Review Article

Facilitators and Barriers to Breastfeeding in Asian American Women:A Review of Literature

ABSTRACT

This review article summarizes the current literature on facilitators and barriers to breastfeeding in Asian American women and providesfuture research directions. PubMed, EMBASE, CINAHL, Web of Science, and PsycInfo databases were searched for original qualitative or quantitative studies published in English. Reviews and consensus statements were excluded. Findingswere synthesized by configuration and bottom-up approach to thematically formulate findings. A vote-counting method was used to summarize the results across the studies selected.A total of eight studies were selected. The review included 222 Asian women living in the United States.Our review focused on three themes: (i) cultural and traditional practices that influencebreastfeeding; (ii) facilitators to breastfeeding; and(iii) barriers to breastfeeding. This review highlighted several areas in need of further research in Asian American women who have an early cessation of breastfeeding and less access to breastfeeding support services.The differences in cultural beliefs among Asian women who have migrated from different countries indicated no singular belief system. A culturally sensitive and family-centered approach in addressing critical barriers and promoting key facilitators of breastfeeding in Asian American women is needed.

Keywords: Facilitators; barriers; breastfeeding; Asian American

1. INTRODUCTION

Improving the health of women and childrenis a global priority[1]. The World Health Organization recommends that infants be exclusively breastfed for six months and breastfeeding be continued for two years or longer with appropriate supplementary feeding[2,3]. It is nurturing, beneficial, and cost-effective for both mothers and children [4]. For infants, breast milk plays a vital role in developinga mature immune system and appropriate responses to encountered antigens[5,6]. Breastfeeding has been associated with improved cognitive development [7] and a lower risk of childhood obesity [8]. Adults who were breastfed as infants were found to be less likely to develop diabetes (hazard ratio [HR] 0.49; 95% confidence interval [CI] 0.32-0.75)[9]; hypertension (HR 0.71; 95% CI 0.61-0.83); and cardiovascular disease, including ischemic heart disease and stroke (HR 0.73; 95% CI 0.62-0.86), than those who were not[10].Research has shown that women who breastfed their infants for at least four months retained less body weight than women who did not (-8.0 kilograms, 95% CI -4.0 to 2.4)[11]. Women who breastfed at least six to twelve months were less likely to develop hypertension (odds ratio [OR] 0.88; 95% CI 0.74-1.05)[12]. For every additional six months of breastfeeding, women had a lowered risk of type 2 diabetes (HR 0.89; 95% CI 0.68-1.16)[13]. Therefore, encouraging women to breastfeed their offspring is essential.

In the United States (US), breastfeeding rates show marked variation by race and ethnicity [14]. Differences have been observed among non-Hispanic whites, non-Hispanic blacks, Hispanics, and Asian groups[14].Healthy People 2020 aims to ensure that 81.9% of women ever breastfeed their infants[15]. Recent data from the National Immunization Survey showed that breastfeeding initiation rates were 86.6% for non-Hispanic white women, 74.0% for non-Hispanic black women, 82.9% for Hispanic women, and 88.2% for non-Hispanic Asian women[14]. While it is recommended that at least 60.6% of infants be breastfed for six months, the data indicated that 61.5% of non-Hispanic white women, 48.6% of non-Hispanic black women, 51.6% of Hispanic women, and 72.1% of Asian womenbreastfed their infants for six months[14].The breastfeeding rates in Asian women are higher than other racial and ethnic groups; therefore, it is important to identify factors associated with Asians' unique breastfeeding beliefs, attitudes, and practices.

Previous research has revealed multiple factorsrelated to breastfeeding practices in various racial-ethnic groups, including non-Hispanic black[16] and Hispanic women[17]. Among non-Hispanic black women, several unique factors were found to act as impediments to breastfeeding, including traditions that shape infant feeding practices and unsupportive work environments[18-20]. A high sense of self-efficacy, knowledge about breastfeeding, and guidance from lactation consultants or hospital staff were reported to facilitate breastfeeding initiation[21,22]. Acculturation, defined as the transition between two different cultures[23], was found to play an importantrole among Hispanic women. Highly acculturated Hispanic women were less likely to initiate breastfeeding than those with a lower acculturation level[17,24]. Support from husbands has been defined as a facilitator reinforcing Hispanic women's infant breastfeeding decisions[25]. These data illustrate that both facilitators and breastfeeding barriersappear to be culture-specific; however, the research results focused on Asians are not well established.

Among Asian women, several factors are associated with a woman's decision to breastfeed[26-28]. Existing literature reviews that draw on findings from women who live in Asian countries examinethe early initiation of breastfeeding[26], facilitatorsand barriers to breastfeeding[27], and maternal education and breastfeeding practices[28]. The Asian women in these studies frequently recognized the limited availability of information and misconceptions about breastfeeding [26,27]; limited antenatal appointments, lack of support, and little involvement in decision making about breastfeeding initiation[26];maternal employment[27] as the key barriers. In contrast, women who had high breastfeeding self-efficacy believed in breast milk's value and received support from their spouses, and their children's grandparentswere more likely to be successful with breastfeeding[27].

Asian immigrants and refugees may not necessarily have similar experiences as Asian women living in their own countries because those who live outside their countries of origin may have unique concerns and needs when they experience critical transitions to a new culture [29]. Asian immigrantsreported a high level of acculturative stress and family conflict after settlement in a new country[30,31]. A meta-synthesis of the lived experiences of immigrant women indicated that women experiencedepisodes of distrust when accessing

health systems in host countries, encountered conflicts with their traditional beliefs regarding the motherhood role, experienced anxiety about adhering to nutritional recommendations during breastfeeding [32], and suffered postnatal depression due to unmet needs[33]. Previous studies in other countries with large populations of Asian immigrants, such as Australia and Ireland, found that Asian immigrants were less likely to seek support from health care providers due to language barriers, cultural conflicts, and a lack of family support, which limited their confidence in breastfeeding[34-36].

Thus far, although a wide range of factors related to breastfeeding has been well documented in immigrants, information on the experiences of Asianwomen living in the US still has not been synthesized. It is clinically essential to formulate a comprehensive description of breastfeeding practices among Asian women in the US. A better understanding of the facilitators and barriers to breastfeeding among a subgroup of Asian women can lead to further investigations to determine whether observed differences are related to culture-specific postpartum and breastfeeding practices. A description of breastfeeding practices among Asians would provide preliminary data to promote policies and inform evidence-based clinical approaches to increase overall breastfeeding rates across diverse cultures. Therefore, the purpose of this review was to summarize the current literature on facilitators and barriers to breastfeeding in Asian American women and to provide directions for future research.

2. MATERIAL AND METHODS

This review focuses on facilitators and barriers to breastfeeding in Asian American women, with a geographic focus on the US.

2.1 Searches and Data Sources

A comprehensive review of the literature was conducted using a systematic approach. The PubMed, EMBASE, CINAHL, Web of Science, and PsycInfo databases were searched for original qualitative or quantitative studies published in English from January 1, 2008, to May 31, 2020. The search was conducted using the following algorithm: (*factor** OR *barrier** OR *challenge** OR *experience** OR *facilitator**) AND (*breastfeeding* OR *breastfed* OR *breastfeeding intention* OR *breastfeeding decision* OR *lactation* OR *breast milk*) AND (*Asian** OR *Asian American* OR *Asian immigrant* OR *immigrant*). Reference lists were also searched to identify additional studies.A facilitator is defined as a factor that supports, positively predicts, or positively affects breastfeeding. A barrier is defined as a factor that impedes,negatively predicts,or negativelyaffects breastfeeding. The Asian American subgroup refers to women having origins among any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent[37].

2.2 Study Selection

Two reviewers identified studies reporting data onAsian American women's experiences relevant to facilitators and breastfeedingbarriers. The studies were imported into Covidence, and all duplicate citations were removed. All titles and abstracts were screened to identify studies that met the inclusion criteria. The inclusion criteria included 1) publications that reported data that captured the experiences of Asian American women with regard to facilitatorsandbarriers to breastfeeding; 2) published between January 1, 2008, to May 31, 2020; and 3) publications published in English. Reviews and consensus statements were excluded. Unpublished material was not considered.

2.3 Data Extraction

Data extraction forms developed by the researchers were used to extract data, including the study design, research purpose, theoretical framework, Asian American women’s demographics, data collection methods, and findings, from each report in the present study.To facilitate the synthesis ofthe primary qualitative and quantitative study findings, findings were transformed into statements that would allow them to be categorized according to relevant information about the sample characteristics, themes and subthemes, comparative reference points, the magnitude of effects, and the level of significance[38]. One researcher extracted data from each study, and another researcher verified the accuracy of the extraction.Narrative data

extraction was conducted, and the data were then analyzed thematically to identify facilitators and barriers to breastfeeding among Asian American women in the US.

2.4 Data Synthesis

The findings were synthesizedthrough configuration, which entails the arrangement of thematically diverse findings, or a set of conclusions aggregated from each study into a coherent theoretical rendering[39]. Thematically diverse findings may contradict, extend, explain, or modify one another. In this review, synthesis by configuration followed the bottom-up approach as the data were derived from various sets of findings[39].Two researchers met weekly oversix months from May to October 2020 to review the extracted findings, identify which findings wererelevant to the review's purpose, and similar group findings. The vote counting method was used to summarize the findings across the reviewed studies[40]. The major results of this review are derived from Asian American women's breastfeeding experiences.

3. RESULTS

3.1 Study Characteristics

The literature's systematic searchled to identifying1,585 relevant studies across the five databases (Fig. 1).

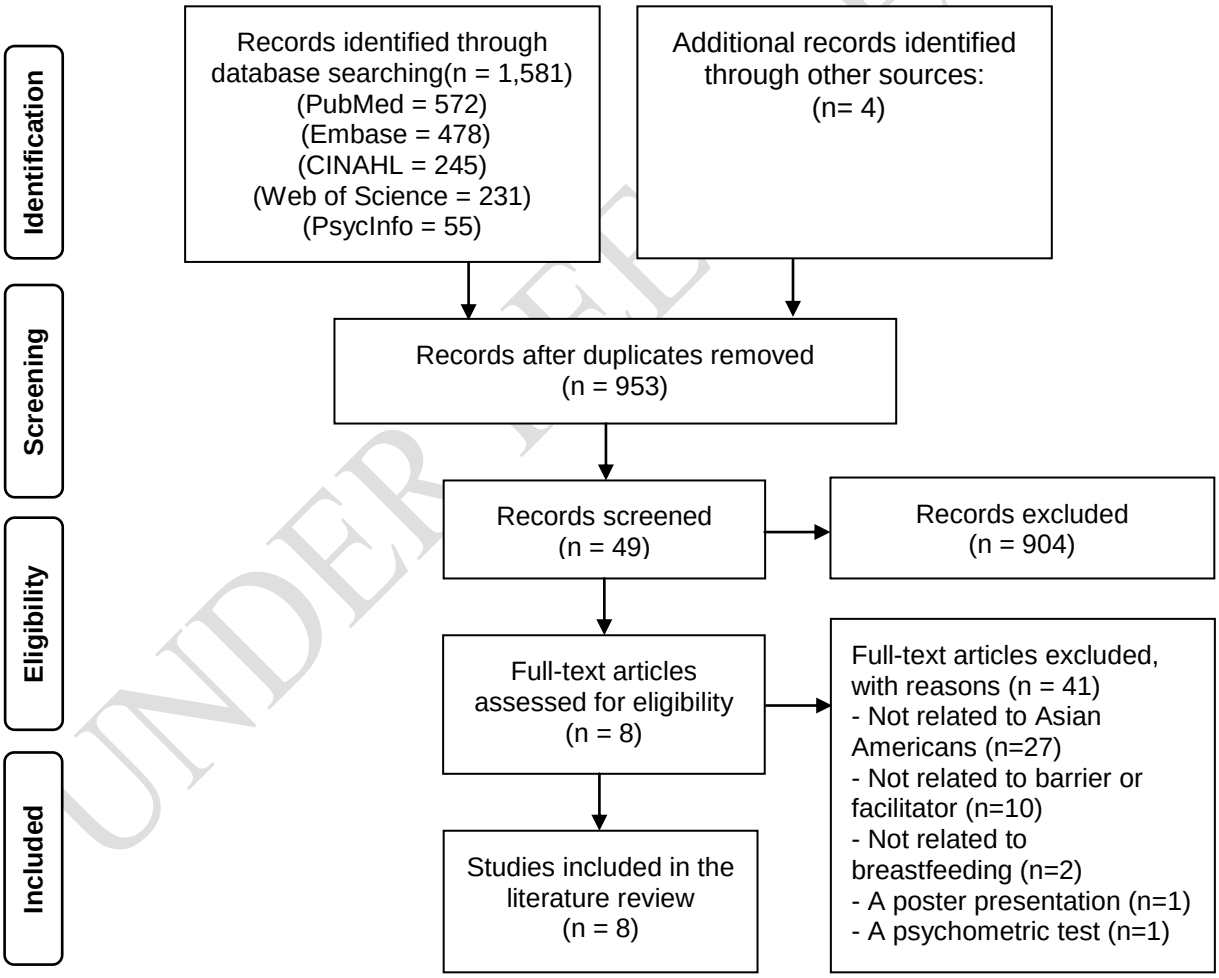

Fig. 1.Search strategy on breastfeeding inAsian American women

In total, 953 studies wereretrieved for abstract screening. A review of the abstracts resulted inexcluding 904 publications that did not meet the inclusion criteria. A total of 49 full-text publications were assessed for eligibility; 41 were excluded because they either were not about Asian American women (n=27), did not report data associated with a facilitator or barrier of breastfeeding (n=10), or did not report data associated with breastfeeding (n=2); one was excluded because it was a psychometric test (n=1), and one was excluded because it was a poster presentation (n=1). A total of eight studies were included in this review[41-48]. These eight studies had qualitative designs (n=6) and quantitative designs (n=2).

3.2 Sample Characteristics

A total of 222 women were enrolled in the eight reviewed studies, which had sample sizes ranging from 9-133 (Table 1)[41-48]. All of the studies included Asian American women in their samples. In five studies, the women had lived in the US for less than five years (27.27%) to more than 21 years (9.09%). In one study, the participants were identified as first-generation immigrants [41]. Complete results are listed in Table 1.

3.3 Main Findings

The eight studies' findings summarized three themes: cultural and traditional practices that influencebreastfeeding, facilitators to breastfeeding, and breastfeeding barriers in Asian American women (Table 2).

3.3.1 Theme one: cultural and traditional practices that influence breastfeeding

Cultural and traditional practices are passed from generation to generation within a community. A synthesis of immigrants or refugees' experiences from Cambodia [44,48], China [42],Korea [41,45], and Vietnam [47] indicated that culture and tradition could serve as either facilitators or barriers to breastfeeding initiation and practicesdepending on women's experiences.

Among Cambodians, postpartum women are expected to follow a diet of "hot" foods, which improves breastmilk production [44]. After providing a culturally acceptable meal plan intervention (e.g., herbal teas, pork stew, white rice, and warm water), Cambodians' breastfeeding initiation rates in the hospital increased from 16.7% to 66.7% within three months of the intervention[44]. Cambodian refugees stated that breastfeeding is a part of Cambodian culture and tradition[48]. They practiced either traditional Cambodian diet to help women make enough breastmilk (*Tnam Sraa*; herbs mixed with either wine or tea), traditional Cambodian rituals (*Spund*; a modified sauna), or both, despite living in the US for more than ten years [48]. Women mentioned that one traditional postpartum practice in Cambodia, called *Ong Klung*, does not allow the baby to be breastfed for hours to days after the birth; however, all women in that study did not follow this tradition [48].

Chinese women value and continue their traditional postpartum practice called *Zuo Yuezi* (*ZYZ*; sitting-the-month). The *ZYZ* emphasizes a mother staying home with her newborn and avoiding outdoor activities [42]. The majority of Chinese American mothers adhered to the *ZYZ* and followed the elders' or grandparents' advice to increase breast milk production. One mother stated: *"I'd like to believe that it had some influence on helping me recover better"* [42].Another woman, whose mother flew from China to the US assisting with postpartum care, considered the *ZYZ* as a tradition rather than an option; she said, *"...especially when you come from traditional Chinese parents, it's not a choice...my mom assumed I was going to do it"* [42]. However, homebound during the 30-day *ZYZ* period exacerbated the emotional stress and sadness [42]. Mothers' emotion affected breast milk production as one woman said, "*breastfeeding depends on the mood. If the mood is good, there will be more breast milk…if your mood is not good, no matter how nourishing the diet is, you won't have breast milk."* In addition, the *ZYZ* has many diet restrictions; the "cold" foods (e.g., anything directly from the refrigerator) were harmful to the mothers' health and reduced breast milk production. Spicy foods and some vegetables and fruits were classified as "cold," included banana, watermelon, bean sprouts, and garlic chives. Some women still had a low breast milk supply after adhering to a traditional diet. One participant said, "*I've had many kinds of soup…maybe because of the problem with my physical condition; still, my milk wasvery little"* [42].

Table 1. Description of eight study characteristics included in the review

Author (Year)/ Setting	Design/ Method	Purpose	Framework	Sample Characteristics						
				Sample Size	Race and ethnicity	Country of origin	Years in the US	Age (years)	Marital status	Employment
Babington et al 2008 [43] Boston	Exploratory, descriptive study: Focus group	To understand the feeding practices, knowledge, and nutritional beliefs of Vietnamese mothers with young children who are recent immigrants to the United States	N/A	10 mothers of children under the age of 5 years	Vietnamese	Vietnam	N/A	Average 35.9 Range 31-44	Married (n=7;70%) Single (n=3;30%)	Employed and worked outside of the home (n=10;100%)
Galvinet al 2008 [44] Massachusetts	Experimental design	To examinewhether a culturallyacceptable menu for new Cambodian mothers would increase breastfeeding initiation in the hospital	N/A	12 women	Cambodian	Cambodia	N/A	N/A	N/A	N/A

Author (Year)/ Setting	Design/ Method	Purpose	Framework	Sample Characteristics						
				Sample Size	Race and ethnicity	Country of origin	Years in the US	Age (years)	Marital status	Employment
Mistry et al2008 [47] California	Cross-sectional study	To examine and document infant-feeding practices among Vietnamese SCCWIC program participants	Theory of planned behavior by Ajzen and Fishbein 1980 [74]	133 women	Vietnamese American	N/A	Average 7.8 SD 5.5	Average 33.3 SD 5.1	Married (n=104; 78.2%) Single (n=15; 11.3%) Living with father but not married (n=13;9.8) Separated/ divorced/ widowed (n=1;0.8%)	Employed (n=50;37.6%) Unemployed (n=82;61.6%)

Author (Year)/ Setting	Design/ Method	Purpose	Framework	Sample Characteristics						
				Sample Size	Race and ethnicity	Country of origin	Years in the US	Age (years)	Marital status	Employment
Straub et al 2008 [48] Cambodian Association of Illinois	Exploratory study: Interviews and questionnaire	To examine Cambodian refugee mothers' infant feeding beliefs, practices, and decision making regarding infant feeding in the U.S. and to explore if a culturally specific breastfeeding program is appropriate for this community	N/A	9 women with a refugee visa	Cambodian	Cambodia	13-18 (n=2; 22.2%) 19 or more (n=7; 77.8%)	Younger than 28 (n=1; 11.1%) 28-32 (n=2; 22.2%) 33-37 (n=2; 22.2%) Older than 38 (n=3; 33.3%) Not response (n=1; 11.1%)	Married (n=7; 77.8%) Divorced (n=1; 11.1%) Single (n=1; 11.1%)	N/A

Author (Year)/ Setting	Design/ Method	Purpose	Framework	Sample Characteristics						
				Sample Size	Race and ethnicity	Country of origin	Years in the US	Age (years)	Marital status	Employment
Lee et al 2015 [42] Two Chinese populated boroughs in New York City	Qualitative design: Interviews	To examine the influence of elders and cultural beliefs on postpartum, infant feeding, and childcare practices	The adapted model of Social Cognitive Theory by Williams et al1999[75]	22 postpartum women	Chinese	China	≥10 years (n=11; 50%) 5–10 (n=3;14%) Less than 5 years (n=6;27%) Not disclosed (n=2;9%)	21-30 (n=11; 50%) 31-40 (n=10; 45%) Not disclosed (n=1;5%)	N/A	Stay-at-home (n=12;55%) Service industry (n=4;18%) Non-service industry (n=6;27%)
Lee et al 2018 [41] New York and New Jersey	Qualitative design: Interviews	To better understand actual breastfeeding initiation,continuation, and discontinuation decisions among Korean immigrant mothers	Theory of planned behavior by Ajzen and Fishbein 1980[74]	13 first generation immigrant mothers	Korean	Korea	Average 13.9 years SD 6.7 Range 2-23	Average 34.4 SD 2.1 Range 30-39	Married (n=13; 100%)	Work full time or part time (n=5;38.5%) Not work (n=8;61.5%)

Author (Year)/ Setting	Design/ Method	Purpose	Framework	Sample Characteristics						
				Sample Size	Race and ethnicity	Country of origin	Years in the US	Age (years)	Marital status	Employment
Han et al2020 [45] USA	A qualitative exploratory design: Interviews and questionnaire	To understand postpartum experiences, perceptions of postpartum depression, and mental health help-seeking among Korean women living in the United States	N/A	11 women	Korean	Korea	≤5 years (n=3; 27.27%) 6–10 years (n=1: 9.09%) 11–15 years (n=3; 27.27%) 16-20 years (n=3; 27.27%) ≥21 years (n=1: 9.09%)	Average 33.5 SD 7.22 Range 22-44	Married (n=11; 100%)	N/A
Kishanrao et al 2020 [46]	A purely qualitative study:	To conclude disparities in breastfeeding rates	N/A	12 women	Asian Indian	N/A	N/A	N/A	N/A	N/A

Author (Year)/ Setting	Design/ Method	Purpose	Framework	Sample Characteristics						
				Sample Size	Race and ethnicity	Country of origin	Years in the US	Age (years)	Marital status	Employment
San Francisco	Interviews and questionnaire	are associated with variations in hospital routines in promoting feeding newborns, independent of the populations they served and the lack of the family influences								

Note: SCCWIC = Santa Clara County Women, Infants, and Children; N/A = Not Applicable; SD = Standard Deviation

Table 2. Qualitative and quantitative results on breastfeeding in Asian American women

Themes	Subthemes	Qualitative Results	Quantitative Results
Cultural and traditional practicesthat influence breastfeeding	N/A	"...especially when you come from traditional Chinese parents, it's not a choice...my mom assumed I was going to do it" [42] "Koreans say to spend at least 21 days doing "Sanhoo-Joeri" and keeping your body warm. I gave birth in the summer, and normally I wouldn't even be allowed to use the air conditioner" [45]	After providing a culturally acceptable meal plan intervention, Cambodians' breastfeeding initiation rates in the hospital increased from 16.7% to 66.7% within 3 months after the intervention [44]
Facilitators to breastfeeding	• Breastfeeding attitude and intention	Positive attitudes result in behavioral intention to initiate breastfeeding [41] "During pregnancy, I came to vaguely form a positive attitude toward breastfeeding, and thought I would breastfeed after delivery" [41]	Feeding intentions during pregnancy predicted feeding method used ($P < .001$) [47] The higher women's intention to breastfeed, the more likely women were to breastfeed in the hospital (Spearman's $\rho = 0.561$, $P < .01$) [47] Women had breastfed, either exclusively or partially, for an average of 4.4 months and 51% of them planned to continue any breastfeeding method for an average of 9.1 months [47]

Themes	Subthemes	Qualitative Results	Quantitative Results
	• Breastfeeding benefits	"Breastfeeding makes the child smarter and healthier. They don't get fat if they arebreastfed" [43] "The improvement was seen by the longer satiety and healthier" [42]	89% of women strongly agreed with the statement that breast milk provides better nutrition than formula [47] 88.9% of women thought that breast milk was healthier for babies than infant formula [48]
	• Support from family and spouse	"My husband really really dislike, hate ginger, but he was so supportive that he even carried the whole bucket of ginger water to the bathroom and it's so steamy that the whole place gets like ginger smell and he never complained" [42]. "If my mother could not have helped me with *San Hu Jo Ri*, I couldn't have done pumping or something like that. So in that case I might have given up [breastfeeding] earlier…. I had such a strong will to breastfeed my first child … so I would have pushed myself hard to do so, but I might have quit in the middle of it, if my mom wasn't there for me" [41]	100% of women received a support from their family during the first month after given birth [48] 55.6% of women were advised from their mothers or relatives to breastfeed as much as she can for the first three months [48]

Themes	Subthemes	Qualitative Results	Quantitative Results
	• Social networking and onlineresources	"When I was pregnant, I had some colleagues or friends who also had been pregnant or had given birth to children already.…One of my close friends in my lab… advised me to breastfeed, saying, "It is really good"[41] I met them [Korean immigrant mothers] through open chat. There is an open chat on KakaoTalk (mobile instant messaging smartphone application, developed in Korea), and I decided to meet up with people who live around me. When I met them in person, we had a lot in common, and I was comforted through that" [45]	51% of mothers received prenatal advice from peer related to formula feeding and breastfeeding [47]
	• Support from health care providers and health care system	The Affordable Care Act that mandates the insurance plans to cover breast pumps, and that US employer's policy of allowing mothers of infants to take breaks to pump at work for up to a year after birth as justification of technical endorsement from national government [46]	50% of women learnedabout breastfeeding from WIC staff and healthcare providers [43] Women who attended a WIC breastfeeding class had higher hospital breastfeeding rates and decreased formula feeding rates (P< .05) [47]
Barriers to breastfeeding	• Misconception about	"I think the nurse brought it, the formula. And they asked me [if] I want to breastfeed and I said yes, she	N/A

Themes	Subthemes	Qualitative Results	Quantitative Results
	breastfeeding	asked if I wanted formula and I said yes...Well, I was thinking that maybe I wasn't producing enough milk... I just didn't know if I had enough" [48] "These days, the quality of formula is really good… Don't be too stressed out about breastfeeding …Formula-fed children also grow well" [41] "Breastfeeding is a way to give children a good start in life, it's just not the only way- We have good options to provide nutrition to infants that are not just breast feeding" [46]	
	• Language barriers	"Because they [English speaking doctors, nurses, and lactation specialists] may use certain terms, or technical terminology and I'm not familiar with breastfeeding yet… I had a sort of fear that I might have difficulty in understanding them. If I were in Korea and there were such services, I would have called and asked for help without any hesitation…" [41] "I was worried about going to the hospital...I think it	N/A

Themes	Subthemes	Qualitative Results	Quantitative Results
		would be nice to have some informationabout the hospital and tell people that they don'thave to be scared about using hospital… Even though I know English, it was challenging to express my pain. . . It is not easy to express detailed signs and symptoms in English" [45]	
	• Employment status	"Hard to breast feed once I returned to work" [43] "She [my mother] say when she has a baby she's breastfeeding for a year or two year. But in the United States I cannot do like her because we work, and we do not have time" [48]	55.6% of women stated that returning to work affected their decision to do partial breastfeeding [48]
	• Breastfeeding challenges	"It is hard to do and not very convenient" [43] "The hardest time was when I had to breastfeed the baby every two hours, and I couldn't sleep when everyone else was sleeping. My husband had to work the next day, so I had to breastfeed and burp the baby on my own" [45] "I especially struggled with breastfeeding. Yes, I think breastfeeding was hard for me to handle" [45]	N/A

Themes	Subthemes	Qualitative Results	Quantitative Results
		" Everything here we have, but I don't have enough milk...When I try to press out, it's not coming out. When I try to pump, it's not coming out, only when the baby suck" [48]	
	• Neonatal health status	A premature baby in the hospital NICU who couldn't breastfeed [46]	N/A
	• Unequal attention to siblings	"First of all, [I had to exclusively formula feed the second child] in order to help my first child get used to having a sibling. If I decided to breastfeed the baby, I would have held the baby all the time. I felt that the first one would feel very jealous when seeing me cuddling the baby….. I thought that breastfeeding the second baby would cause a serious conflict with the first child. Therefore, I was more likely to decide not to breastfeed the second one" [41]	N/A

Note: N/A = Not Available/Not Applicable; NICU = Neonatal Intensive Care Unit; WIC = The Special Supplemental Nutrition Program for Women, Infants, and Children

Korean families emphasize parental responsibilities across generations [41,45]. Korean parents prefer maternal or parental grandmothers as a primary infant care system. Korean grandmothers typically provided childcare for their daughters as part of their responsibilities. One traditional practice in Korea, called *San Hu Jo Ri*, is referred to as postpartum care, where her mother-in-law took care of a mother and a newborn for a minimum of 21 days after childbirth [41,45]. Women shared that their mothers-in-law traveled from Korea to the US tohelp the older grandchildren adjust to a newborn [41]. In Korea, the local and national government offered *San Hu Jo Ri Won* (formal postpartum care facility) and *San Hu Jo Ri Sa* (home visit services by certificated postpartum care specialists) for low-income families who were less likely to afford the privatized care systems [41]. Women requested these services, and full postpartum care,such as was available in Korea [41]. One woman said, "*This [Sanhoo-Joerisa/Sanhoo-Joeriwon] is not a common concept in America . . .It is not easy to have this kind of facility or hire professional caregivers to help*" [45].Some women hired Korean private postpartum care specialists to prepare special foods and support them to continue breastfeeding for a longer duration [41].Korean cultural postpartum beliefs and rituals encouraged women to consume warm seaweed soup (Miyukguk) and avoid eating or drinking cold food after birth [45]. Women should keep the body warm and not go outside for 21 days after given birth to protect their body: "*Koreans say to spend at least 21 days doing "Sanhoo-Joeri" and keeping your body warm. I gave birth in the summer, and normally I wouldn't even be allowed to use the air conditioner"* [45].

In Vietnam, women were encouraged to follow confinement, rest, and a balanced diet of "hot" and "cold" foods consumption for at least one month postpartum [47]. Women in one study agreed that traditional Vietnamese foods improved infants' health and the mothers' body strength [47].

Cultural practices and traditional beliefson breastfeeding varied from country to country. Our review highlighted grandparents' roles and unique food and activity restrictions in postpartum care among Asian immigrant and refugee women living in the US.

3.3.2Theme two: facilitators to breastfeeding

A synthesis of the qualitative and quantitative data provided rich descriptions of Asian American women's breastfeeding experiences. In eight studies[41-48], the participants frequently reported various facilitators to breastfeeding initiation and practices. Breastfeeding attitude and intention, breastfeeding benefits, support from one's family and spouse, social networking and online resources, and support from health care providers and the health care system were identified as subthemes as shown in Table 2.

Facilitators included individual motivation and the essential support provided by others for breastfeeding practices. Women's positive attitudes, shaped by breastfeeding advantages, resulted in behavioral intention to initiate and maintain breastfeeding [41]. A woman's intention to breastfeed during pregnancy has been one of the strongest predictors of breastfeeding [47].A study among Vietnamese American womenfound that feeding intention during pregnancy predicted the feeding method used (P<.001) [47]. The greater women's intention to breastfeed, the more likely they were to breastfeed in the hospital (Spearman's ρ = 0.561, P< .01). The women included in the study had breastfed, either exclusively or partially, for an average of 4.4 months, and 51% of them planned to continue any breastfeeding method for an average of 9.1 months[47]. The main reasons for breastfeeding were mothers' and infants' benefits, such as mother-infant closeness and infants' growth development [42,43,47,48]. For example, a woman expressed that "*breastfeeding makes the child smarter and healthier*"[43].

Support from family members and spouses was the main breastfeeding facilitator mentioned across three studies [41,42,48]. Elders' influence in the extended family has been acknowledged in Chinese culture [42]. Often, grandparents in China visited and stayed for several months in the US to take care of a mother and a newborn [42]. Chinese mothers felt relief and safe having the grandparents as the primary caretaker: *"…she's a part of us, she won't treat her own kindbad…of course, I won't feel safe for others to takecare of the kids…"* [42]. Infant feeding advice and support from their grandparentswere found to be two-sided [42,48]. Afirst-generation Korean immigrant woman in the USdescribed that *"if my mother could not have helped me, I might have given up earlier…. I had such a strong will to breastfeed my first child … so I would have pushed myself hard to do so, but I might have quit in the middle of it if my mom was not there for me"*[41].However, one woman who experienced low breast milk production sought advice from the elder to

use formula as it was the method she fed her children before [42]. Another woman suggested enhancing the elders' learning on breastfeeding benefits to best support breastfeeding: *"keepingthem educated and insisting on doing it"* [42].Another mother described that of all the family members; she valued her husband's opinion the most because her husband was a good listener and helped alleviate stress during the postpartum period [42].One woman shared that "*my husband dislikes ginger, but hewas so supportive that he even carried the wholebucket of ginger water to the bathroom and it's sosteamy that the whole place gets like the ginger smell andhe never complained"* [42].

Social networking and online resources were cited as an essential resource to acquire breastfeeding information. Often, women sought support from their colleagues who had been pregnant[41].Specifically, Korean mothers often trusted other Koreans more than Americans because they had similar cultural perspectives [41]. Immigrant mothers utilized technological platforms such as Skype, texts, and emails to connect with their family members since they lived apart from each other [41]. Some searched for health information related to breastfeeding on online resources such as *NAVER* (South Korean's web searches),blogs, and smartphone messaging applications, which became a critical postpartum social support [41,45].One woman shared that*"…I feel more comfortable with Korean, I search "NAVER."… Among the Korean websites, I don't remember the name, though there is a major blog on pregnancy. Anyone can register and share questions and answers about pregnancy and childbirth in that blog"* [41].

Additionally, women frequently required support and encouragement from health care providers and health services at hospitals [43,47]. For example, Vietnamese mothers learned about breastfeeding from the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) staff and health care providers [43]. Women who attended the WIC breastfeeding class had higher hospital breastfeeding rates and lower formula feeding rates than women who did not participate in the class ($P < .05$) [47].Women also suggested the insurance plans to cover breast pumps, and the employer's policy should allow mothers to take breaks to pump at work for up to a year after birth [46].Therefore, women's breastfeeding attitude and intention, breastfeeding benefits, and support from others helped facilitate breastfeeding practices.

3.3.3Theme three: barriersto breastfeeding

Six of the eight studies mentioned barriers to breastfeeding[41-43,45,46,48]. Women reported misconceptions about breastfeeding, language barriers, employment status, breastfeeding challenges, neonatal health status, and unequal attention to siblings to be the critical barriers to breastfeeding their infants.

The majority of Asian American women repeatedly reported misconceptions about breastfeeding. For example, one woman did not know that breastmilk was nutritionally superior to infant formula. One woman expressed the following view: "*These days, the quality of the formula is really good… Don't be too stressed out about breastfeeding…Formula-fed children also grow well"*[41]. Korean mothers believe that breastfeeding is ideal and had mixed feelingsabout feeding formula to their babies [41].

A commonly cited barrier by women across studies was the difficulty of understanding health information due to language barriers [41,45].AKorean immigrant woman expressed, *"I was worried about going to the hospital... I think it would be nice to have some information about the hospital and tell people that they don't have to be scared about using the hospital…Even though I know English, it was challenging to express my pain...It is not easy to express detailed signs and symptoms in English"*[45].

In four of the eight studies[41-43,46], women cited returning to work as a reason for early weaning from breastfeeding. Among Vietnamese immigrant women, a working mother reported that it was*"hard to breastfeed once I returned to work"*[43].In another study, a woman shared, *"She [my mother] said when she had a baby, she was breastfeeding for a year or two. But in the US, I cannot do like her because we work, and we do not have time"* [48]. Interestingly, a Chinese woman shared that returning to work is the main reason to practice reverse-migration separation [42]. A woman, who has planned to send her child back to China, shared that she used infant formula to avoid formula rejection after separation [42]. In contrast, most Korean mothers considered that breastfeeding was totally up to them as mothers; therefore, they leave their jobs after becoming pregnant or after childbirth [41].

Multiple lifestyle and psychosocial issues among women had an impact on breastfeeding.Sleep disturbance was found to have a negative effect on breastfeeding [45]. In one study, a woman reported that *"the hardest time was when I had to breastfeed the baby every two hours, and I couldn't sleep when everyone else was sleeping. My husband had to work the next day, so I had to breastfeed and burp the baby on my own"*[45].Korean immigrant mothers expressed that exclusive breastfeeding was less necessary when mothers had inadequate breastmilk supply, a mother's physical illness, and pain while breastfeeding her infant [41]. Another participant stated, *"I especially struggled withbreastfeeding. Yes, I think breastfeeding was hard for me to handle"* [45].

In addition to maternal factors, neonatal health status affected how women breastfed their infants. For example,Asian Indian mothers living in the USuse bottle feeding because a premature baby in a neonatal intensive care unit could not be breastfed [46].Furthermore,women frequently recognized unequal attention to siblings as another critical barrier to breastfeeding [41]. Women were concerned about the loss of their relationships with their firstborn children while breastfeeding their babies. For example, one woman said,"*First of all, [I had to exclusively formula feed the second child] to help my first child get used to having a sibling. If I decided to breastfeed the baby, I would have held the baby all the time. I felt that the first one would feel very jealous when seeing me cuddling the baby….. I thought that breastfeeding the second baby would cause a serious conflict with the first child. Therefore, I was more likely to decide not to breastfeed the second one"*[41].Hence, misconceptions about breastfeeding, language barriers, employment status, breastfeeding challenges, neonatal health status, and concern over unequal attention to siblings were significant barriers for Asian American women, which, in turn, impeded their intention to start and continue breastfeeding.

4. DISCUSSION

To our knowledge, this is the first review to describe facilitators and barriers to breastfeeding in Asian American women living in the US. In this review of six qualitative and two quantitative studies, three main themes were identified.

4.1 Cultural and Traditional Practicesthat InfluenceBreastfeeding

This review highlights motherhood issues, postpartum restrictions, and family roles, especially grandparents, as influencing breastfeeding factors.Our finding is comparable to previous studies with other racial and ethnic groups, emphasizing the importance of cultural components in breastfeeding [49-52]. Asian mothers had strong cultural beliefs toward breastfeeding, such as the recommendation of certain foods for enhancing breast milk production.This finding is consistent with previous systematic reviewsamongAfrican immigrant mothers [50]. They consumed certain traditional foods to stimulate breast milk supply [50], such as soaked peanuts, soaked rice, and cassava leaves [51]. In Mexico, women believed that *Atole* (traditional hot drink) promoted breast milk production while cold foods and spicy foods impeded milk supply [52]. Besides, mothers in the reviewed studies are encouraged to avoid outdoor activities for weeks to months. This tradition is congruent with previous studies in Asia [53] and rural Africa [54]. Postpartum women were often fragile and vulnerable to illness; therefore, homebound confinement practices would allow the mother to rest andrecoverbody strength after giving birth [53]. Immigrant women across generations particularly value these food preferences and activity restrictions as a means of retaining ties with their original cultures. Future research may explore how cultural beliefs and related practices affect immigrant women's everyday habits regarding continuing breastfeeding among stay-at-home mothers at home.

Asian women's breastfeeding experiences were closely related to traditional postpartum practice. However, women experienced cultural conflicts with the host country, such as a lack of culturally tailored care, which negatively influence women's motivation and confidence to breastfeed exclusively [55]. Our review was in line with previous studies among African immigrants [50,51] and Hispanic women [25,49], all of which demonstratedthe cultural differencesin postpartum practices after immigration. Our review found a knowledge gap on how acculturation influences breastfeeding in Asian women. Future research may examine the association between Asian women's breastfeeding behaviors and acculturation as immigrantsto the US.

In Asian culture, grandparents' perspectives influenced women's decisions on breastfeeding initiation and motherhood responsibilities. Asian women were less likely to go against their elders' recommendations who perceived breastfeeding as a tradition [56]. Effective interventions for Asian mothers must address the context of the extended familyin parenthood roles. Health care providers may involve family members, especially grandparents, at perinatal visits to discuss beliefs, intentions, and practices regarding breastfeedingand how they can help women minimize challenges and achieve breastfeeding goals.

4.2 Facilitators to Breastfeeding

Overall, the subthemes identified as facilitators were consistent with findings on breastfeeding intention and practicesamong Asian women living outside theircountries of origin and immigrants of other races and ethnicities in the US.Our review found that breastfeeding intention is a key predictor of breastfeeding. This finding aligns with a previous study that reported that infant feeding intention was associated with an increased likelihood of exclusive breastfeeding in Hispanic immigrant women[49].The majority of women believed that breastfeeding provided the best nutrition for infants' growth, supports mother-infant bonding, and improves maternal health. This finding is similar to 36 Chinese immigrant mothers in Australia who believed that breastfeeding provided unique benefits that could not be obtained through formula [34].The evidence from
192 pregnant women in the USindicated that positive feelings about breastfeeding in the first week were associated with good breastfeeding outcomes [57]. Clinicians may inform mothers regarding the positive impact of early breastfeeding initiation after delivery and the breastfeeding frequency. Providing timely mother-centered support within the first week postpartum in the hospital and community to encourage women and increase their satisfaction with early breastfeeding experience is recommended.

A major facilitator to breastfeeding involved support from family membersand friends. This result is comparable to a previous finding on ten African American and ten African-born mothers in the USwhose spouses provided practical support such as feeding and caring for the infant [58]. The support from friends and colleagues included breastfeeding advice and encouragement to breastfeed, which affected women's breastfeeding initiation [59,60]. Since family members and friends are important sources of support for women, clinicians may collaborate with identified important supporters and provide both parties with breastfeeding education and best practices tosuccessfully breastfeed their infants.

The decision to breastfeed is personal, and women need access to information to make the best choice for their infants. A significant source of support identified in this review was breastfeeding information from online resources and smartphone applications. The use of messaging applicationscan be a useful and innovative strategy to provide breastfeeding support[61,62]. Future research may look into the credibility of information from such online resources and applications for Asian American women.

In our review, health care providers (HCPs) and the health care system were frequently cited as influencing mothers' feeding decisions. In line with previous research conducted among diverse racial and ethnic groups, this research showed that HCPs were particularly influential in shaping women'sbreastfeeding practices[21,22]. This finding contrasts with that of research conducted among Hispanic and non-Hispanic black mothers who reported that HCPs providedlittle guidance about breastfeeding in prenatal and postpartum periods[16,63]. Immigrant women might benefit from more breastfeeding education from HCPs, including providingdirect assistance and support in managing common breastfeeding challenges. Maternal health services should be prioritized and promoted to achieve progress in the early initiation of breastfeeding in the community.

Although breastmilk is a natural and beneficial food source, breastfeeding is a learned skill. Often, women need educational services to learn how to breastfeed and tailor breastfeeding to their daily lives and traditional beliefs. Access to high-quality information and support from family members, friends, colleagues, health care providers, and the health care system isessential to breastfeeding success.

4.2 Barriers to Breastfeeding

Our review brought to light several barriers to breastfeeding among Asian American women. Many times, barriers were related to misconceptions about breastfeeding that were not conducive to long-term breastfeeding. Infant formula advertisements play a role in establishing infant feeding norms [64,65]. Women held several misconceptions. For example, infant formula should be fed to all newborns [64], and colostrum is heavy for infants' digestion [66]. HCPs may help clarify these misconceptions by first asking what women and their families have heard about breastfeeding and then giving them evidence-based information.

Language barriers and a lack of culturally sensitive care limited Asian women's access to infant feeding services. This finding is similar to previous research exploring two Chinese mothers' and fifteen health workers' experiences in Spain[67]. There was a stereotype made by health workers that Chinese mothers preferred artificial milk rather than breastfeed [67].Meta-synthesis among immigrants in Australia indicated that breastfeeding services were available.However, women did not seek assistance because of their difficulties with the language used in health information[68]. Services of a medical interpreter may be beneficial to ensure that the mother's concerns are validated andto establish a platform for delivering feeding advice to mothers.

Multiple challenges may cause women to stop breastfeeding sooner than intended. Some women faced pain,lack of sleep, and inadequate breast milk production,which affected breastfeeding, similar to a finding from immigrant women in Australia [34].A lack of adequate lactation support to overcome these challenges makes it easier for women to discontinue breastfeeding their infants. HCPs' observation of breastfeeding, assistance with positioning and latching, and referral to a lactation specialist as needed could alleviate these challenges.

Women's return to work was frequently cited as a barrier to breastfeeding. Often, women described that when their maternity leave ended, they had no time to breastfeed. This finding is consistent with other findings on working women in previous studies, which reported that womenmostly experienced a lack of time and lack of facilities in their workplacesto express breastmilk[68-70].Maternity leave duration correlated positively with longer breastfeeding duration and exclusivity through 9 months [69]. Hence, it is necessary to perform further research to increase our understanding of the effect of the workplaces and specific working conditions of Asian American mothers breastfeeding. Policymakers may develop a social policy to establish infrastructures, such as mandated lactation rooms in the workplace, and offered necessary maternal security for new parents.

There was limited evidence on breastfeeding barriersrelated to neonatal factors. Only one study of Asian mothers mentioned that a premature baby in a neonatal intensive care unit (NICU) could not breastfeed[46].Previous research in 17 head nurses indicatedthatthe parents were often asked to leave the NICU during a change-of-shift report or when the infants needed to undergo invasive procedures[71]. Conversely, apopulation-based study in the US found that mothers of 62,494 late preterm infants admitted to a NICU were more likely to initiate breastfeeding than mothers of those infants not admitted in this setting[72]. Future studies may seek to identify the drivers of these dissimilarities in the context of Asian American women to develop a practical approach to engage mothers in promoting premature infant care practices.

Interestingly, women expressed concern about the loss of their relationship with their firstborn children as a reason not to breastfeed their infants. In examining this result, alongside women's breastfeeding practices, it becomes clear that mothers worry about their firstborn children being jealous and identifying this as one of their childrearing concerns[73]. More research is needed to extend our findings by examining the association between child jealousy and maternal breastfeeding intention and practices in Asian American multigravidas. A better understanding of children's perceptions of their new siblings could provide insight into managing perceived unequal attention from parents due to breastfeeding.

4.3 Limitations

This review has some limitations. First, our review synthesized Asian American women's experiences who had migrated from either Cambodia, China, Korea, India, or Vietnam. Although one study described Asian Indian mothers' experiences [46], little is known how their traditional and cultural practices may affect

breastfeeding.The findings and conclusions drawn from this review might not apply to other Asian immigrant communities[37]. Second, our review only described breastfeeding experiences based on women's perspectives. Future studies may explore family members' perspectives, such as spouses and grandparents, on breastfeeding practices and how the generation gaps may affect postpartum care. Third, this review has not identifiedall relevant manuscripts secondary to studies published in other formats, such as case reports, alternative databases, or other languages. We used a systematic search to identify and select the publications to strengthen our findings. Two authors participated in establishing the eligibility criteria and approved the final study selection. Our consensus resolved any discrepancies in data extraction, findings, and conclusions.

Despite the limitations, this review's major strength was the convergence of critical themes across studies and identifying the following areas for additional research to address significant gaps in the literature. Although one study recruited first-generation immigrants, less is known about how being a first-generation mother in the US influences breastfeeding. Further research may expand the scope to compare first- and second-generation mothers' experiences to better understand how settlement in a host country influences breastfeeding rates. Second, there is a knowledge gap on the possible associationbetween acculturation and breastfeeding rates among Asian American women. Additional research may examine, for example, how women's acculturative stress and coping strategies in the postpartum periodcould affect breastfeeding. Third, there are limited studies focused on the association between neonatal health status and breastfeeding practices. Further research may examine Asian American women's experiences who delivered premature infants to develop a practical approach to facilitating breastfeeding practices.

4.4 Implications for Clinical Practices and Public Health Policy

The inconsistencies in the attitudes and cultural beliefs among Asian women who migrated from different countries revealed nosingular belief system. The approach to supporting mothers needs to be individualized. There is a need for health care providers to assess how migration influences breastfeeding and how we can better support Asian women in the US to achieve breastfeeding goals.

Physicalsupport from the grandparents and mothers-in-law meaningfully influenced the women's breastfeeding practices. The importance of extended families has been acknowledged across Asian countries. HCPs should provide evidence-based education on breastfeeding to both the mother and her family at each perinatal visit. This information should be given in the discharge plan at the hospital as well. Family-centered and collaborative decision-making interventions should be delivered to women early on in pregnancy right up to the postpartum period to increase mothers' intention and positive attitude towards breastfeeding.

Community-based parenting programs could help address the needs and concerns of immigrant Asians, including information and support for new Asian parents in planning their return to work and choosing childcare arrangements near their home. Integrating traditional maternity care into community health centers would be beneficial to foster exclusive breastfeeding for a longer duration.

Policymakers may promote work-based support for breastfeeding, such as flexibility in work schedule, gradual reintegration at work, lactation rooms, and necessary material security. Policies must address the need to expand affordable work-site daycare centers' availability in the US.

5. CONCLUSIONS

Several studies have highlighted persistent facilitators and barriers to breastfeeding in women after migration. Numerous strategies have been proposed based on Asian American women's cultural and traditional beliefs. Our review underscores the need for culturally appropriate breastfeeding promotion approaches, describes breastfeeding practices as an important public health challenge, and encourages further research to overcome critical barriers and promote key facilitators to breastfeeding. Asian American women may benefit from more family-centered support and evidence-based education to increase exclusive breastfeeding rates.

HIGHLIGHTS

- Lifestyle changes after migration and cultural and traditional beliefs about breastfeeding influence exclusive breastfeeding rates in Asian American women.
- There is a need for further research in Asian American women who are early cessation of breastfeeding and less likely to access breastfeeding support services in the hospital, workplace, and community.
- A culturally sensitive approach to supporting women's breastfeeding practices is needed for Asian women living in the US.

CONSENT

Not applicable.

ETHICAL APPROVAL

Not applicable.

COMPETING INTERESTS

Authors have declared that no competinginterests exist.

AUTHORS' CONTRIBUTIONS

Two authors contributed equally to the preparation of this manuscript. The literature search was performed by one author and checked by another author. Two authors contributed to the data analysis. Two authors wrote the first draft of the manuscript. Two authors have reviewed and approved the final manuscript**.**

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