

**BREASTFEEDING EXPERIENCES OF IMMIGRANT WOMEN IN CANADA: PATHS
TO IMPROVEMENT**

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Abstract

Breastfeeding has proven to be a health equalizer and a significant predictor of health outcomes for a mother-infant dyad. The World Health Organization (WHO), all major Canadian public health institutions and medical organizations recommend breastfeeding as a natural and effective way to feed infants. Despite clear guidelines, the BF prevalence in Canada is significantly below the WHO recommended standards. According to the evidence, immigrant women are faced with multiple constraints as they strive to initiate and maintain BF which potentially increases the risk for various health complications. Although all Canadian provinces are committed to advance their BF policies, available literature and reports indicate enormous gaps in the existing BF support services, which poses several challenges to new immigrant mothers in accessing these services. This paper examines the available international and national literature on immigrant mothers' BF experiences, and current BF promotion policies and programs in Canada to identify the determinants of BF among this population so that concerted efforts can be taken to support these women in their BF endeavors. This capstone project serves as a meaningful starting point for discussion on BF experiences of women who immigrate from low and middle-income countries (LMICs) and deliver their babies in Canada. The purpose of this capstone is to (1) explore the current literature on immigrant women's breastfeeding experiences in Canada, (2) identify gaps in the existing BF services that lead to inequity in accessing BF support among the immigrant population and (3) develop recommendations to tailor contextual and all-encompassing BF promotion strategies to ensure supportive BF environments for all immigrant mothers across Canada.

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Introduction

Significance of Breastfeeding

Breastfeeding (BF) is a health equalizer and a significant predictor of health outcomes for mothers and infants. For infants, never breastfeeding or early weaning is associated with increased risks of otitis media, diarrhea, lower respiratory tract infection, sudden infant death syndrome, leukemia, and type 1 diabetes (Chung et al, 2007). The risks of breast cancer, ovarian cancer, diabetes, hypertension, and myocardial infarction are high among mothers who never breastfeed as compared to women who breastfeed their babies (Stuebe & Schwarz, 2010).

Based on these associations, the World Health Organization (WHO), Public Health Agency of Canada (PHAC), and all major medical organizations including Canadian Pediatric Society recommend 6 months of exclusive breastfeeding (EBF), with continued BF through the infant's first year and beyond (Eidelman et al, 2012).

In spite of universal acknowledgment of BF benefits, the global BF (EBF in particular) prevalence is considerably below the WHO recommended standards. Interestingly, the top ten countries that have highest BF prevalence are low and middle-income nations which may imply that BF is a cultural norm in these countries. Evidence illustrates that immigrants' BF prevalence decreases when they migrate from LMICs to high- income countries (Higginbottom, 2013). Canada receives a large number of immigrants from LMICs, hence responsiveness and flexibility of Canadian health care system may help enhance immigrants' health status.

Immigration and cultural diversity in Canada

Canada ranks high among the most diverse countries in the world and is known for its multiculturalism. Canada demonstrates a unique mosaic of diverse cultures, languages, religions,

and ethnicities. According to Statistics Canada (2011), one out of five people in Canada is foreign-born, this proportion is the highest than any other G8 country. Historically, immigrants from European countries settled in Canada for better social and economic life. However, during the early 1980s, the immigration trend shifted towards Asia, Middle East, Africa, Central America and the Caribbean. Since 2002, more immigrants from Asia and the Middle East compared to other countries have been accepted in Canada (Higginbottom, Bell & Pillay, 2012).

Canada has welcomed 25,000 migrants and refugees every year since 1999 (Human Rights Research and Education Centre, 2012). Also, Canada's door has always been open for refugees from all over the world. In 2015, the Canadian government took unprecedented steps by accepting 25,000 post war Syrian refugees and the preference was given to young families, women, and children (Carmen, 2016).

Currently, immigrants represent 20.6% of the total Canadian population of which 52% are women (Stats Canada, 2011). Recent immigrants are younger, 58.6% of the immigrants belong to core working age group (25 – 54 years) and 4.4% represent the older working age group (55 – 64 years). The median age of the recent immigrants is 31.7 years (Stats Canada, 2011). It is important to note that the Canadian population growth rate was 5.4% in 2001 – 2006 census, which rose to 5.9% in the 2006 – 2011 census (Stats Canada, 2012); the increasing number of young female immigrants who may also have higher fertility rate is attributable to the growing population rate (Higginbottom et al, 2013). This may imply increasing number of childbirths among immigrant population in the future, hence increasing demand for culturally appropriate perinatal health promotion interventions including BF supportive programs across Canada.

Immigrant mothers and access to breastfeeding promotion programs in Canada

Equitable access to BF promotion programs during perinatal period plays a significant role in empowering immigrant mothers to take informed infant feeding decisions. Additionally, effective utilization of existing BF support services promotes the physical, emotional and spiritual well-being of immigrant mothers, and in turn, has a positive impact on their babies' physical and cognitive development. Notably, many immigrant women in Canada face several barriers in accessing BF services such as limited familiarity with the Canadian health system, absence of spouses and lack of English proficiency (Higginbottom et al, 2012). In addition to these obstacles, conflicting cultural beliefs, mistrust of the Western health system and unavailability of traditional maternity care, and low socioeconomic status also negatively impact their ability to access Canadian public health services at the time of need (Hyman, 2007; Higginbottom et al, 2012). Many international reports highlight that the stress of migration, anxiety of birthing in an unfamiliar environment, feeling of isolation and lack of supportive networks significantly influence immigrant mothers' BF behavior.

The refugee women's experiences of trauma in their country of origin and their journey to host countries may have negative implications on their health (Higginbottom et al, 2012; Human Rights Research and Education Centre, 2012). The negative effects of conflict, travel, family separation, and social disconnection increase refugee women's vulnerability to various physical and emotional health issues during pregnancy and childbirth (Fazel, 2005). They need special maternity care and BF support. However there exists a gap in the provision of culturally sensitive BF support in Canada, therefore refugee mothers are faced with enormous challenges related to BF initiation and continuation. More importantly, many recent refugees do not have health insurance coverage, they are unaware of the available support services and they speak little or no English or French which creates barriers to successful utilization of BF services.

Breastfeeding support is an integral part of maternity care services in Canada and other developed nations. The initiation and continuation of BF highly depend on how the BF information is shared with the pregnant women and new mothers, and how the BF services are delivered by the healthcare providers (HCPs) in hospitals, community health centres, and homes. While each Canadian province has implemented different strategies to promote BF such as offering free prenatal breastfeeding classes, providing breastfeeding support after childbirth, and encouraging doctors and midwives to discuss feeding plans with pregnant women, however, these conventional strategies may not be effective when addressing immigrant mothers. The unique cultural needs of these women should be taken into consideration while planning such interventions. There is a dire need to revisit the existing BF promotion interventions across Canada and modify them according to the needs of immigrant mothers. This step could help empower these women to take informed infant feeding decisions and foster BF initiation and duration.

Project Purpose and Objectives

This capstone project serves as a venue to initiate discussion on BF experiences of immigrant women who immigrate from LMICs and deliver their babies in Canada. The immigrant mothers are faced with multiple constraints as they strive to initiate and maintain BF which potentially increases the risk for various health complications, not only for the mother-infant dyad but also for the overall immigrant population. Notably, the promotion and maintenance of breastfeeding among immigrant mothers remain an under-examined topic of study in the developed world including Canada. Given the myriad of problems faced by the immigrant mothers and dearth of studies in this particular area, there is an urgent need to examine the perception of immigrant mothers regarding BF support services, and identify the

positive predictors and barriers to their BF practices, so that concerted efforts could be taken to support these women in their BF endeavors.

The purpose of this capstone is to (1) explore the current literature on immigrant women's breastfeeding experiences in Canada, (2) identify gaps in the existing BF services that lead to inequity in accessing BF support among the immigrant population and (3) develop recommendations to tailor contextual and all-encompassing BF promotion strategies to ensure supportive BF environments for all immigrant mothers across Canada.

The specific objectives of this capstone project are as follows:

1. To review the current empirical literature on breastfeeding experiences of women who immigrate from LMICs and deliver their babies in Canada.
2. To analyze existing BF promotion programs and policies across Canada and identify windows of opportunity.
3. To offer recommendations to promote successful breastfeeding practices among immigrant women across Canada.

Methods

The primary method used for this capstone project is a literature review which was conducted during the last week of May 2017. The initial search was focused on peer-reviewed articles published in the academic journals. Given the scarcity of research in this particular area, gray literature sources had been included to complement the literature review. This literature review is aimed to develop a deeper understanding of the perceptions and experiences of breastfeeding among immigrant mothers from LMICs and the factors that can have positive or

negative impacts on the BF practices of these women so that BF supportive spaces could be created for diverse immigrant mothers in Canada.

Search Strategies: A broad search strategy was deployed in consultation with the SFU Health Sciences Liaison Librarian. The initial search was made of the MEDLINE (EBSCOhost) and MEDLINE (Pubmed), Web of Science, PsycINFO, Current Index to Nursing and Allied Health Literature (CINAHL) and Global Health data bases for articles published between January 1980 and May 2017. The year 1980 was selected because Canada is witnessing a heavy influx of immigrants from low and middle-income countries since the mid-1980s (Statistics Canada, 2016).

The abovementioned databases were searched to identify relevant quantitative and qualitative research studies and reports that explored immigrant mothers' breastfeeding perceptions and experiences in the developed countries. The initial search employed general key terms ("breastfeeding experiences of immigrant women") followed by a MeSH search utilizing terms "breastfeeding", "immigrant" AND "refugees", "asylum seekers", "developed countries "OR" high income countries", "Canada", "breastfeeding experiences AND immigrant women", "breastfeeding perceptions AND immigrant women". A modified search was deployed with the terms "breastfeeding experiences and perceptions" AND "immigrants" AND "Canada" AND "health promotion". The gray literature was searched on the Google Scholar using the exact phrase "breastfeeding experiences of immigrant women in developed countries".

These strategies yielded a total of 111 peer-reviewed articles and 27 gray literature papers including government reports and document. Twenty-nine papers were included after scanning the titles and abstracts of the above-mentioned articles.

The total was reduced to 13 based on the inclusion and exclusion criteria. References and citation of the 13 articles were checked adding 3 more articles. Lastly, numerous journals were manually searched which resulted in adding 2 more documents. All these articles were evaluated and finally, 8 were selected for analysis.

Inclusion criteria (see appendix 4) were documents published in English language focusing on recent immigrant women (less than 5 years) including economic immigrants, refugees, asylum seekers from LIMICs; immigrant mothers' BF perceptions and experiences in the host country; BF promotion program evaluation reports; short communications; international organizations' reports; documents that provided recommendations for BF initiation and duration, government reports on BF; dissertations and thesis exploring barriers and influencers of BF among diverse ethnic groups; and documents published between January 1980 and May 2017. Only full text-articles were included for this capstone. Exclusion criteria were conference proceedings; documents published before 1980; theoretical articles; review papers; book chapters; editorials; and studies with inadequate information.

For this capstone, the Canadian Council Glossary was consulted for the definition of "immigrant": *a person who has settled permanently in another country (Canada)* and "refugee": *a person who is forced to flee from persecution and who is located outside of their home country* (Canadian Council for Refugees, Online).

Results

This section examines the emerging immigrant women's BF evidence at the international and national levels, identifying facilitators and inhibitors to BF decision and behaviors as described by the recent immigrant mothers themselves. The international evidence presented in

this capstone project has been selected from those immigrant-receiving countries that have publically funded healthcare system similar to Canada to better understand the factors that influence immigrant mother's BF experiences in Canada. Furthermore, this capstone will include a brief account of the BF promotion guidelines, policies, and programs across Canada to explore gaps that create barriers in equitable access to BF services among immigrant mothers. A total of 8 articles were selected for this capstone project. Seven of them deployed qualitative method while one utilized mixed method approach.

International Evidence

Australia:

A qualitative research by Maharaj & Bandyopadhyay (2013) explored the influence of culture and identity on BF initiation and duration of South Asian (SA) mothers in Melbourne, Australia. Similar to other studies on SA mothers, the prevalence of BF initiation among SA mothers was found to be high in this study, but mothers were not able to continue BF for a longer period of time despite recognizing BF benefits and intending to BF. The participants in this study were educated (post-secondary) and involved in paid employment. They did not face language barriers in accessing BF support, however, they experienced social and cultural barriers that affected their BF practices. They perceived the early return to work, lack of paid maternity leave and absence of social support to be the major contributing factors in early BF cessation.

Maharaj & Bandyopadhyay (2013) report that many SA participants received inconsistent messages from different HCPs regarding BF, which negatively affected their confidence and BF practice. The women perceived that Australian doctors were not familiar with their customs and did not respect their cultural values regarding BF. The power difference was another barrier to

open BF discussions between participants and HCPs. Additionally, some hospital practices such as availability of free formula samples and easy access to infant formula in the hospital influenced their infant feeding decision.

It is important to note that SA and Vietnamese immigrants in two Australian studies perceived doctors to be the main source of BF support in absence of their family members and felt disappointed when their expectations were not fulfilled (Groleau et al, 2006; Maharaj & Bandyopadhyay 2013). The evidence shows that the EBF prevalence among immigrant population in Australia is declining in the last five years; inequity to access adequate BF support among immigrant women is the most significant contributing factor. The challenges faced by immigrant mothers in Australia include detrimental hospital practices, attitudes and beliefs of HCPs, and limited time spent by the HCPs in infant feeding discussions and BF counselling, conflicting beliefs and misconceptions about EBF, linguistic barriers, loneliness, absence of community support and lack of culturally sensitive interventions (Groleau et al, 2006; Maharaj & Bandyopadhyay 2013).

Spain:

Spain is experiencing a large-scale migration for the past two decades and immigrants represent 13% of the total Spanish population. A cross-sectional study conducted in Spain by Rio et al (2011) compared the BF initiation rates among immigrant and nonimmigrant mothers and concluded that prevalence of BF initiation was higher among the immigrant women regardless of the mode of delivery, maternal age, gestational age, birth weight of the newborn except Chinese women. According to this study, Chinese women in Spain prefer commercial formula over breast milk due to various reasons, such as negative perceptions of BF and early return to work. It was noted that majority of Chinese women in Spain belong to working class and choose to send their

infants to their families in China as they lack family support in Spain. These findings were confirmed by a recent qualitative ethnographic study by Gonzalez-Pascual et al (2017). The authors pointed out that although Chinese mothers culturally value BF in their native country, however, BF initiation and duration decreases after moving to Spain because of various reasons such as lack of social support, inability to adhere to the post-delivery rituals perceived to be required with the maintaining breast milk quality and quantity.

United Kingdom (UK)

Many studies conducted in the UK on immigrant mothers indicate that cultural preference to breastfeed was one of the most important determinants of BF initiation and duration among participants. Multiple studies from the UK identify that socioeconomic status is not the major inhibitor of BF in many immigrant groups, particularly among SA women. Choudhry & Wallace (2012) investigated the effects of acculturation on BF intentions and behaviors of SA mothers in the UK, employing a qualitative approach. The authors documented that half of the study participants opted for mixed feeding because they found EBF to be inconvenient in the UK, they felt embarrassed to breastfeed in public and perceived to be housebound if they chose EBF. The authors documented that less acculturated participants continued to follow their cultural teachings about EBF and maintained EBF hence low acculturation potentially had a protective effect on their BF intentions and behaviors. Whereas the high level of acculturation, led mothers to prefer infant formula because they perceived it to be a social norm in the host country. The study also highlighted that family members' BF advice and assistance positively influenced immigrant mothers' EBF behavior. Choudhry & Wallace study revealed that the power relations between mothers-in-law and daughters-in-law, high expectations of in-laws from daughters-in-law to fulfill their household responsibilities led new mothers to shift to mixed feeding.

Hufton & Raven (2016) report high familiarity among refugee mothers about EBF benefits in their qualitative study that was undertaken to investigate the perception and predictors of infant feeding among UK-based refugees. The recognition of EBF benefits led majority of the refugee study participants to continue EBF for six months. This study identified that cultural preference of EBF as a dominant and desirable method of infant feeding was the most significant predictor of EBF among this group. Moreover, the study participants frequently mentioned that they trusted their family's BF advice compared to BF information received from HCPs. The second important predictor was the social support these women received from elder females in the family, including mothers-in-law. Importantly, poverty and acculturation had no effect on their infant feeding decision and behavior. The authors concluded that culture and social support played a central role in influencing infant feeding decisions and behaviors among this population and women who lacked family support were unable to continue with EBF.

National Evidence

Canada

As mentioned earlier in this paper, Canada is accepting more immigrants from Asian and Middle-Eastern countries compared to other regions. The rapid growth in the number and diversity of immigrants require flexible healthcare system including culturally sensitive BF promotion interventions to ensure healthy communities in the long run. However, evidence reveals that Canadian healthcare system lacks immigrant-friendly BF interventions. The issue of inadequate utilization of BF support services has been consistently mentioned in multiple studies. It would be prudent to explore the facilitators and the inhibitors of BF practice among diverse immigrant groups to better understand the association between migration process and BF practices so that appropriate modifications can be made in the existing programs.

The factors that could prevent effective usage of BF services among immigrants in Canada can be grouped into three main themes:

A: Social, cultural and linguistic challenges

B: Economic Challenges

C: Role of HCPs in BF promotion

A: Social, Cultural and Linguistic Challenges

Migrating to a new country that has entirely different set of values and systems is a significant social determinant of health for the mother-infant dyad (Khanlou et al, 2017). The socio-economic, psychological and emotional repercussions of migration potentially affect mothers' BF behavior. As pointed out by multiple authors, many immigrant women are dependent on their spouses and in-laws and do not feel empowered to take infant feeding decisions. The lack of adequate BF information further impacts their BF practice and increases their susceptibility to choose commercial formula (DaCosta, 2012; Khanlou et, 2017).

A telephone survey was conducted by Brar et al (2009) in Calgary, demonstrated a huge gap in utilization of perinatal and BF support services between new SA immigrant mothers and Canadian-born mothers. The majority of SA mothers identified linguistic barriers, lack of interpreters at public health units and non-availability of BF educational material in their local languages to be the major barriers in accessing perinatal and BF support services.

A number of studies confirm that prevalence of BF initiation and duration is the highest among Middle-Eastern immigrant mothers in developed countries. A qualitative study using ethnographic approach and human ecological framework was conducted by Jessri et al (2013) in

Edmonton, identified that religion and culture played an important role in shaping Muslim Middle-Eastern immigrant mothers' BF decision. All study participants were breastfeeding their infants and expressed their commitment to continue BF until two years after childbirth and this decision coincided with their cultural and religious teachings. It was noted that the participants were fully aware of the benefits of EBF irrespective of their age, socioeconomic status, and educational background. Importantly, pre-lacteal feed including ghee and honey are routinely introduced to the infant in the Middle-Eastern culture and study participants complied with this custom hence could not exclusively breastfeed their babies. Notably, the study participants did not abandon BF despite facing various barriers such as discomfort to breastfeed in public, lack of BF support received from HCPs and absence of BF supportive environment at the workplace.

Rodubari et al (2009), Dahlen & Homer (2002) and Ghaemi-Ahmadi et al (1992) also mention that Muslim Middle-Eastern women maintain their BF practice even after moving to developed nations; they tend to strictly follow their religious teachings and failing to do so is considered a sin among this group. Furthermore, Al Nasser et al (1991) in their study identify that BF is regarded as the most beneficial and convenient, and cost-effective method of infant feeding among the Arab population.

Groleau et al (2006) interviewed 19 Vietnamese immigrant mothers in Quebec to explore the influence of culture on their BF behavior. All these women were multiparous and had breastfed their previous babies in Vietnam before migrating to Canada. Interestingly, it was found that all mothers opted to feed their babies with infant formula because BF behavior is ritualized among this population and they experienced conflicting cultural practices between Vietnam and Canada. None of the participants exclusively breastfed and one-fourth selected mixed feeding for their infants for less than three months and finally switched to infant formula.

Another study, Sutton et al (2007) mentions that the low EBF prevalence among Vietnamese mothers in their study group was attributed to lack of BF knowledge, lack of family support and absence of ethnicity-specific BF information at the prenatal classes. The most noteworthy positive predictor of BF was found to be peer support; experienced Vietnamese women were very helpful in supporting BF mothers in the community. However, it was also recognized that a few experienced peers disseminated unscientific information about BF among new mothers that created problems. Sutton et al (2007) conclude that peer support model if incorporated into existing BF promotion programs in Canada it could emerge as one of the cost-effective, trustworthy and culturally relevant approach.

Reitmanova & Gustafson (2008) did a qualitative investigation of needs and barriers of Muslim immigrant mothers to accessing maternity care in St. John's, Canada. The study identified huge gaps between maternity care and diverse needs of Muslim women including emotional support and culturally appropriate BF information in their native language. The majority of participants expressed their dissatisfaction with the healthcare system because it was not responsive to their unique needs and some practices were contradictory to their cultural and religious beliefs and created significant discomfort. For example, the presence of men in the prenatal classes was against their cultural values and religious teachings, therefore, they did not attend those classes. Many women were not aware of these classes; some lacked a clear understanding about the purpose and benefits of prenatal classes; multiparous women were unable to attend because childcare was not provided. The language barrier was found to be the most significant key barrier to accessing BF information and support. Also, it was reported that focus on individual care in Canadian healthcare system posed additional challenges as they preferred family-based approach.

Gagnon et al (2010) found out in their qualitative study conducted in Montreal that immigrants, refugees, and asylum seekers are less inclined to access post-partum public health services that include BF support services. The factors that influence their decision of seeking public health support include lack of transport, spouse dependency, the absence of childcare, contradictory information provided in prenatal classes, lack of English proficiency and weather conditions.

In a qualitative study conducted by DaCosta (2012) the ethnocultural factors that could influence the BF behavior of SA mothers residing in the Region of Peel, Ontario were explored. DaCosta reports that EBF is culturally valued and encouraged in the SA community and EBF is considered a natural, convenient, and cost effective way of infant feeding. However, a cultural shift towards mixed feeding/formula supplementation has been noted among SA immigrants. The author indicates that the lack of knowledge about benefits of EBF, misconceptions about colostrum, pressure exerted by spouse/mother-in-law/other elder females in the family for early supplementation with formula, lack of BF support, and breast discomfort within the first few days after childbirth were the major inhibitors of EBF among study participants. The study also demonstrates that many SA mothers-in-law are illiterate and perceive formula feeding as a Canadian way of raising children, and view it more positively than BF (DaCosta, 2012). SA mothers highly value physicians' advice and the acceptability for infant formula rose when they received free formula samples / observed infant formula advertisements in their doctor's office.

Grewal et al (2008) report similar findings in their qualitative study and also highlight that SA immigrant mothers face unique challenges in accessing BF support services such as the inability to understand or speak English, inability to drive, lack of social support, settlement issues, acculturation to a new country and conflicting belief systems.

Cowin J (2001) in her thesis that was done to qualitatively examine the factors influencing EBF practice of Punjabi speaking SA women confirms these findings. Cowin reports that the participants recognized the benefits of EBF however they were unable to continue EBF because it was inconvenient and socially unacceptable in public. The participants expressed that EBF restricted their freedom and they felt housebound. The thesis highlights that family support was the most significant positive predictor for EBF.

B: Economic Challenges

Khanlou et (2017) identify that economic implications of migration greatly influence the maternal and infant health outcomes in the early postpartum period and also affect mothers' infant feeding behavior. The study highlights that all legal immigrants are entitled to utilize publically funded maternity health care including BF support services, however, many recent immigrants are faced with financial constraints that prevent them to effectively utilize the required services including transport cost, loss of wages for the time spent to access BF services, and lack of childcare, etc. Many recent privately-sponsored refugees and other illegal migrants such as asylum seekers noticeably face huge barriers in accessing BF and other maternity services because they lack health insurance coverage.

In a retrospective case comparison study, Jarvis et al (2011) indicate that uninsured women in Canada, face challenges in timely registering for antenatal care and hence are less likely to receive prenatal classes and are unable to access adequate BF support.

Sutton et al (2007) qualitatively explored the BF experiences and challenges of Vietnamese mothers living in London, Ontario. According to this study, transportation cost was one of the major barriers in seeking BF support effectively.

C: The Role of HCPs in BF Promotion

A survey conducted by Pound et al (2014) explored knowledge, confidence, beliefs, and attitudes of Canadian physicians and showed that majority of Canadian pediatricians (PED), family physicians (FP), final-year pediatric residents, and final-year family medicine residents lack optimum knowledge about BF (67% PED and 64% FP scored less than predefined acceptable knowledge score of 70%) and they do not feel confident to deal with lactation problems. Notably, Pound survey indicated that majority of Canadian physicians are unable to provide effective BF counseling and 59.6% PED, and 29.9% FP routinely keep formula samples in their office respectively.

Another prospective cohort study from the US reports that significant communication gaps exist between patients and clinicians regarding BF knowledge and skills. The self-reported data from clinicians was linked with patients' opinions and it was found that majority of the patients were not able to recall BF advice received from their physicians during prenatal visits, however clinicians self-reported that they provided adequate information about BF initiation and duration to all patients. The authors also mention that majority of physicians in the US do not comply with current national BF guidelines and do not deliver BF information to their patients in a meaningful way (Taveras, 2004).

Burglehaus et al (1997) report that many Canadian HCPs lack confidence, competency, and skills about BF support, they spend less time on BF counseling with pregnant mothers, which sometimes lead to dissemination of negative messages to immigrant mothers. These findings indicate a potential gap in the training system which needs to be effectively dealt with by the relevant agencies. Jessri et al (2013) and Rossiter et al (1998) confirm these findings and indicate that the Middle-Eastern participants of their qualitative study were not satisfied with the

BF support they received in Canada; participants mentioned that HCPs in their respective countries encouraged and supported lactating mothers in a compassionate manner and it was perceived to be lacking in the Canadian system. Participants shared that they received contradictory messages from different HCPs regarding BF, which resulted in confusion, disappointment, and mistrust.

Reitmanova & Gustafson (2008) also highlight in their St. John's study that many immigrant women faced discrimination in accessing maternity care including BF support, and, perceived HCPs as insensitive to their cultural values, and less interested in making arrangements to offer linguistically appropriate services. Furthermore, participants expressed that loneliness and delivering child as an immigrant was the most significant stressor and they turned to their HCP for encouragement when they experienced lactation problems, however, their needs were not addressed adequately (Reitmanova & Gustafson 2008)

Loiselle et al (2016) in their mixed method study explored the perceptions of first-time immigrant mothers about BF information and support they received in hospitals and community health centers in Montreal, Quebec and compared it with Canadian-born mothers. The authors pointed out that the likelihood of immigrant women to receive BF information and support was higher compared to Canadian-born mothers and this could have helped them successfully initiate BF. The immigrant women expressed their content with the BF information and support provided by the HCPs; they perceived nurses to be the fundamental source for BF information and support.

International Breastfeeding Policies

The Baby-Friendly Hospital Initiative by WHO and UNICEF

To improve worldwide breastfeeding initiation and duration, the WHO and UNICEF launched the Baby-Friendly Hospital Initiative (BFHI) in 1991. The goal was to protect, promote and support breastfeeding by adopting the WHO recommendation: “Ten Steps to Successful Breastfeeding” (see appendix 2). However, according to Canadian Pediatric Society 2012 Report, only 500 hospitals and health centers in developed countries including 37 (5%) healthcare facilities in Canada have been designated as Baby-Friendly as yet.

Breastfeeding Policies and Guidelines in Canada

The College of Family Physicians of Canada

The College of Family Physicians of Canada fully supports the WHO breastfeeding recommendations and BFHI initiative (see appendix 2) in its policy statement. Also, college’ policy is aligned with the WHO’s International Code on Marketing of Breastmilk Substitutes (1981), and the Innocent Declaration on the Protection, Promotion, and Support of Breastfeeding (1990).

Professional Associations of Canada

The professional medical associations of Canada including Canadian Pediatric Society and Dietitians of Canada promote breastfeeding as an incomparable way to feed infants and endorse EBF for the first six months after birth, and recommend continuation of breastfeeding for 2 years or longer with appropriate supplementation with other food items for the optimum physical and cognitive development of infants.

Breastfeeding Committee for Canada (BCC)

As mentioned earlier, the Baby-Friendly Hospital Initiative (BFHI) was launched by the WHO and UNICEF in 1991 to foster BF practice globally. As a result, the Breastfeeding Committee for Canada (BCC) was established in 1991 as a national authority “to establish breastfeeding as the cultural norm for infant feeding within Canada” (BCC, 2014 Update p.8). Since its inception, BCC is playing a meaningful role in fostering Canada-wide BF practices by implementing and evaluating the BFHI policies (see appendix 2) in diverse Canadian health care facilities (BCC, 2014 Update). In 1998, BFHI was instigated in all Canadian provinces and territories under the direct supervision of the BCC, however, only 5% of the Canadian health care facilities have been able to successfully achieve this target until 2012 (Canadian Pediatric Society, 2012).

Public Health Agency of Canada (PHAC)

PHAC supports BF as the natural way to provide adequate nutrition and emotional support to the infants and toddlers. Notably, the PHAC breastfeeding policy is aligned with the WHO’s breastfeeding recommendations. The PHAC website provides relevant scientific information in simple language to help parents understand the significance of breastmilk. There are digital booklets available on the main page of PHAC website to help support new mothers take informed infant feeding decisions. Moreover, the website offers various helpful BF promotion links and resources to enhance self-efficacy of physicians, nurses and community health workers concerning BF counseling.

Health Canada & Canadian Public Health Association (CPHA)

Both these organizations support exclusive breastfeeding for six months after childbirth and continuation of BF until 2 years or more.

Provincial Ministries of Health (MOH)

Initiatives to foster breastfeeding in different provinces

All Canadian provinces have developed and implemented multiple BF initiatives in their healthcare facilities. The provinces are assessed regularly by the BCC for their BFHI designation which requires adherence to a set of guidelines recommended by the WHO (see appendix 2). All provincial Ministries of Health are committed to comply with the WHO guidelines and take steps to increase the number of BFI designated hospitals and public health units in their jurisdiction. Moreover, comprehensive BF educational material such as booklets, pamphlets, and videos are developed by the respective ministries to help new parents understand the benefits of breastfeeding and breastmilk. The respective ministries have also devised a system of collecting exclusive BF initiation data at discharge; however, there is a lack of standardized system of collecting accurate BF information after discharge and after home deliveries. Additionally, different Canada-wide public events are organized annually during Breastfeeding Week to enhance public awareness regarding the importance of BF and to promote BF as a natural way to feed infants.

Importantly, all Canadian provincial Ministries of Health have introduced free prenatal classes that include BF education for expectant women and their partners. In Ontario, certain public agencies such as the Peel Region Public Health, offer prenatal classes in languages other than English to women that have limited English language proficiency; these classes have been designed according to the culture and religion of the recipients (Region of Peel, Online). The Peel Region also offers special prenatal support to vulnerable women based on their needs. Similarly, the BC province has developed the integrated system at provincial and community levels to help shift cultural attitudes and foster BF among different cultural groups. In BC, some

public health units offer interpreter facility and prenatal classes in different languages, however, these classes are poorly attended, which pose challenges in continuation of these classes.

Barriers in breastfeeding promotion

While important initiatives have been planned in all Canadian provinces, certain gaps have also been noticed in those programs that negatively impact equitable access to these services. For instance, not all BF promotional materials are available in the local languages spoken by diverse immigrant groups. Furthermore, due to limited financial resources and health budget, many provinces have stopped offering regular prenatal classes in languages other than English or French (Higginbottom et al, 2012). Additionally, some provinces such as Nova Scotia has replaced traditional in-person prenatal classes by online prenatal resources in most of its districts thereby resulting in disappointment among expectant mothers that are unable to access the online resources (Nova Scotia Canada, 2014). Moreover, challenges such as lack of standardized breastfeeding definitions in different jurisdictions as reported by Ontario Surveillance Report (2013) also creates barriers in comparing BF data collected by different stakeholders in diverse jurisdictions thereby undermining the effectiveness of surveillance system regarding BF.

Breastfeeding Surveillance in three Canadian Provinces

In 2013 -14, different BF surveillance related projects were conducted in Alberta, BC, and Ontario by their respective health ministries to understand BF services and practices in their jurisdiction and to assess their BFHI status. These projects carried out environmental scans to identify gaps in BF services and data collection in the three provinces. As Alberta, BC and Ontario accept the largest number of immigrants per capita as opposed to other provinces, the

valuable insights gained from these project reports could be effectively utilized to improve current BF promotion programs and to create immigrant-focused interventions in Canada.

Breastfeeding Surveillance in Ontario – A Locally Driven Collaborative Project, 2013

The Breastfeeding Surveillance Report Ontario illustrated that MOH recognizes BF as a significant determinant of health and committed to monitoring BF trends in Ontario however huge variability was found in breastfeeding data collection across the province. It was highlighted that there is a lack of Canada-wide standardized BF surveillance tools. The environmental scan of 36 public health units in Ontario indicated differences in BF data collection methods among large healthcare facilities and small public health units. Additionally, it was revealed that almost half of the public health units in Ontario did not have enough BF data to attain BFI designation. This report concludes that Ontario lacks province-wide standardized data collection methods, therefore, breastfeeding trends among different groups cannot be evaluated effectively.

Review of Breastfeeding Practices and Programs- British Columbia and Pan Canadian Jurisdictional Scan, 2012

Multiple surveys and interviews were conducted with diverse stakeholders to assess BF practices in BC. According to the Pan Canadian Jurisdictional Scan, the BC province is committed to advance its BF policies and formulate strategies to prioritize BF as a public health issue. By designating BF as a public health issue, more human and material resources could be directed towards BF promotion programs in BC. It was illustrated that Perinatal Services of BC (PSBC) and PHAC have been effectively collaborating to create online BF educational material in different languages to help improve new mothers' understanding about benefits of breastmilk

and EBF. Many respondents indicated there is a need for tailoring a “focused public awareness campaign” such as social marketing campaign to help encourage attitude shift and enhance support for BF. Keeping in mind the cultural norms of diverse groups, fathers and other immediate family members need to be included in prenatal education. It was emphasized that in addition to new mothers, fathers and immediate family members, the HCPs and particularly perinatal HCPs need comprehensive BF education. In order to improve self-efficacy and confidence of the perinatal HCPs, the development of standardized BF training curriculum is urgently required. Although a 20-hour BF course based on WHO guidelines has been devised in BC and is a mandatory requirement for all public health nurses, however more formal approach was suggested to help build competency among HCPs in this particular area. The report also recommended the creation of peer-to-peer support programs, community-based initiatives, BF support helpline and special programs for vulnerable groups.

Environmental Scan by Alberta Health Services (AHS), 2014

The BF services data was collected from 43 acute care and 135 community care facilities across Alberta. This report indicated major inconsistencies in BF guidelines/policies across acute care and community care facilities. The conflicting policies potentially affected mothers’ infant feeding decision in multiple ways, for instance, the promotion of infant formula was noticed in some acute care facilities that disseminated messages conflicting with best practice standards to new mothers. Additionally, a lack of standardized BF training curriculum for healthcare providers was reported. The difference in curriculum resulted in the dissemination of contradictory messages to the lactating mothers and negatively affected their ability to initiate and continue EBF. Around 80% of HCPs reported to receiving BF education during their pre-service training, however many discrepancies were found regarding content, format, and duration

of teaching. Also, there was a lack of consistency in BF education provided to women during prenatal classes and after childbirth. It was also pointed out that BF support at many community care facilities was not adequately accessible for mothers that experienced lactation problems during early postpartum, and there was a notable variability in the BF resources among acute care and community care facilities. Only 25% acute care facilities had lactation consultants and 16% and 24 % acute care and community care facilities offer focused BF educational material to specific groups including low-income and immigrants respectively.

Non-governmental Organizations (NGOs)

Several NGOs in Canada support and advocate breastfeeding initiatives in multiple ways. For example, Infant Feeding Action Coalition (INFACT) Canada is committed to promote and protect maternal and child health and well-being through the promotion of breastfeeding. Also, INFACT Canada explicitly condemns the unethical marketing of infant formula and supports the WHO's International Code of Marketing of Breastmilk Substitutes. Similarly, the La Leche League Canada strives to provide mother-to-mother breastfeeding support and BF education to new mothers across Canada. It organizes the free informal discussion among lactating mothers at their homes or at public places where women share their experiences and learn from each other. As the program is volunteer-based, the organization cannot guarantee peer support in all languages spoken by immigrant mothers. In addition to these NGOs, many breastfeeding advocacy groups in Canada offer BF information and emotional support to the lactating women; some of these groups such as Breast Out for Ontario Babies (BOOB) has been advocating for BF in public.

Discussion

Notably, Canada has clear federal guidelines, and ministries of health in all Canadian provinces are committed to advance BF promotion policies in their jurisdictions but the EBF prevalence is far below the WHO recommended standards which raise many concerns (see appendix 1). A Canadian National Survey conducted by Chalmers et al (2009) indicates that the prevalence of EBF intention and initiation were 90% and 90.3% respectively whereas the EBF rate at six months after birth was very low (14.4%). It was concluded that the low EBF rates were attributed to low adherence of Canadian hospitals to BFHI initiatives (Chalmers et al, 2009). Interestingly, the BF initiation rate has been found to be similar among Canadian-born and immigrant mothers, however, the overall likelihood of BF among immigrant mothers is 1.7 times higher at 3 months after childbirth as opposed to Canadian-born mothers (Higginbottom et al, 2015). It is also noteworthy that the BF prevalence at 3 months is not consistent among all immigrant subgroups.

This capstone project identifies that determinants influencing access to BF promotion interventions among immigrant mothers in Canada can be divided into three major themes: (a) social, cultural and linguistic challenges; (b) economic challenges; (c) the role of HCPs in BF promotion.

During the analysis conducted as a part of the capstone project, it was observed that the majority of research studies included BF in the overall maternity care, but only a handful of Canadian studies have exclusively investigated this important area. Surprisingly, no stratified data related to BF trends among diverse immigrant groups was found from the national website sources including Statistics Canada. It is imperative for the relevant agencies to conduct disaggregated data analysis and develop an in-depth understanding of the various disparities that exist in accessing BF promotion interventions in different immigrant population subgroups.

Importantly, all studies except one (Montreal, Quebec study) explicitly identify that immigrant mothers are discontented with the BF support services they receive in Canada, and they are faced with multiple challenges that restrict their access to these services. The social, cultural and linguistic barriers followed by economic challenges have been reported as the most critical determinants of effective utilization of BF support services in the international and national studies alike. The most repeatedly mentioned obstacle in the majority of these studies was language barrier; immigrant mothers with limited English language proficiency were less inclined to attend prenatal classes and seek BF assistance (Groleau et al, 2006; Sutton et al, 2007; Grewal, 2008; Reitmanova & Gustafson et al, 2008; Brar et al, 2009; Gagnon et al, 2010; DaCosta, 2012; Khanlou et al, 2017). The second important inhibitor to successful BF was lack of family / peer / community support and the resulting feelings of low self-esteem which undermined the new mothers' confidence to initiate or continue BF (Groleau et al, 2006; Sutton et al, 2007; Reitmanova & Gustafson et al, 2008; DaCosta, 2012; & Cowin, 2001).

Other significant predictors of negative BF outcomes included: conflicting beliefs, misconceptions about BF, mistrust in the Western healthcare system, the inability to adhere to the rituals associated with maternal nutrition and the perception about the quality of milk (Groleau et al, 2006; Sutton et al, 2007; Grewal, 2008; Gagnon et al, 2010; DaCosta, 2012). Fewer studies have identified financial constraints to be the major contributing factor affecting BF behavior, perhaps because Canada allows universal access to maternity care and BF support services to immigrants. Yet many refugees, particularly privately sponsored refugees, experience difficulties in accessing maternity care in Canada because they do not benefit from the universal health insurance as pointed out by Jarvis et al (2011). Sutton et al (2007) support these findings

and explicitly mention that transportation cost was one of the most important barriers among the Vietnamese study participants to accessing BF support services in London, Ontario.

Physicians play a vital role in fostering BF promotion by providing consistent and adequate information about the benefits of BF and lactation problems. Many studies indicate that physicians in high-income countries including Canada lack confidence and competency in providing the correct BF education/counseling to their patients. The Pound et al Survey (2014) confirms this finding and identifies that the majority of family physicians and pediatricians across Canada do not possess optimum BF-related knowledge; they lack the capacity to efficiently deal with lactation problems and to support BF practices of new mothers. In addition to the optimum BF-related knowledge, cultural competency of the HCPs enormously influences immigrant mothers' BF behavior. Similar to the Melbourne study, Rossiter et al (1998) & Jessri et al (2013) reveal that immigrant mothers in their studies were not satisfied with their physicians' attitude and felt that their cultural and religious values were not respected in the Western healthcare facilities. The contradictory messages received from diverse HCPs contributed to undermining lactating women's confidence and resulted in early cessation of BF.

The analysis of three Canadian provincial BF services and policies clearly indicates that enormous inconsistencies exist in: BF guidelines and policies among diverse healthcare facilities particularly in Alberta; BF definition; data collection tools; training of HCPs; and BF support services offered to pregnant women and lactating mothers as part of maternity care. This variability potentially widens the gaps between Canadian-born and immigrant mothers and negatively influences their BF outcomes. Although none of the project reports explicitly addresses immigrant women's BF challenges, it is evident that inequitable access to BF resources increases the vulnerability of the mother-infant dyad. Moreover, the lack of BF

resources in languages spoken by immigrant populations and interpreters in many public health units was identified as a significant barrier to accessing these resources. Additionally, these reports illustrated that lack of confidence and competency among HCPs negatively affect new mothers' infant feeding decisions and potentially leads to early breastfeeding cessation. This common finding needs urgent attention by the concerned professional associations and ministries. More importantly, limited finances available for healthcare in different provinces negatively affect maternity care including BF support services.

The studies explored in this capstone project greatly contribute to understanding the association between migration process and BF behavior among immigrant women in Canada. Furthermore, the studies and different surveillance reports have evidently shown that there are enormous gaps in context-specific and diversity-responsive BF promotion interventions in Canada; inclusive interventions are urgently required to address the unique breastfeeding-related needs of immigrant mothers.

Recommendations

Canada's immigrant and refugee friendly policies attract citizens from low and middle-income countries to settle in Canada. While immigrant women from low and middle-income countries (LMICs) culturally value BF, many of them fail to successfully initiate or continue breastfeeding their infants after migration. It would be prudent to acknowledge the contextual landscape of immigrant populations, revisit the existing BF interventions and modify them according to specific needs of immigrant women. Undoubtedly, BF is a natural way to feed infants, however, BF is a learned skill rather than an instinct. New mothers require comprehensive knowledge about benefits of breast milk and lactation challenges, and constant BF support during the initial weeks after childbirth. The literature reviewed for this capstone

supports the idea that multidisciplinary and intersectoral BF promotion interventions informed by the social ecological framework (see appendix 3) are needed at different levels. The social ecological model includes “the analysis of interpersonal, community, organizational and policy aspects in addition to individual factors” (Harris, 2010 p. 24). This particular model also allows public health institutions to comprehensively explore multiple conditions that result in inequality and injustices. The social ecological framework would help identify specific domains that lead to disparities in this population.

The BF perceptions are shaped by culture and religion; the unique culture of immigrant women needs consideration in providing public health services. Traditional BF promotion interventions offered by mainstream agencies in Canada are informed by the principle of autonomy and they target individuals with an emphasis on individual responsibility for making health-related decisions (Grewal et al, 2008). These interventions fail to acknowledge the fact that the spouse and immediate family members greatly influence infant feeding decisions in this population. Context-specific and culturally sensitive interventions that target the social network of immigrant mothers would help empower these women in making infant feeding decisions.

Immigrants from developing countries highly regard their physicians and tend to follow their advice hence the proactive role played by doctors in supporting and counseling new mothers’ BF efforts would help improve the BF rates. Mandatory BF courses that include hands-on-training for all physicians particularly family physicians, obstetricians, and pediatricians need to be included in the residency programs to help build physicians’ capacity in this area. In addition to these courses, refresher courses must be available for the practicing HCPs. Additionally, the cultural competency courses are urgently needed for HCPs to help empower their capacity to address the cultural and linguistic needs of immigrant mothers, and to improve

their health outcomes. Lastly, healthcare organizations have an obligation to ensure that their HCP staff has successfully completed the BF training.

As pointed out in some studies and surveillance reports, women lose their confidence and tend to terminate BF earlier when they receive contradictory messages and feel that their cultural values are disrespected by the nurses. Hence, it would be pivotal to devise a standardized BF training curriculum for all nurses and particularly perinatal nurses.

Professional breastfeeding resources such as lactation support has been proved to foster BF worldwide, therefore, training public health nurses to become lactation consultants and appointing them in all healthcare facilities would help encourage immigrant women to initiate and continue BF.

As highlighted in many studies, the immigrant mothers prefer to receive BF education from their peers compared to HCPs that are unfamiliar with their customs and cultures, therefore effective integration of a peer support model in the existing BF promotion would be helpful. The experienced immigrant women could be recruited, trained, and familiarized with the scientific knowledge about BF so that they could support the new mothers in their respective communities.

Standardized data collection tools and surveillance programs need to be implemented across Canada to develop a better understanding of BF trends among different population subgroups. Also, disaggregated data would be helpful to identify positive predictors and barriers to BF among diverse immigrant groups.

Considering the exclusion of many immigrant women from the existing health messaging due to language barriers, it would be pragmatic to create cautiously designed relevant media campaigns for diverse immigrant subgroups. There is evidence that the media has been an

effective tool for disseminating health messages to a wider population in a short period of time (Whitehead, 2000). Radio, TV, and social media are being globally utilized and have been found to efficiently support and encourage women to breastfeed their babies. In particular, social media health promotion campaigns can be cost effective, powerful and have a strong impact.

Broadcasting inclusive, carefully planned and culturally safe BF promotion campaigns in different languages could be productive in creating breastfeeding enabling environments across Canada.

Conclusion

The evidence presented in this paper indicates that rapidly growing population diversity in Canada requires flexible and responsive healthcare systems to ensure positive health outcomes. BF is culturally valued in most of the LMICs however immigrant mothers face enormous challenges after migration that prevent them from effectively accessing BF promotion interventions, and have a negative impact on their BF practice. There is a pressing need to formulate multidisciplinary, culturally appropriate and inclusive BF promotion interventions informed by the social ecological framework. These interventions must be tailored to the specific needs of diverse immigrant women to ensure supportive breastfeeding environments in Canada.

Reflection

MPH program provided me an avenue to explore the opportunities and challenges that shape public health and global health in particular. My previous experiences working as a medical professional and an ethicist in low and middle-income countries enabled me to explore diverse domains of public health in a meaningful manner, which made my journey of public health study more exciting. Additionally, my practicum at Fraser Health Authority provided many opportunities to learn practical skills in a real life professional environment. Lastly, the efforts and support of my teachers not only helped me gain relevant knowledge and skills but also motivated me to think out of the box.

My health promotion work during my practicum and development of a program to foster exclusive breastfeeding practice among South Asian women of Surrey, BC, set a stage for my capstone project. I learned valuable lessons during my practicum including the significance of effective communication skills and I achieved many important milestones of the practicum utilizing this skill. The practicum topic inspired me to take a closer look at breastfeeding experiences of diverse immigrant and refugee mothers that deliver their babies in Canada. I am glad that I selected this specific area for my capstone project because I realized during my research that this specific area has not been adequately prioritized in research and practice; there is a dire need to identify the gaps that exist in Canadian breastfeeding promotion programs. It was noteworthy that immigrant mothers face similar barriers in accessing breastfeeding support in many developed countries, however, these barriers can be dealt with by taking simple measures.

This capstone projects marks the culmination of my MPH program and not only displays my public health knowledge and skills but also highlights my commitment to working in the area

of women's health and empowerment. I strongly believe that healthy and empowered women ensure healthier future irrespective of their countries of residence. Furthermore, as a new immigrant, it was interesting to learn about the complexity of relationship between migration process and women's infant feeding practices. This capstone and MPH program helped expand my global health horizon and enhance my familiarity of the critical social determinants of health. I believe that I am able to identify the windows of opportunity in the existing breastfeeding promotion programs in Canada. I look forward to continue building expertise in diverse public health domains and working as a public / global health professional to help improve population health.

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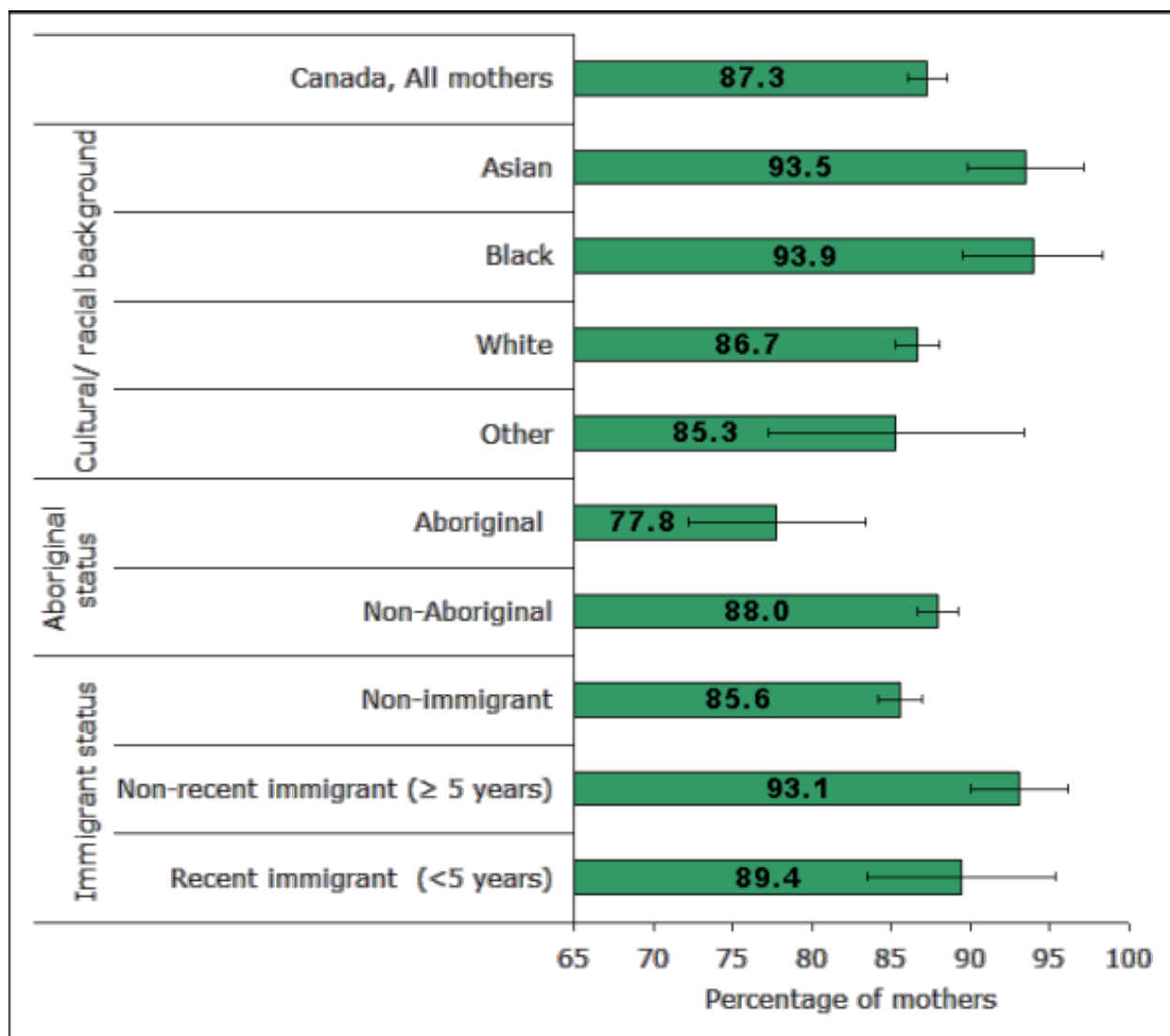
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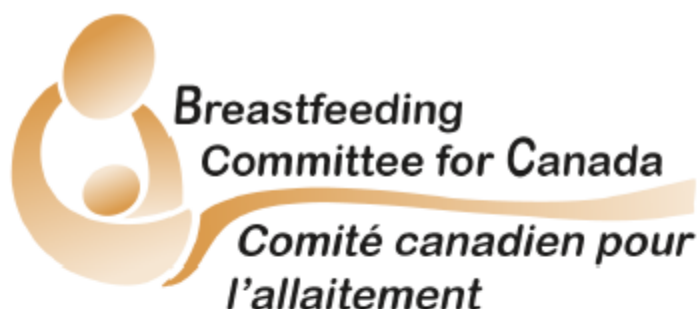
http://www.un.org/en/development/desa/population/migration/publications/migrationreport/docs/MigrationReport2015_Highlights.pdf

Appendix 1: Breastfeeding initiation based on migration status and cultural background



Source: Government of Canada Website (2009 – 2010 Statistics)

Appendix 2: Baby-Friendly Initiative Guidelines



The National Authority for the Baby-Friendly Initiative

Integrated 10 Steps & WHO Code Practice Outcome Indicators for Hospitals and Community Health Services: Summary

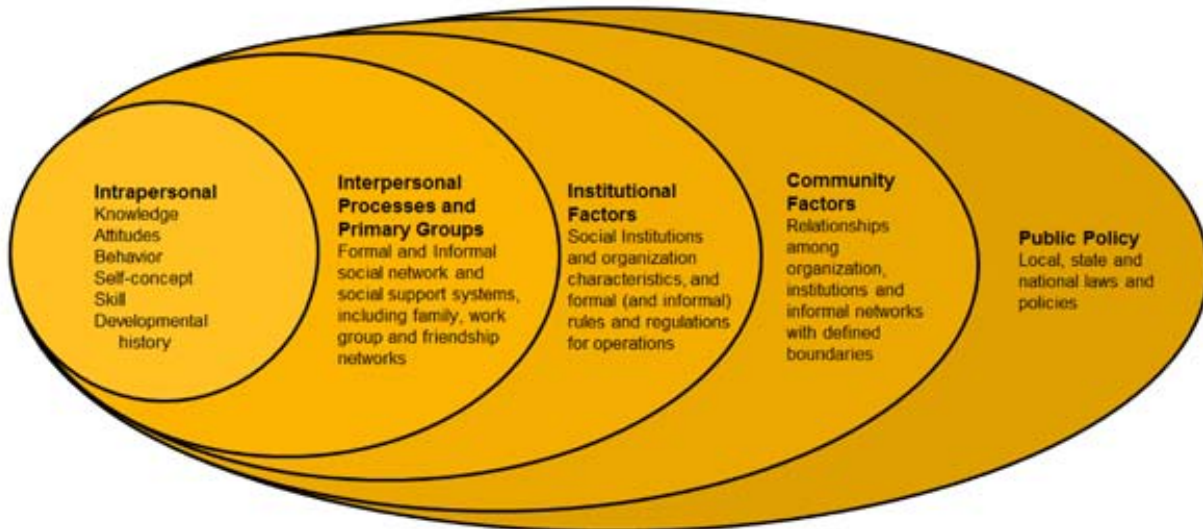
The WHO 10 Steps to Successful Breastfeeding (1989) and the Interpretation for Canadian Practice (2011)

Step 1	WHO	Have a written breastfeeding policy that is routinely communicated to all health care staff.
	Canada	Have a written breastfeeding policy that is routinely communicated to all health care providers and volunteers.
Step 2	WHO	Train all health care staff in the skills necessary to implement the policy.
	Canada	Ensure all health care providers have the knowledge and skills necessary to implement the breastfeeding policy.
Step 3	WHO	Inform pregnant women and their families about the benefits and management of breastfeeding.
	Canada	Inform pregnant women and their families about the importance and process of breastfeeding.
Step 4	WHO	Help mothers initiate breastfeeding within a half-hour of birth. WHO 2009: Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour. Encourage mothers to recognize when their babies are ready to breastfeed and offer help if needed.
	Canada	Place babies in uninterrupted skin-to-skin ¹ contact with their mothers immediately following birth for at least an hour or until completion of the first feeding or as long as the mother wishes: encourage mothers to recognize when their babies are ready to feed, offering help as needed.

Step 5	WHO	Show mothers how to breastfeed and how to maintain lactation, even if they should be separated from their infants.
	Canada	Assist mothers to breastfeed and maintain lactation should they face challenges including separation from their infants.
Step 6	WHO	Give newborns no food or drink other than breastmilk, unless medically indicated.
	Canada	Support mothers to exclusively breastfeed for the first six months, unless supplements are <i>medically</i> indicated.
Step 7	WHO	Practice rooming-in - allow mothers and infants to remain together 24 hours a day.
	Canada	Facilitate 24 hour rooming-in for all mother-infant dyads: mothers and infants remain together.
Step 8	WHO	Encourage breastfeeding on demand.
	Canada	Encourage baby-led or cue-based breastfeeding. Encourage sustained breastfeeding beyond six months with appropriate introduction of complementary foods.
Step 9	WHO	Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
	Canada	Support mothers to feed and care for their breastfeeding babies without the use of artificial teats or pacifiers (dummies or soothers).
Step 10	WHO	Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.
	Canada	Provide a seamless transition between the services provided by the hospital, community health services and peer support programs. Apply principles of Primary Health Care and Population Health to support the continuum of care and implement strategies that affect the broad determinants that will improve breastfeeding outcomes.
The Code	WHO	Compliance with the International Code of Marketing of Breastmilk Substitutes.
	Canada	Compliance with the International Code of Marketing of Breastmilk Substitutes.

Source: Breastfeeding Committee for Canada Website

Appendix 3: Social ecological Framework



Source: American College Health Association (ACHA) Website

Appendix 4: Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> • Documents published in English language 	<ul style="list-style-type: none"> • Conference proceedings
<ul style="list-style-type: none"> • Full-text articles 	<ul style="list-style-type: none"> • Review articles
<ul style="list-style-type: none"> • Documents focused on recent immigrant women (women who immigrated to Canada less than 5 years) 	<ul style="list-style-type: none"> • Documents focused on all immigrants
<ul style="list-style-type: none"> • Documents published between January 1980 and May 2017 	<ul style="list-style-type: none"> • Documents published before January 1980
<ul style="list-style-type: none"> • Documents on economic immigrants, refugees and asylum seekers from LMICs 	<ul style="list-style-type: none"> • Theoretical articles
<ul style="list-style-type: none"> • Short communications 	<ul style="list-style-type: none"> • Book chapters
<ul style="list-style-type: none"> • Documents on asylum seekers from LMICs 	<ul style="list-style-type: none"> • Editorials
<ul style="list-style-type: none"> • Studies with adequate information 	<ul style="list-style-type: none"> • Studies with inadequate information
<ul style="list-style-type: none"> • Documents recommending BF promotion, initiation and duration 	
<ul style="list-style-type: none"> • BF Program evaluation reports 	
<ul style="list-style-type: none"> • International organizations' reports 	
<ul style="list-style-type: none"> • Government reports 	
<ul style="list-style-type: none"> • Dissertations and thesis focused on immigrant women's BF experiences in Canada 	