

How to promote exclusive breastfeeding in Ireland: a qualitative study on views of Chinese immigrant mothers

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Abstract

Background: The exclusive breastfeeding rate in Ireland is very low with extremely slow annual growth. The population of immigrants in Ireland is increasing. Improving exclusive breastfeeding practice among immigrants may contribute to the overall improvement of exclusive breastfeeding rates in Ireland. This study was conducted to elicit suggestions on improving exclusive breastfeeding rate for six months among Chinese immigrants in Ireland.

Methods: Fourteen semi-structured in-depth interviews were conducted with Chinese immigrant mothers residing in Ireland, who breastfed exclusively for four to six months. Interviews were recorded and transcribed in Chinese. Data were analyzed using qualitative thematic analysis. Themes were developed through categorization of codes and via in-depth discussion between two researchers.

Results: Themes generated from thematic content analyses were 1) suggestions for new mothers: being strong mentally and getting support from family and friends; 2) suggestions for employers: creating a supportive workplace by setting up private room and breastmilk storage facilities; 3) suggestions for health care professionals: advocating breastfeeding in the hospital and addressing cultural differences by recruiting multilingual staff; 4) suggestions for the government: promoting breastfeeding by initiating societal and policy changes.

Conclusions: The key findings emerging from this study may be considered in the development of breastfeeding promotion strategies in Ireland. Our findings could also have implications for other English-speaking countries with low rates of exclusive breastfeeding.

Background

Appropriate feeding practices are vital for children's optimal growth and development [1]. Exclusive breastfeeding is promoted worldwide as the ideal way for infant feeding due to its protective effects on infant mortality, overweight/obesity, type 2 diabetes and other chronic diseases [2-7]. The World Health Organization (WHO) suggests exclusive breastfeeding within the first six months of life, and continued breastfeeding until the age of two or above [8].

It has been reported immigration to another country may have a great impact on breastfeeding initiation and maintenance rates [9-13]. Previous research have shown that immigrant mothers have higher breastfeeding initiation rates and longer duration than non-immigrant mothers, especially those who had a shorter duration of stay in the new country than their country of origin [14]. This phenomenon has been observed in many countries and is widely referred as "the healthy immigrant effect." [9-13] However, a number of studies reported "the healthy immigrant effect" in breastfeeding might be affected by the length of residency in the host country [11]. As the length of residency increased, the breastfeeding rates lowers. This might be explained by factors such as acculturation, exposure to the new social norms, barriers to access health services due to language or cultural differences [10, 15, 16].

Additionally, there is some evidence that breastfeeding rates might vary by country of origins. Rio et al found that Chinese immigrants had lower prevalence of breastfeeding initiation rates when compared to immigrants from Latin America, Eastern Europe, Maghreb or sub-Saharan African [9]. Goel et al and Tuttle et al also found immigrant Chinese mothers in Europe or North America seldom breastfeed their babies [17, 18]. Thus, it seems important to identify factors influence patterns of breastfeeding in immigrant population, especially among Chinese immigrants.

In Ireland, the Chinese population is estimated at 60,000, and is potentially the largest (and if not the second largest) minority ethnic community in the Ireland [19, 20]. From 2011 to 2016, Chinese immigrants in Ireland increased by 9.1%, which represented the largest increase among all Asian groups [21]. A study using the Growing up in Ireland cohort of 11,092 mother-infant dyads found that although 91.5% Chinese immigrant mothers initiated breastfeeding, only 31.5% continued at the time of the interviews [22]. Similarly, the Ireland Chinese Mother Survey collected from 322 Chinese immigrant mothers found that although Chinese immigrants had a high breastfeeding initiation rate (75.6%) and any breastfeeding rate (87.2%), only 5.8% of mothers exclusively breastfed for six months [23, 24]. Given the rapid growing Chinese immigrant population in Ireland and the low exclusive breastfeeding rates, there is a need to develop effective interventions and formulate a comprehensive strategy to promote exclusive breastfeeding among Chinese immigrants in Ireland.

A paper from our research group has been published previously to identify factors contributing to the success of exclusive breastfeeding among Chinese immigrant mothers living in Ireland who exclusively breastfed for four to six months and to describe barriers they had encountered [25]. However, it failed to include specific suggestions from Chinese immigrant mothers on how to improve and better promote breastfeeding among this population. The objective of this study was to describe views, opinions, and suggestions from Chinese immigrant mothers in Ireland to better inform interventions or policies to promote breastfeeding in the future among immigrant population.

Methods

Study Design

Based on the phenomenological framework which exemplifies a constructionist epistemology [26], a qualitative approach was used to explore participants' suggestions on exclusive breastfeeding promotion among Chinese immigrant mothers living in Ireland. Interviews were conducted between December 2009 and February 2010. Ethical approval was obtained from the Research Ethics Committee of the Dublin Institute of Technology.

Participants

Participants were recruited from the Ireland Chinese Mothers Survey (ICMS) Study. The ICMS included 322 Chinese women who were born in China and had been living in Ireland for more than six months. The original inclusion criteria can be found elsewhere [23, 24]. Participants from the Ireland Chinese

Mothers Survey were invited to take part in the study if they 1) had given birth in Ireland ;2) breastfed successfully for over six months and 3) exclusively breastfeed for four to six months in Ireland. All mothers (n=16) who met the inclusion criteria were contacted via telephone calls. Two refused to participate due to time constraints.

Setting and data collection

Before each interview, researchers informed the participants about the purpose, confidentiality of the study and obtained the written consent. Researchers then conducted face-to-face, semi-structured interviews with the participants using an interview guide. The participants were prompted to share their views, opinions, and suggestions on 1) on how to breastfeed exclusively in Ireland; and 2) how the Irish government can improve exclusive breastfeeding rates in Ireland. Further probing questions were asked based on the interview context. The interview guide was inspired by a Hong Kong study which explored the relationship between situational variables and primipara mothers' infant feeding behaviors [27, 28] and tailored to fit our study aims. The guide was then pilot tested with three Chinese mothers who had given birth in Ireland and was well understood by the participants.

Each interview was conducted in Chinese only, recorded by a digital recorder and lasted for 45 to 125 minutes. Participants had the opportunity to ask questions and to withdraw from the study anytime during the interview. At the conclusion of each interview the participant's demographic information were collected via a brief questionnaire and field notes were added. All recordings were transcribed verbatim into Chinese by QZ. HC reviewed the taped interviews and validated the accuracy of the transcription of each interview.

Data analysis

Thematic content analysis was used to analyze the data since it provides a flexible research tool that potentially provides rich, detailed and complex data [29].

Common themes were identified by HC and QZ following the guidelines proposed by Morse & Field [30]. Two researchers read the transcripts (not including the pilot test data) and coded the transcripts independently and systematically. Initial codes were generated and organized into categories. A tree diagram was developed to help organize the categories into a hierarchical structure [30] and the categories integrated into themes. HC and QZ then discussed the categories and themes to reach a consensus on the assignment of all themes and quotations that illustrated typical views. During the data analyses, field notes were reviewed against the transcripts. Quotations reflecting the participants' opinions on exclusive breastfeeding promotion were also identified. Similar codes and themes generated from different interviews were gathered, and opposite views were identified. Preliminary results were provided to five participants for their verification. No problem had been reported by these five participants.

Results

Sample characteristics

A total of 14 mothers between 24 and 54 years old (mean age: 34 years) were interviewed. At time of the study, the women had been living in Ireland for between three to 18 years (mean duration: nine years). Eight mothers were primiparous, while six had two children (one with twins). Ten had achieved third-level education while four secondary or training school education. Over half of the participants were housewives or had part-time, non-professional jobs; while six were self-employed or had professional jobs. The majority had an annual family income over 30,000 Euro (before tax); three had an annual family income of 15,000-30,000 Euro. All held positive attitudes towards exclusive breastfeeding because they believed that exclusive breastfeeding for four to six months benefited babies, mothers and society.

The results of the thematic analyses are summarized below. The four themes identified were: 1) being strong and getting support-suggestions for new immigrant mothers; 2) creating a supportive workplace-suggestions for employers; 3) addressing cultural differences and promoting breastfeeding in the hospital-suggestions for health care professionals; and 4) promoting societal and policy changes for breastfeeding-suggestions for the government.

Being Strong and Getting Support-Suggestion for New Immigrant Mothers

Breastfeeding is not easy, even among immigrant mothers who managed to exclusively breastfeed their babies. All participants mentioned that strong willpower and persistence were key characteristics for their success in breastfeeding. One mom said, *"I was very determined when I decide to do this (breastfeeding), so I think strong determination is very important."* (P1). Another mom said, *"it was inconvenient, but when I thought this (breastfeeding) was good for my baby, I would conquer any difficulties."* (P4) Similarly, the other mom said, *"first and foremost, you need to be strong, you must stay strong, you can complain, but do not give up. If I think this is the right thing to do, I will do it"* (P5). Generally, it was suggested by the study participants that new mothers should believe in themselves and remain positive for breastfeeding.

Many participants also suggested getting support from family members, which was crucial for new moms to initiate and continue breastfeeding. When probed about who provided the most support during breastfeeding, many moms mentioned their parents. One mom said, *"I don't think I can do this (exclusive breastfeeding) without the help of my parents. For example, when my babies cried in the middle of the night, I couldn't pick them up because I was in the middle of pumping milk. At that time, my mom and dad would come and help taking care of them. If I was all by oneself, I don't know how I could have done this."* (P3) Besides parents, some moms emphasized the important role of their husband in providing support for breastfeeding. One mom said, *"my husband, he is very supportive for me to breastfeed my baby. For example, when I felt embarrassed to breastfed in public, he encouraged me and said it didn't matter what other people say."* (P1) Some other moms mentioned that their husband was able to adjust the working hours to fit their breastfeeding schedule so they didn't have to do this alone.

In addition to family support, the participants also suggested new moms to get help from their friends who had breastfeeding experiences. One mother suggested, *"as they were experienced, they could*

understand your difficulties, tolerance the noise from the baby, and provide timely help when necessary.” (P14) When family members were not around to provide support, it might be a good way for inexperienced new moms to reach out to their friends who could offer some practical help and emotional support.

Creating a Supportive Workplace-Suggestions for Employers

Some working mothers suggested employers should find ways to support breastfeeding moms who came back to work following maternity leaves. One mom suggested setting up nurseries within or near the workplace, she said, *“the nurseries near my workplace were convenient for me to breastfeed, (so this might be a way to support working moms who wish to continue breastfeeding).”* (P13) Besides setting up nurseries, other moms also provided suggestions such as extending the paid maternity leave, creating a private space for breastfeeding moms who need to pump, and providing facilities to store breast milk. Notably, positive attitudes and mutual understanding from the employers and colleagues were also mentioned by some moms as important factors in promoting breastfeeding in workplace. One mom said, *“I managed to continue breastfeeding exclusively after returning to work because my colleagues understood my situation well.”* (P3) This highlighted the importance of create a breastfeeding-friendly environment at the workplace.

Addressing Cultural Differences and Promoting Breastfeeding in the Hospital-Suggestions for Health Care Professionals

In general, participants felt the health care professionals in Irish hospitals and health centers should provide more information about breastfeeding. One mom indicated *“in Ireland, people pay less attention to breastfeeding (than in China).”* (P14) Similarly, another mom said, *“breastfeeding was seldom mentioned in medical advice. Doctors should encourage mothers to breastfeed.”* (P1) Some participants suggested that health care professionals should combine breastfeeding knowledge with breastfeeding practice in prenatal education classes for future breastfeeding initiation. *“Primipara were taught breastfeeding knowledge, but it’s difficult for them to operate in practice... Practice is needed to assist the understanding of theoretical knowledge.”* (P14)

When providing information, most participants suggested that health care professionals should address the language barriers encountered by Chinese immigrant mothers. One mom mentioned, *“in fact, there was still a language barrier. When I communicated with a health care professional, there were many professional terminologies which troubled me. So, I think maybe more Chinese nurses and midwives would be better.”* (P6). Other participants also indicated language-specific health care professionals should be recruited and trained to provide support and prenatal education for immigrant mothers since many Chinese immigrant mothers in Ireland were the first generation and had difficulties understanding English, especially professional terminologies. In addition, breastfeeding support groups targeting Chinese immigrant mothers to share experiences was also suggested.

Another suggestion for the health care professional was to address the conflicting information received by Chinese immigrant mothers from their country of origin and from Ireland. For example, one mother indicated that treatments of breast milk jaundice by Chinese doctors and Irish doctors were completely different. *"My baby had jaundice due to breastfeeding. Chinese doctors advised to stop breastfeeding for one or two weeks, but Irish medical staff advised to increase breastfeeding frequency to promote infant digest[ion] and wet napp[ies]."* (P6) Participants suggested health care professional should consider the cultural differences and resolve these confusions on whether they should or should not breastfeed.

Promoting Societal and Policy Changes for Breastfeeding-Suggestions for the government

Most participants suggested the government agencies to increase and enrich breastfeeding publicity by various means. For example, enhancement of publicity at clinics, communities and television advertisements could be possible venues for mothers to understand the benefits of breastfeeding. One mom mentioned, *"the government still need to increase the publicity to let more mothers know that breast milk is better than bottles."* (P9) In order to reach the target audiences, many participants suggested that breastfeeding should be publicized in Chinese and in various forms (e.g., brochures, books). *"Add some Chinese information on breastfeeding."* (P12). *"Publicity can be made through newspapers and television."* (P5). *"Publicizing breastfeeding to Chinese immigrants by brochures may be better, because they don't like to join clubs."* (P6) Regarding the content of breastfeeding promotion materials, participants provide some topics such as emphasizing that breastfeeding is natural, necessary, and worthwhile when compared to formula feeding. *"I think you can compare breast milk with formula, and present in a table."* (P9) This may help moms to understand the pros and cons of breastfeeding and formula feeding. Other topics includes providing education on benefits of breastfeeding, correcting breastfeeding misconceptions, and discussing solutions to breastfeeding problems such as for mothers taking medication.

Besides increasing publicity, some participants suggested Irish governmental agencies should amend the laws and regulations to provide more breastfeeding support for Chinese immigrant mothers. One mom suggested providing financial subsidies during maternity leave. *"The government could give appropriate subsidies for breastfeeding, such as dozens of Euros a month."* (P11) Others suggested developing new social security policies for Chinese immigrants, such as narrowing the gap of social welfare benefits between Irish and immigrant residents. *"As there is a big gap of social welfare between immigrants and Irish, I do hope that Ireland could provide special social welfare policy for immigrants."* (P14) Providing a longer-term Irish visa for Chinese mothers came to Ireland for education-related reasons was also suggested to ensure they could breastfeed for six months in Ireland after birth. A newly arrived mother said, *"I attained language class in the second month after delivery for student visa which caused difficulties in exclusive breastfeeding."* (P14)

Another common suggestion was that government agencies should develop policies to urge public places, such as shopping malls, to set up more well-equipped breastfeeding facilities. One mom said *"There were many places for nappy changing, but breastfeeding facilities are not enough."* (P5). Some

participants further suggested to equip these rooms with seats, water and breast milk heaters to better enhance breastfeeding experiences.

Discussion

This is the first study exploring Chinese immigrant mothers' suggestions on exclusive breastfeeding promotion in Ireland. This paper complemented the other paper from our group which identified facilitators and barriers to breastfeeding among this ethnic group [25]. The findings from this study provided breastfeeding promotion suggestions for Chinese immigrant mothers, employers, health care professionals, and Irish governmental agencies. These suggestions might inspire other countries with low breastfeeding rates, as few studies had explored immigrants' opinions in improving exclusive breastfeeding in host country.

Suggestions for New Immigrant Mothers

The important role of maternal attitudes towards breastfeeding has been reported in a number of studies [31-34]. Consistently, our findings implied that Chinese mothers' strong willpower to exclusively breastfeed was important to the success of optimal feeding practices. This might especially be true for Chinese immigrant mothers in the first generation due to the influence of traditional belief where mothers were viewed as strong and persistent and should do whatever was best for their offspring's well-being in Chinese culture. For new mothers, reinforcing these positive attitudes, reassuring their abilities, and increasing their self-efficacies to breastfeeding might be crucial to increase breastfeeding rates among new mothers.

Besides maternal attitudes, previous studies have identified family support as an important factor to support exclusively breastfeeding [35-37]. Findings from this study also suggested that new mothers should turn to their family members for more support during lactation. Notably, besides parents, husbands' encouragement and cooperation during lactation were crucial for the success of exclusively breastfeeding. It was reported that most Chinese-Irish families were nuclear families(a family group consisting of two parents and their children) where the husband was the main source of financial support [23, 37]. The husband's busy working schedule may have contributed to a lack of involvement or support of exclusively breastfeeding. Indeed, a previous study confirmed that increasing fathers' involvement during an infants' first year of life may improve breastfeeding duration up to six months of age [38]. Other studies have also reported that husbands' positive attitudes and support are associated with longer breastfeeding duration [39, 40]. To address these and promote breastfeeding in Ireland, relevant policies have been developed in Ireland. As of November 2019, under the new employment legislation, both new mothers and fathers are entitled to two weeks extra parental leave on top of the current maternity/paternity leave entitlements [41]. This policy may help fathers to get more involved and support breastfeeding.

Suggestions for Employers

Chinese immigrant mothers in this study considered a supportive working environment a key factor for the success of exclusive breastfeeding practices, especially about establishing relevant policies on extending maternity leave. Previous studies in other countries have shown that immigrant women are more likely to return to work earlier due to financial reasons despite their intention to breastfeed for six months or longer [42, 43]. Therefore, as suggested by our study participants, ensuring sufficient paid maternity leave may help improving immigrant mothers' breastfeeding duration. In fact, relevant policies have been released to ensure the rights of breastfeeding mothers in Ireland, such as the Maternity Protection (Amendment) Act (2004) [44]. These policies allow breastfeeding mothers to have maternity leave of no less than 18 consecutive working weeks, and to breastfeed during working hours without any loss of pay [44, 45]. However, our study participants rarely mentioned these policies, which may be due to unawareness. It should be noted that these policies have been updated as the Parent's Leave and Benefit Act 2019 [41], which allowed for a total of 26 weeks paid maternity leave at the time when this study is published. Employers should provide and explain these updated policies in detail as immigrant mothers may not be aware of their breastfeeding rights at working place.

Further, previous studies have shown an unfavorable workplace environment may be significantly associated with the cessation of breastfeeding [28, 46]. Findings from our study also suggested the importance of a breastfeeding-friendly workplace (e.g., nurseries, breastfeeding rooms) and further suggested employers set up a private space and have a safe and clean facility for breast milk storage. It should be noted that by Irish law, employers are not obliged to provide facilities in the workplace if the provision of such facilities would give rise to considerably cost [44]. Thus, ways to reduce cost in providing workplace breastfeeding facilities/spaces or Incentives for employers to provide breastfeeding policies should be explored.

Suggestions for Health Care Professionals

Breastfeeding counseling provided by health care professionals is also a useful source for obtaining breastfeeding knowledge [43, 47]. Previous research has already established the importance of health care professionals' attitudes and advices on exclusive breastfeeding rates among Chinese immigrants [12, 43]. Participants in our study felt that health care professionals didn't stress the importance of breastfeeding enough in the hospital and suggested them to talk more explicitly with immigrant mothers.

It should be noted that the interviews in this study were collected 10 years ago and changes had been made to the Irish health care system in the past decade. According to 2015 Breastfeeding Policy for Primary Care Teams and Community Health Care Settings developed by Irish Health Service Executive (HSE) [48], all staff involved in the care of pregnant women, infants and young children should support and enable mothers to breastfeed exclusively for 6 months. This policy indicated training should be provided for all health workers in the knowledge and skills necessary to implement the breastfeeding policy and all health workers should discuss with pregnant women and their families the importance and management of breastfeeding [48]. In fact, Sullivan et al published a paper in 2020 examining breastfeeding beliefs among Polish-born mothers in Ireland and suggested the health professionals were

very “pushing” about breastfeeding [49]. This may be resulted from the efforts put in for breastfeeding training among health care professionals. Additionally, the National Standards for Antenatal Education in Ireland has been published in 2020 [50]. This document provided information on the content, mode of delivery, and training resources for the development of a high-quality antenatal education program. It also set up the standards for such programs in Ireland [50]. However, no specific section or reference to immigrant mothers was found.

Despite the promising results from training health care professionals in Ireland, limited improvements have been shown to address the language and cultural differences encountered by immigrant mothers. Our study suggested that language barrier was a great impedance for obtaining breastfeeding relevant information by Chinese immigrant mothers, which was consistent with many other studies among immigrant population [18, 23, 43]. Translation service might be used to overcome this barrier. However, according to another study among immigrant women in Ireland, lack of access to trained interpreters continued to be a problem and was often limited in the hospital due to cost [51]. Therefore, the recruitment of multilingual staff might be needed in the health care system. Besides the language problem, multilingual health care professionals may come from the same or similar culture and have a better understanding of the cultural differences encountered by immigrant mothers. Thus, they might be able to clarify specific misconception or conflicted information received by immigrant mothers. Currently, no data have been published regarding whether the recruitment of multilingual staff have been increased at the time of the study. Future research should address this gap and collect information regarding how the health care system deal with the language problems in the hospital.

Suggestions for Government Agencies

Nearly half of our participants reflected that government agencies should initiate more society changes to promote breastfeeding among immigrants in Ireland, such as increasing publicity on breastfeeding and making breastfeeding messages more visible *via* brochures, books or televisions. To the author’s best knowledge, printed information in Chinese from Irish government website is still limited, so far only one flyer called “feeding cues” was available in Chinese on the HSE website [52]. More language specific materials on topics proposed by our study participants, such as comparison between breastfeeding and formula feeding, benefits of breastfeeding, breastfeeding misconceptions, and solutions to breastfeeding problems, should be developed and made available to immigrant mothers.

Although not mentioned by the participants, hotline might be another effective way to increase breastfeeding publicity among immigrant population, as indicated by one study conducted in Chinese-Canadian population [53]. In Ireland, no hotline has been established so far, but an email service called “ask the expert on-line lactation consultant service” was available on the HSE websites and has been providing support for breastfeeding mothers who had questions or need to join a local breastfeeding support group [54]. However, it is unclear whether this email service would have multilingual agents to address immigrant population from non-English speaking countries. Further exploration regarding the

effectiveness of this email service in improving the breastfeeding rates in Ireland immigrant population is needed.

Other suggestions proposed by our study participants include setting up more well-equipped specific breastfeeding rooms in public places, especially in shopping malls. Although the Equal Status Act (2000) in Ireland prevents discrimination and harassment for breastfeeding in public [45], mothers may still feel embarrassed and need some privacy when it comes to breastfeeding. Certain policies should be in place to help creating a safe place in public for breastfeeding moms. In addition, the participants suggested several other policy changes, such as developing new social security policies for Chinese immigrants, narrowing the gap of social welfare benefits between Irish and immigrant residents, providing a longer-term Irish visa for breastfeeding moms. These issues had not been documented previously and currently there are no policies in place. However, these might be of future consideration for the Irish Immigrant Council of Ireland.

Several limitations should be kept in mind when interpreting the results of this study. First, the interviews were collected 10 years ago and the suggestions might not be relevant as of today. However, to the author's best knowledge after conducting a thorough search online, little has been done to address the suggestions such as recruiting multilingual health care professionals or establishing policies to support breastfeeding among immigrant population. Further research should be conducted to explore the impact of any legislative changes in support of breastfeeding and their impact on the experiences of immigrant mothers. Additionally, the generalizability of the findings might be a concern since this study was only conducted in a small sample of Chinese immigrant mothers. It is possible that our results may not be reflective of the general population of Chinese immigrant mothers. Besides, our results may not be fully comprehensive, because we only included mothers who had breastfed exclusively for at least four months, although the rationale for this was that the opinions were being sought from mothers who had had a successful and positive experience of breastfeeding exclusively. Nonetheless, constructive opinions from immigrants' families and husbands, and immigrants who breastfed for less than four months are warranted in further studies.

Conclusions

This study explored the opinions and suggestions on exclusive breastfeeding promotion in Ireland among Chinese immigrant mothers who had a successful experience of exclusive breastfeeding. Specific suggestions for new mothers, employers, health care professionals, and Irish government were provided. Findings from this study may help researchers understand needs from Chinese immigrant mothers to succeed in exclusively breastfeeding and may have further implications for breastfeeding interventions and policy changes to promote breastfeeding among immigrant population in Ireland or other countries.

Abbreviations

WHO — World Health Organization

Declarations

Ethical approval and consent to participate

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Ethical approval was obtained from the Research Ethics Committee of the Dublin Institute of Technology. All participants were informed of the purpose and confidentiality of the study. Written consent was obtained before each interview.

Consent for publication

Consent for using the qualitative data and publication was obtained from each participant before each interview.

Availability of data and materials

The data supporting the conclusions of this article are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

QZ conceptualized the study, recruited the participants, conducted and transcribed the interviews, analyzed the data and drafted the manuscript. HC contributed to data analysis and manuscript drafting. KMY, TMC and JMK conceptualized the study and provided critical comments on this paper. SS improved the English expression during the revision. CL heavily edited and rearranged the structure of the manuscripts. All authors have read and approved the final manuscript.

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Table

Table 1. Mothers' personal opinions on exclusive breastfeeding promotion

Theme 1. Recommendation for mothers

1.1 Maintaining maternal intention and improving self-efficacy

1.2 Creating suitable condition for exclusive breastfeeding

1.3 Obtaining breastfeeding knowledge

Theme 2. Recommendation for family members, employers and colleagues, and health care professionals

2.1 Family members' sufficient support

2.2 Employer' support and colleagues' respect

2.3 Health care professionals' support

2.3.1 Encouragement and advocacy

2.3.2 Multilingual specialization

2.3.3 Appropriate breastfeeding education combined with practice

Theme 3. Recommendation for the government

3.1 Setting up well-equipped breastfeeding facilities in public places

3.2 Providing social welfare policies

3.3 Publicity

3.3.1 Increasing intensity of publicity

3.3.2 Enriching contents of publicity

3.3.3 Publicizing by various means
