

10-28-2021

Good for Baby, Good for Mom: The Determinants of Breastfeeding Initiation and Continuation Among Working Women in the Midwest U.S.

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Recommended Citation

Jiang, Q., Hatton-Bowers, H., Tippens, J. A., Hong, S., & Kohel, K. (2021). Good for Baby, Good for Mom: The Determinants of Breastfeeding Initiation and Continuation Among Working Women in the Midwest U.S.. *Journal of Human Sciences and Extension*, 9(3), 4. <https://scholarsjunction.msstate.edu/jhse/vol9/iss3/4>

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Acknowledgments

The authors gratefully acknowledge the families who generously donated their time to participate in this research. Funding for this project was provided by the Nebraska Extension (NE Extension) and College of Education and Human Sciences (CEHS) at the University of Nebraska-Lincoln through its Extension Partnership Grant Program (PI: Soo-Young Hong, PhD; Co-PI: Holly Hatton-Bowers, PhD). Opinions expressed herein are those of the authors and do not reflect the position of the CEHS or NE Extension.

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Various factors support or hinder women's decision to initiate and continue breastfeeding, particularly among working women. Currently, limited literature investigates breastfeeding experiences among working women across time. The purpose of this study was to gain nuanced insight into working women's breastfeeding experiences during the first year of their infant's life. Semi-structured, in-depth interviews were conducted with working women residing in a Midwestern state (N = 25) across two time points (when infants were 3-4 months and 9-12 months). Results showed that twenty-one working women initiated and continued breastfeeding when their infants were 3-4 months old, and 14 women in the sample continued breastfeeding when their infants were 9-12 months old. Five themes emerged regarding barriers and facilitators of breastfeeding initiation and continuation. Individual-level factors included 1) Women's perceptions of breastfeeding as nurturing and pleasurable as well as frustrating and painful and 2) Maternal self-efficacy and beliefs. Setting-level themes included: 3) Active and passive workplace supports, 4) Lactation and breastfeeding supports in the community, and 5) Childcare provider supports. Findings suggest the importance of resources, programming and policy efforts that support the expansion of statewide breastfeeding programs, breastfeeding education for health professionals and childcare providers, lactation rooms, and flexible work scheduling.

Keywords: Breastfeeding, breastfeeding experiences, breastfeeding barriers, breastfeeding facilitators, childcare, qualitative methods

Introduction

Breastfeeding offers abundant benefits for both infants and mothers, and growing evidence highlights its importance when women choose to do so (Centers for Disease Control and Prevention [CDC], 2020). Human milk provides infants with essential nutrients (e.g., calories,

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vitamins, minerals) that promote their healthy growth and optimal development (National Institutes of Health, 2017). Breastfed infants have a lower risk of infection, obesity, diabetes, and sudden infant death syndrome (Binns et al., 2016; Victora et al., 2016). Increased consumption of human milk is associated with increased attachment security in infancy (Gibbs et al., 2018) and increased cognitive development for school-age children (e.g., higher IQ, improved memory, better academic achievement) (Belfort et al., 2016; Victora et al., 2016). For women, breastfeeding reduces the risk of breast cancer and ovarian cancer, helps protect against diabetes, and improves birth spacing (Victora et al., 2016). There are also benefits for supporting the mother-infant relationship. For example, studies find that women who breastfeed reported closer maternal-infant bonds, particularly among mothers who delivered preterm (Ikonen et al., 2015; Kair et al., 2015; Wambach et al., 2016).

The American Academy of Pediatrics (2012) recommends exclusively breastfeeding for the first six months of an infant's life, with continued breastfeeding and appropriate complementary foods for at least one year. Many women who give birth in the U.S. initiate breastfeeding, with 84.1% of infants having ever been breastfed (CDC, 2020). However, breastfeeding rates decline at six months (58.3%), and only one-third of women (35.3%) continue breastfeeding at one year (CDC, 2020). To encourage women to sustain breastfeeding if they desire, it is crucial to understand factors that influence their decision to initiate and maintain breastfeeding.

Rollins et al. (2016) developed a nested conceptual model demonstrating the “components of an enabling environment for breastfeeding” that highlights individual (mother and infant attributes; mother-infant relationship), settings (health systems, workplace, and employment), and structural (structural and market contexts) determinants of breastfeeding (p. 492). At the individual level, breastfeeding practices are associated with the characteristics of the mother, such as maternal age, education, and socioeconomic status (Habibi et al., 2018; Kitano et al., 2016) as well as the infant attributes, such as temperament (Abuhammad et al., 2020). At the settings level, the important role of childcare providers is highlighted in promoting mothers' intention to continue breastfeeding, particularly during the transition to work (Lundquist et al., 2019). Finally, factors at the structural level include social trends, advertising, media, legislation, and policy (Rollins et al., 2016). For instance, guaranteeing breastfeeding breaks and longer paid maternity leave are essential for working women who are breastfeeding (Atabay et al., 2015).

Employment is the most common challenge for women who continue breastfeeding. Women who return to work are more likely to breastfeed for fewer months than women with no or low intention to return to work (Thomas-Jackson et al., 2016). Women who continue breastfeeding while working experience more family-to-work conflict, which is associated with a higher stress level (Spitzmueller et al., 2016). However, when breastfeeding supports (e.g., providing adequate time for expressing human milk) exist in the workplace, women's job satisfaction is improved (Jantzer et al., 2018).

The purpose of this study was to understand Midwestern working women's breastfeeding experiences during the first year of their infants' lives. Previous studies have examined factors at multiple levels that influence working women's decision to breastfeed; however, investigating their breastfeeding experiences across time is limited. Exploring breastfeeding experiences of the same group of working women during the first year of an infant's life contributes to our understanding of factors associated with the decision to initiate and continue breastfeeding. Findings may provide insights on how employers, health professionals, and childcare providers can best support working women who want to initiate and continue breastfeeding.

Methods

Design

The presented qualitative data are from a longitudinal mixed-methods study of women's decision-making related to childcare. The current qualitative study was to glean nuanced understandings of working women's breastfeeding experiences during the first year after their infants were born in a Midwestern state. The university's Institutional Review Board approved the study protocol.

Setting

Participants were recruited from both rural and urban sites in Nebraska at community events and through social media. An urban community is an area that encompasses 50,000 or more people, and a rural community refers to all population, housing, and territory that are not included within an urban area (U.S. Census Bureau, 2019). Nebraska's breastfeeding rates are above the United States national average, with 85.3% ever breastfed, 63.0% breastfed at 6 months, and 41.4% at 12 months (CDC, 2020).

Sample

Women at least 19 years old and in their third trimester of pregnancy were eligible to participate in the research. A total of 46 participants enrolled in the study investigating women's childcare-related decision-making needs. Participants were interviewed once during their third trimester and twice postpartum. The current study includes data from interviews conducted at 3-4 months postpartum (Time 1 [T1]) and at 9-12 months postpartum (Time 2 [T2]). These interviews provide temporal context for women's breastfeeding experiences as their health-related perceptions, expectations, and experiences change over time (Hunt et al., 1989; Young, 1982). Thirty-eight women agreed to participate in interviews at T1, and 29 continued to participate in interviews at T2; the analytic sample consists of 25 women interviewed at both T1 and T2.

Data Collection

Two female researchers and seven doctoral-level research assistants (RAs) conducted semi-structured, in-depth interviews between June 2018 and February 2020. Five interviewers attended a three-hour training on conducting the interviews, and two who joined the team later were guided by those who participated in the training. RAs initially trained were paired with those trained later to ensure consistency throughout the interview process. As a result, all interviewers became familiar with the semi-structured questions and protocols. A qualitative methodologist provided the interview training. Training included content such as establishing informed consent, building rapport with the interviewee (e.g., introducing interviewers, getting comfortable with one another, explaining the purpose of the interview), asking effective questions and relevant follow-up probes (e.g., asking open-ended questions, avoiding leading questions), taking useful fieldnotes, and transitioning to different topics. Interviews were conducted in-person in participants' homes ($n=8$ at T1; $n=22$ at T2) or remotely using Zoom ($n=17$ at T1; $n=3$ at T2). RAs consented participants before data collection. Participants completed an online demographic survey before participating in interviews. The average length of interviews was 30 minutes (range 8-75 minutes) at T1 and 33 minutes (range 15-78 minutes) at T2. Participants received \$30 and \$40, respectively, for completing the T1 and the T2 interviews. Interview questions were developed using the literature on facilitators and barriers to breastfeeding and focused on breastfeeding decision-making and experiences (see Table 1).

Table 1. Interview Questions

Time 1 Interview Questions
Are you breastfeeding your baby?
What situations or factors have influenced your decision?
What is your perception of breastfeeding supports in your community?
If you are breastfeeding, how does your childcare provider (person caring for your child while you work) support breastfeeding?
How does your workplace support breastfeeding?
Time 2 Interview Questions
Have you continued to breastfeed?
If yes:
What situations or factors have influenced your breastfeeding experience? (childcare, workplace, community, etc.)
What challenges, if any, do you experience in breastfeeding your baby now that he/she is older?
What do you enjoy about breastfeeding?
Are there ways that your childcare provider supports you in breastfeeding your baby?
Are there ways that your work supports you in breastfeeding your baby? (e.g., a private place to pump)
If no:
What factors influenced your decision to stop breastfeeding your baby?
Did you research different types of formula when you decided to stop breastfeeding?
What contributed to your decision to choose one over the other types of formula?

Data Analysis

Interviews were transcribed verbatim and coded by A1, A3, and A5 using MAXQDA 2020 (VERBI Software, 2019). Coders employed a matrix analysis approach (Averill, 2002) to identify codes using inductive and deductive analyses and generate themes across transcripts. Matrices provide a visual sheet and facilitate the identification of associations and patterns across time. Coding groups were displayed along the y-axis and included 1) breastfeeding-T1, 2) not breastfeeding-T1, 3) breastfeeding-T2, and 4) not breastfeeding-T2. The first two columns displayed deductive codes: barriers and facilitators to breastfeeding; coders completed the remaining columns with themes that they individually generated. A1, A2, A3, and A5 met regularly to discuss ongoing coding and generate the final themes.

Results

Characteristics of the Sample

Our sample consisted of 25 working women aged 26 to 41 years ($M = 32$). Twenty-one (84%) women were breastfeeding at T1 when their infants were 3-4 months. Fourteen (67%) of these 21 women continued breastfeeding at T2 when their infants were 9-12 months. Two women (8%) had twins. The majority identified as White (96%), married (96%), working full-time (96%), and earning a middle to upper-middle-class household income (\$75,000 and above) (68%). Over half of the women (52%) were highly educated (had a graduate degree; see Table 2). All sociodemographic characteristics were the same across T1 and T2, except for participants' employment status (working full-time: $n = 24$ at T1; $n = 23$ at T2).

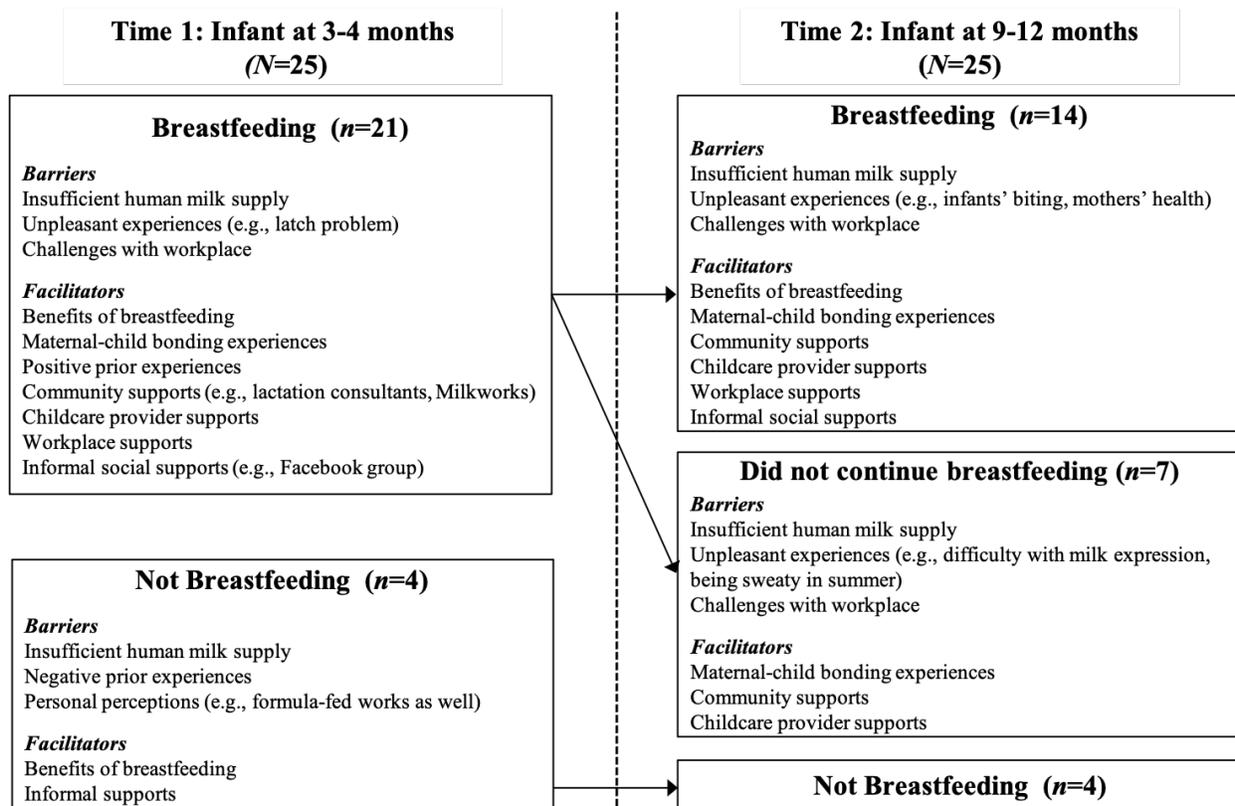
Table 2. Demographic Characteristics of Participants (N=25)

Characteristic	<i>n</i>	%
<i>Race</i>		
White	24	96
Asian	1	4
<i>Age</i>		
25–29	7	28
30–34	9	36
35–41	7	28
Unreported	2	8
<i>Education</i>		
Some college but no degree	2	8
Bachelor's degree	10	40
Graduate degree	13	52
<i>Marital status</i>		
Married	24	96
Not married	1	4
<i>Household income</i>		
\$49,999 and under	2	8
\$50,000–\$74,999	6	24
\$75,000 and above	17	68

Characteristic	<i>n</i>	%
<i>Employment status</i>		
Full-time	24	96
Part-time	1	4
<i>Living community</i>		
Rural	11	44
Urban	14	56
<i>First-time mom</i>		
Yes	7	28
No	18	72
<i>Profession</i>		
Teacher	9	36
[Organization's name] staff	3	12
School psychologist	2	8
Juvenile probation officer	2	8
Executive assistant	1	4
Exercise specialist	1	4
Graduate student	1	4
Lab technician	1	4
Project manager	1	4
Research team member	1	4
Supervisor	1	4
Unreported	2	8

Figure 1 presents several barriers and facilitators to breastfeeding initiation and continuation among working mothers when infants were at 3-4 months and when infants were at 9-12 months. These barriers and facilitators align with individual-level factors and settings-level factors in Rollins et al.'s (2016) conceptual model. For example, unpleasant breastfeeding experiences were individual-level factors, and workplace supports and community supports were settings-level factors. Both levels' factors influence mothers' breastfeeding initiation and continuation. Thus, we generated five themes categorized as individual-level and settings-level breastfeeding barriers and facilitators using Rollins et al.'s (2016) conceptual model. Individual-level themes included: 1) Women's perceptions of breastfeeding as nurturing and pleasurable as well as frustrating and painful, and 2) Maternal self-efficacy and beliefs. Settings-level themes included: 3) Active and passive workplace supports, 4) Lactation and breastfeeding supports in the community, and 5) Childcare provider supports.

Figure 1. Barriers and Facilitators to Breastfeeding Across Time Among Working Mothers



Individual-Level Breastfeeding Barriers and Facilitators

“Good for Baby, Good for Mom”: Women’s Perceptions of Breastfeeding as Nurturing and Pleasurable as well as Frustrating and Painful

Most participants described breastfeeding as having two core benefits: 1) enhancing the long-term health of the infant (and occasionally the mother) and 2) strengthening the mother-child bond. One woman noted how breastfeeding was beneficial for both the infant and the mother. This quote is illustrative of the first core benefit that many women described:

I’m giving her good nutrition and protecting her. ... I just want to keep her healthier. So, I think just knowing that it’s giving her antibodies and all of this stuff that’s just protecting her makes me feel good. ... It’s good for me too. It helps my body recuperate. (36-year-old, urban, full-time, not first-time mother, T2, breastfeeding)

Another participant described the joy of bonding with her infant through breastfeeding, which illustrates the second core benefit:

[I enjoy] the snuggles. Like, I’m the only one who can do that. ... I’ve been totally guilty of times I have nursed her and then just kept her under the cover. [I tell people], “She’s

still eating,” and she’ll be asleep and not eating at all, but I don’t want to give her up yet. [I like] the snuggles and enjoying that bond and enjoying the nutrition that you know that they’re getting. (33-year-old, rural, full-time, not first-time mother, T2, breastfeeding)

On the other hand, breastfeeding was a frustrating or painful experience for some women. Insufficient milk supply was a common reason for not breastfeeding exclusively or stopping breastfeeding entirely. One participant stated,

I chose to stop because I just wasn’t producing enough. He had fallen off the growth chart, like he was in the zero percentile. As a mother, I just felt horrible like that. (28-year-old, urban, part-time, first-time mother, T2, not breastfeeding)

A small number of women described breastfeeding as a painful experience related to biting or infection. Three women said thrush made the process of breastfeeding painful. As one described, “[baby] has gotten thrush a couple of times, which is painful for her ... and then it gets in your nipple, which is awful.” One woman who stopped breastfeeding before the Time 1 interview shared a general sense of unpleasantness around breastfeeding:

I don’t personally feel connected to the idea, and I just thought [breastfeeding] seemed very stressful and painful. I don’t have like that instinct for breastfeeding. So, formula feeding really worked for us because we had so many people helping with him; we had our parents in the home, and my husband was able to help. (age: unreported, urban, full-time, not first-time mother, T1, not breastfeeding)

“I [Used to] Freak Out So Much”: Maternal Self-Efficacy and Beliefs

Women who had prior children ($n = 18$) frequently compared their current breastfeeding experiences to previous experiences. Many women described how they felt more anxious about breastfeeding the first time and now felt a greater sense of comfort with the process:

Like just with my first one, I freaked out so much about wanting [infant] to have only milk, and then he wasn’t even a latch-er. So, then I had to pump, wake up all night, and pump. ... Like this time around [with second infant], that is just not worth it. I’ll give her [second infant] formula if I have to. I’m not gonna waste my energy and not sleep and stuff. (29-year-old, rural, full-time, not first-time mother, T1, breastfeeding)

I would say that it was a lot smoother, meaning my second time around, I feel that I was a lot more knowledgeable and able to, um, kind of know what to do and know how they’re supposed to be latched so that we don’t have issues. I feel like I didn’t need as much help and so I didn’t second guess myself. So, I just felt more confident, and it was really nice. (30-year-old, urban, full-time, not first-time mother, T2, breastfeeding)

Some of the women noted using formula. Reasons for using formula ranged from following previous formula-fed experiences to needing to supplement with formula due to insufficient milk supply. One participant described her belief that using formula was just as good as breastfeeding and made the same decision to use formula with her second child:

We made the decision to formula feed our first child, and so we made the same decision again. Formula feeding really worked out for us. It just worked better for our life, and we just feel like that's the best decision to make for this new baby because we haven't noticed that our son is delayed, or you know, any different from a breastfed baby. So, we just decided to go with that again. (age: unreported, urban, full-time, not first-time mother, T1, not breastfeeding)

Settings-Level Breastfeeding Barriers and Facilitators

***“The Only Place to Pump is a Bathroom”:* Active and Passive Workplace Supports**

The workplace emerged as a space that influenced women's decisions to continue or stop breastfeeding. Women described workplaces as providing both passive and active breastfeeding supports. Passive breastfeeding support was primarily mentioned by women who held jobs with private offices or could work remotely. Most women who were still breastfeeding at the time of the second interview noted the importance of a close, convenient, and private space at work as essential to continuing breastfeeding. Women who had their own offices described an increased sense of privacy and flexibility to breast pump during working hours:

I think it really helped that I happen to have a private office. ... I just feel like people understood; when it came to like scheduling meetings and stuff or if like my door was closed, people knew I was probably pumping and weren't like knocking on it or trying to come inside. (41-year-old, urban, full-time, not first-time mother, T2, breastfeeding)

However, those who did not have private offices or held jobs with regimented schedules (e.g., teachers) tended to rely on active support from their workplaces. For example, a teacher described her gratitude for the support from staff at her school that facilitated her ability to pump and continue breastfeeding in a less than ideal bathroom setting:

[My employer] has been as accommodating as they can. I work for a school district, and it's hard in the building sometimes, because there are not very good places to pump. My office is currently in a portable [classroom] behind a building, and the only place to pump in the portable is a bathroom, which actually is pretty big. So, it works out okay, but I end up taking up the bathroom a couple of times a day. [My coworkers] have never complained. When I had my second child, the bathroom didn't have an outlet, so the custodian put an outlet in that bathroom for me [and] I was able to plug my pump in, so that was really helpful. He was great with that. [In a different building in the school

district], there's a really nice [mothers'] room with a chair and a fridge and everything. I feel like the district is building new buildings and doing things that are taking [breastfeeding] into account and making better accommodations for mothers. (36-year-old, urban, full-time, not first-time mother, T1, breastfeeding)

Finally, several women described receiving support from their supervisors and colleagues. For example, one teacher noted that her principal was a mother of young children and initiated an early conversation about how she could support her. Similarly, her colleagues offered to cover her class so she would have time to pump. Other women discussed how their colleagues would offer to assist with work responsibilities and schedule meetings around pumping times. This was not everyone's experience, however, and one teacher described workplace frustrations that she encountered:

I had to fight my work to actually just let them get me 20 minutes in the morning, so I can go pump. Because I'm a teacher, I can't just like walk out of my classroom. I had like a whole summer [when] I had to fight for my schedule so I could get 20 minutes to pump. ... So, I would say probably not a lot of [workplace] support. (29-year-old, rural, full-time, not first-time mother, T1, breastfeeding)

“I Don't Think I'd Still Be Breastfeeding Without [Milkworks]”: Lactation and Breastfeeding Resources in the Community

Breastfeeding resources in the community were supportive agents for women to initiate and continue breastfeeding. Many participants acknowledged that lactation consultants and local organizations were helpful resources to support their breastfeeding goals. For example, one participant described her experiences with lactation consultants in her community:

The lactation consultants in [city] are amazing. I worked with them very closely with both kids. ... And there's the breastfeeding support group. ... And then also a breastfeeding support group on Facebook if you have questions in the middle of the night. Usually, when that happens, then you're able to post the question, and lactation consultants are a part of the group [to answer questions]. (33-year-old, rural, full-time, not first-time mother, T1, breastfeeding)

Most women perceived a local organization, Milkworks, as a supportive, welcoming, and encouraging community resource. One participant shared her experiences at Milkworks:

Every time I go to Milkworks, it's really awesome, and I don't think I'd still be breastfeeding without [Milkworks]. So, they've been really helpful. ... We went to a class at Milkworks. And I mean, I had wanted to breastfeed anyway. But I think the class really reinforced it, you know, there's some talking about how beneficial it is to the baby and how good it is for the mothers, just all the great things that come with breastfeeding.

So, that really like made me for sure want to do it and want to stick with it. (29-year-old, urban, full-time, first-time mother, T1, breastfeeding)

“We’ll Continue Feeding as Long as You Want”: Childcare Provider Supports

Childcare providers were crucial support for breastfeeding when women returned to work. The majority of participants indicated that childcare providers were passionate about helping with breastfeeding. The following quotes illustrate the support from childcare providers:

[Childcare provider] has been really good. I just take my expressed milk, and she gives it to [infant]. [Childcare providers] have been encouraging of that, and they like will support [breastfeeding] as long as I want to. I feel like they take it seriously. I feel like she’s really informed, and she knows a lot about how to prepare [expressed milk] and keep [expressed milk] safe for [infant] to eat. (28-year-old, urban, part-time, first-time mother, T1, breastfeeding)

I think childcare was great with it. They were open to anything and kind of said whatever I want to do and however I wanna do it ... even as [infant] gets older or continue that setup and kind of said like, “We’ll continue feeding as long as you want,” which is great. (41-year-old, urban, full-time, not first-time mother, T2, breastfeeding)

Some women, however, perceived childcare providers as supporting their breastfeeding goals in a more passive way, as if it was just completing their work responsibilities:

[Childcare providers] are really good about it. I mean, I don’t know if they really supported [breastfeeding]. They’re just good with it. I mean, there’s never been any issues with it so. So, I bring milk to the childcare every day, and they just helped to feed the baby right. When we first brought [infant] there, I gave [infant’s] teacher some instructions of like how to feed her so that she wouldn’t get too dependent on the bottle. You know, it’s like paced feedings so that [childcare provider] would mimic more of like breastfeeding. (29-year-old, urban, full-time, first-time mother, T2, breastfeeding)

Discussion

Our findings extend the existing breastfeeding decision-making literature by investigating Midwestern working women’s breastfeeding experiences at different time points during the first year of an infant’s life. We identified barriers and facilitators to initiation and continuation of breastfeeding from the individual level to the settings level using a conceptual model developed by Rollins et al. (2016). At the individual level, health benefits of breastfeeding were noted by mothers across each time point. Women who had prior children usually conveyed greater confidence in their ability to successfully breastfeed. Common challenges included insufficient

human milk supply, problems with latching, and infection, which contributed to the decision to stop breastfeeding.

At the settings level, workplace supports influenced breastfeeding continuation for working women. Almost one-third of our sample were teachers, and they often did not have a designated space for pumping or enough time to breastfeed or pump due to a rigid schedule. Increasing supports in the workplace could reduce barriers and contribute to success in breastfeeding (Rollins et al., 2016). These supports include private offices or designated lactation rooms. Enhancing workplace support, such as adequate time to breastfeed, increases the likelihood of women initiating and continuing breastfeeding (Jantzer et al., 2018).

The working women in our sample reported support from community health professionals as an important facilitator to initiate and continue breastfeeding. Our findings are similar to those of Alianmoghaddam et al. (2017) that mothers generally acknowledged the support that they received from lactation consultants as enabling breastfeeding initiation and continuation. Lactation consultants and local breastfeeding programs effectively enhance breastfeeding practices through encouragement and recommendations.

Childcare providers may play a critical role in the promotion of continued breastfeeding when mothers return to work. Most women in this study reported receiving support from their childcare providers, while other women perceived childcare providers as simply providing a service to care for their children. Other studies also found that some women did not perceive their childcare provider as a person actively supporting their choice to breastfeed (Dombrowski et al., 2020; Lundquist et al., 2019). Childcare providers can support working women by having a space for mothers to breastfeed in the childcare setting and initiating conversations about breastfeeding goals.

Limitations

Limitations of the study should be addressed. Our sample was not diverse and consisted of White (96%), married (96%), working full-time (96%), well-educated (52% had a graduate degree), and earning a middle to upper-middle household income (68% reported \$75,000 and above). Evidence shows that breastfeeding practices are varied depending on the socioeconomic status (Habibi et al., 2018); thus, future research needs to investigate working women's breastfeeding experiences in other socioeconomic groups. Furthermore, our study did not show much influence of infants' attributes on breastfeeding practices. Future studies may consider infants' attributes (e.g., temperament) when examining breastfeeding initiation and continuation because this is an important factor associated with breastfeeding practices (Abuhammad et al., 2020). Additionally, our study primarily focused on working mothers' decisions about breastfeeding initiation and continuation at the individual and the settings level. Future research may consider addressing how policy on breastfeeding contributes to working mothers' breastfeeding duration, particularly for those who want to breastfeed their infants for a longer period of time. Lack of longer

maternal leave policy or practices that do not guarantee breastfeeding breaks prevents working mothers from choosing a longer breastfeeding duration (Atabay et al., 2015).

Implications for Program, Practice, and Policy

Our study descriptively showed that a higher percentage of working mothers who were breastfeeding their infants at 3-4 months were continuing to breastfeed through 9-12 months. This provides an important implication for local programs that continue to encourage and promote breastfeeding practices while they provide instrumental and emotional supports, particularly for working women who choose to continue breastfeeding. Lactation consultants were trusted formal resources in the community, and local programs, such as Milkworks, should be expanded throughout the state to reach rural-residing caregivers. Furthermore, ongoing breastfeeding education for health professionals (e.g., lactation consultants) is crucial because they provide evidence-based breastfeeding support for women (Blixt et al., 2019; Yang et al., 2018). Our study also highlights the potential importance of fostering partnerships between mothers and childcare providers in achieving mothers' breastfeeding goals (Lundquist et al., 2019); therefore, it is helpful to train childcare providers about breastfeeding knowledge and skills. Notably, the Nutrition and Physical Activity Self-Assessment for Childcare (Go NAP SACC) program delivered by Nebraska Extension was perceived to improve breastfeeding environments and practices in rural and urban family childcare homes (Kohel et al., 2021). This finding suggests that programming, such as Go NAP SACC, can enhance the provision for breastfeeding-friendly environments in childcare settings. At the policy level, extended maternal leave, designated lactation rooms, and flexible scheduling at work (Atabay et al., 2015; Rollins et al., 2016) are recommended.

Conclusions

Findings from this study are significant as they demonstrate barriers and facilitators for working women making decisions to breastfeed during the first year of their infant's lives. Working women's breastfeeding decisions need to be understood from both the individual level and the settings level. Efforts to promote breastfeeding within the individual level should focus on increasing maternal breastfeeding self-efficacy and breastfeeding knowledge. Breastfeeding supports from the workplace, health professionals, and childcare providers in the settings level should be encouraged and continued. Our findings may inform interventions and educational resources to support working women who want to continue breastfeeding when they return to work.

References

- Abuhammad, S., Khraisat, O., Joseph, R., & Al Khawaldeh, A. (2020). Factors that predict infant temperament: A Jordanian study. *Journal of Pediatric Nursing, 51*, e45–e49.
<https://doi.org/10.1016/j.pedn.2019.08.002>

- Alianmoghaddam, N., Phibbs, S., & Benn, C. (2017). Resistance to breastfeeding: A Foucauldian analysis of breastfeeding support from health professionals. *Women and Birth, 30*(6), e281–e291. <https://doi.org/10.1016/j.wombi.2017.05.005>
- American Academy of Pediatrics. (2012). Breastfeeding and the use of human milk. *Pediatrics, 129*(3), e827–e841. <https://doi.org/10.1542/peds.2011-3552>
- Atabay, E., Moreno, G., Nandi, A., Kranz, G., Vincent, I., Assi, T.-M., Vaughan Winfrey, E. M., Earle, A., Raub, A., & Heymann, S. J. (2015). Facilitating working mothers' ability to breastfeed: Global trends in guaranteeing breastfeeding breaks at work, 1995–2014. *Journal of Human Lactation, 31*(1), 81–88. <https://doi.org/10.1177/0890334414554806>
- Averill, J. B. (2002). Matrix analysis as a complementary analytic strategy in qualitative inquiry. *Qualitative Health Research, 12*(6), 855–866. <https://doi.org/10.1177/104973230201200611>
- Belfort, M. B., Anderson, P. J., Nowak, V. A., Lee, K. J., Molesworth, C., Thompson, D. K., Doyle, L. W., & Inder, T. E. (2016). Breast milk feeding, brain development, and neurocognitive outcomes: A 7-year longitudinal study in infants born at less than 30 weeks' gestation. *The Journal of Pediatrics, 177*, 133–139. <https://doi.org/10.1016/j.jpeds.2016.06.045>
- Binns, C., Lee, M., & Low, W. Y. (2016). The long-term public health benefits of breastfeeding. *Asia Pacific Journal of Public Health, 28*(1), 7–14. <https://doi.org/10.1177/1010539515624964>
- Blixt, I., Johansson, M., Hildingsson, I., Papoutsis, Z., & Rubertsson, C. (2019). Women's advice to healthcare professionals regarding breastfeeding: "Offer sensitive individualized breastfeeding support"- an interview study. *International Breastfeeding Journal, 14*(1), Article 51. <https://doi.org/10.1186/s13006-019-0247-4>
- Centers for Disease Control and Prevention [CDC]. (2020). *Breastfeeding report card, 2020*. <https://www.cdc.gov/breastfeeding/pdf/2020-Breastfeeding-Report-Card-H.pdf>
- Dombrowski, L., Henderson, S., Leslie, J., Mohammed, K., Johnson, D., & Allan, N. (2020). The role of early years care providers in supporting continued breastfeeding and breast milk feeding. *Early Years, 40*(2), 205–220. <https://doi.org/10.1080/09575146.2018.1430123>
- Gibbs, B. G., Forste, R., & Lybbert, E. (2018). Breastfeeding, parenting, and infant attachment behaviors. *Maternal and Child Health Journal, 22*(4), 579–588. <https://doi.org/10.1007/s10995-018-2427-z>
- Habibi, M., Laamiri, F. Z., Aguenou, H., Doukkali, L., Mrabet, M., & Barkat, A. (2018). The impact of maternal sociodemographic characteristics on breastfeeding knowledge and practices: An experience from Casablanca, Morocco. *International Journal of Pediatrics and Adolescent Medicine, 5*(2), 39–48. <https://doi.org/10.1016/j.ijpam.2018.01.003>
- Hunt, L. M., Jordan, B., & Irwin, S. (1989). Views of what's wrong: Diagnosis and patients' concepts of illness. *Social Science & Medicine, 28*(9), 945–956. [https://doi.org/10.1016/0277-9536\(89\)90324-9](https://doi.org/10.1016/0277-9536(89)90324-9)

- Ikonen, R., Paavilainen, E., Kaunonen, M., Ikuta, L., & Zukowsky, K. (2015). Preterm infants' mothers' experiences with milk expression and breastfeeding: An integrative review. *Advances in Neonatal Care, 15*(6), 394–406. <https://doi.org/10.1097/ANC.0000000000000232>
- Jantzer, A. M., Anderson, J., & Kuehl, R. A. (2018). Breastfeeding support in the workplace: The relationships among breastfeeding support, work-life balance, and job satisfaction. *Journal of Human Lactation, 34*(2), 379–385. <https://doi.org/10.1177/0890334417707956>
- Kair, L. R., Flaherman, V. J., Newby, K. A., & Colaizy, T. T. (2015). The experience of breastfeeding the late preterm infant: A qualitative study. *Breastfeeding Medicine, 10*(2), 102–106. <https://doi.org/10.1089/bfm.2014.0121>
- Kitano, N., Nomura, K., Kido, M., Murakami, K., Ohkubo, T., Ueno, M., & Sugimoto, M. (2016). Combined effects of maternal age and parity on successful initiation of exclusive breastfeeding. *Preventive Medicine Reports, 3*, 121–126. <https://doi.org/10.1016/j.pmedr.2015.12.010>
- Kohel, K., Hatton-Bowers, H., Williams, N., Dev, D., Behrends, D., Hulse, E., Rida, Z., Dingman, H., Dinkel, D., & Gebhart, L. (2021). Improving breastfeeding environments and feeding practices in family child care homes with the Go NAP SACC Program. *Maternal and Child Health Journal, 25*(1), 510–520. <https://doi.org/10.1007/s10995-020-03075-2>
- Lundquist, A., McBride, B. A., Donovan, S. M., & Kieffer, A. (2019). An exploratory look at the role of childcare providers as a support and resource for breastfeeding mothers. *Breastfeeding Medicine, 14*(5), 313–319. <https://doi.org/10.1089/bfm.2018.0091>
- National Institutes of Health. (2017). *Breastfeeding and breast milk*. <https://www.nichd.nih.gov/health/topics/breastfeeding>
- Rollins, N. C., Bhandari, N., Hajeebhoy, N., Horton, S., Lutter, C. K., Martines, J. C., Piwoz, E. G., Richter, L. M., & Victora, C. G. (2016). Why invest, and what it will take to improve breastfeeding practices? *The Lancet, 387*(10017), 491–504. [https://doi.org/10.1016/S0140-6736\(15\)01044-2](https://doi.org/10.1016/S0140-6736(15)01044-2)
- Spitzmueller, C., Wang, Z., Zhang, J., Thomas, C. L., Fisher, G. G., Matthews, R. A., & Strathearn, L. (2016). Got milk? Workplace factors related to breastfeeding among working mothers. *Journal of Organizational Behavior, 37*(5), 692–718. <https://doi.org/10.1002/job.2061>
- Thomas-Jackson, S. C., Bentley, G. E., Keyton, K., Reifman, A., Boylan, M., & Hart, S. L. (2016). In-hospital breastfeeding and intention to return to work influence mothers' breastfeeding intentions. *Journal of Human Lactation, 32*(4), NP76–NP83. <https://doi.org/10.1177/0890334415597636>
- U.S. Census Bureau. (2019). *2010 census urban and rural classification and urban area criteria*. <https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural/2010-urban-rural.html>

- VERBI Software. (2019). *MAXQDA 2020* [computer software]. <https://www.maxqda.com/>
- Victora, C. G., Bahl, R., Barros, A. J. D., França, G. V. A., Horton, S., Krasevec, J., Murch, S., Sankar, M. J., Walker, N., & Rollins, N. C. (2016). Breastfeeding in the 21st century: Epidemiology, mechanisms, and lifelong effect. *The Lancet*, 387(10017), 475–490. [https://doi.org/10.1016/S0140-6736\(15\)01024-7](https://doi.org/10.1016/S0140-6736(15)01024-7)
- Wambach, K., Domian, E. W., Page-Goertz, S., Wurtz, H., & Hoffman, K. (2016). Exclusive breastfeeding experiences among Mexican American women. *Journal of Human Lactation*, 32(1), 103–111. <https://doi.org/10.1177/0890334415599400>
- Yang, S. F., Salamonson, Y., Burns, E., & Schmied, V. (2018). Breastfeeding knowledge and attitudes of health professional students: A systematic review. *International Breastfeeding Journal*, 13(1), Article 8. <https://doi.org/10.1186/s13006-018-0153-1>
- Young, A. (1982). The anthropologies of illness and sickness. *Annual Review of Anthropology*, 11(1), 257–285. <https://doi.org/10.1146/annurev.an.11.100182.001353>

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Acknowledgments

The authors gratefully acknowledge the families who generously donated their time to participate in this research. Funding for this project was provided by the Nebraska Extension (NE Extension) and College of Education and Human Sciences (CEHS) at the University of Nebraska-Lincoln through its Extension Partnership Grant Program (PI: Soo-Young Hong, PhD; Co-PI: Holly Hatton-Bowers, PhD). Opinions expressed herein are those of the authors and do not reflect the position of the CEHS or NE Extension.