supports breastfeeding as a tool to decrease obesity.³⁰ The potential transgenerational impact of breastfeeding to mitigate risk of obesity adds additional urgency to understanding the factors that influence EBF ability.

Strengths of this study include survey completion at 6 weeks postpartum to minimize the potential impact of return to paid employment, and limiting the population to women intending EBF to eliminate maternal intention as a confounding variable. This is particularly important when studying the impact of obesity on EBF as prior studies have found no difference by maternal BMI on breastfeeding outcomes after adjusting for confounding variables, including intended breastfeeding duration and self-report of the importance of breastfeeding.³¹ In addition, by focusing on data at 6 weeks postpartum, the majority of women who eventually worked for pay (91/142) had not returned to work (87.9%, including 88.9% of women with obesity and 84.5% of women with overweight), thus decreasing the likelihood of employment barriers as a primary etiology for BMI-related disparities in EBF.

Limitations include the relatively homogenous population with limited racial/ethnic diversity, as our population was 85% white. A prior systematic review found a relationship between higher BMI and lower BF initiation only among certain racial/ethnic groups,²¹ specifically among Hispanic but not African American women,³² and among white women but not African American women.³³ We were unable to evaluate the impact of underweight on EBF due to the small sample ($n = 2$).

Conclusion

Despite similar adherence to BFHI objectives in the immediate postpartum period and similar perceived support for EBF by providers and family members, women with overweight and obesity were significantly less likely to achieve desired EBF at 6 weeks postpartum. This suggests that attention to factors other than BFHI practices and postnatal support may be critical for establishing EBF equity by maternal BMI.

Disclosure Statement

No competing financial interests exist.

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Supplementary Material

Supplementary Figure S1
 Supplementary Table S1
 Supplementary Table S2

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