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Breastfeeding Experiences of African Migrant Women in Developed Countries: A Qualitative Systematic Review.

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A thesis submitted in partial fulfillment of the requirements for the Master of Science degree in Nursing

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ABSTRACT

The American Academy of Pediatrics and the World Health Organization (WHO) recommend that newborns be fed breastmilk exclusively for the first 6 months of life unless medically contraindicated. Non-White African migrant women in developed countries experience breastfeeding challenges that shorten breastfeeding duration compared to women in their countries of origin. The purpose of this systematic review was to synthesize available qualitative research evidence to understand the breastfeeding experiences of non-White African migrant women residing in industrialized nations. Eight electronic databases were assessed and the Critical Appraisal Skills Programme (CASP) was used for quality assessment of studies. Ten peer-reviewed qualitative research articles published in English between 2003 and 2016 that examined the breastfeeding experiences of non-White African migrant women in developed countries were selected for the review. Data were extracted into NVivo 12 software and analyzed using thematic synthesis. Eight analytical themes were identified: *Breastfeeding as the accepted norm*, *Breastfeeding is convenient and enjoyable*, *Breastfeeding is stressful*, *Women's inadequate breastfeeding knowledge*, *Perceived insufficient milk supply*, *Preference of formula*, *Family and friends' support* and *Health professional's support*. Findings indicate that non-White African migrant women value breastfeeding but do not maintain exclusivity due to cultural beliefs. Family support especially infant's grandmother's support has a strong influence on women's breastfeeding experiences. Despite the various breastfeeding challenges these African migrant women experienced, they still maintained long durations of breastfeeding up to 9 to 12 months. Family involvement in breastfeeding education and support services are crucial strategies health professionals need to include when caring for non-White African migrant women.

Effective steps are needed to eliminate the negative connotations of breastfeeding publicly. Providing conducive and comfortable public and work environments to breastfeed will be beneficial to women and improve breastfeeding experiences.

Keywords: breastfeeding experiences, African migrants, qualitative studies, systematic review.

CO-AUTHORSHIP STATEMENT

Odinaka Anunike conducted this review for her master's thesis under the supervision of Dr. Marilyn Evans and Dr. Kim Jackson who will be co-authors of the publication resulting from the manuscript.

DEDICATION

To my sister, Dr. Nwakaego C. Anunike, for first conceiving this dream, believing in me, and for never leaving my side. You are indeed a role model.

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CHAPTER ONE

INTRODUCTION

Breastmilk is described as the total nutritional package for infants complete with protective antibodies (World Health Organization [WHO], 2018). The American Academy of Pediatrics (AAP) and World Health Organization (WHO) recommends that all newborns be exclusively breastfed for the first six months of life and continued with other supplementary meals up to and beyond the first two years (AAP, 2018; WHO, 2018). Early initiation and adequate duration of breastfeeding is complementary to the health of both infant and mother (Kramer & Kakuma, 2012). However, the initiation and duration of breastfeeding vary widely depending on culture, location, ethnicity, and other conditions (Condon, Ingram, Hamid, & Hussein, 2003; Global Breastfeeding Scorecard, 2017). For example, in Africa, breastfeeding is more prevalent and tends to be of longer duration where 80% of infants are breastfed up to one year of age and 40% are breastfed until 2 years of age (Global Breastfeeding Scorecard, 2018). However, evidence shows that less than 13.6% of non-White women from Africa residing in developed countries breastfeed for only 11 months (Lee, Elo, & Culhane, 2010).

Among the various factors that influence breastfeeding, ethnic influences play a significant role, especially in the racially diverse developed world. For example, in the United States, Asian, Caucasian and Hispanic women are reported to be more likely to breastfeed their infants (83.2%, 83%, and 82.4% respectively) compared to Black women at 66.4% (Anstey et al., 2017). Like ethnicity, migration also influences breastfeeding practices where length of stay in host countries and acculturation significantly influences breastfeeding decisions (Nolan & Layte, 2014). Migration has shaped the demographics and characteristics of human populations over time. A migrant, as defined by the

International Organization of Migration (IOM), is an umbrella term that includes any individual who moves from their country of nationality to a new country to improve their life (Laczko et al., 2013). For the purpose of clarity, African migrant women in this review refer to all non-White women born in Africa and reside in developed countries.

African countries account for 14.1% of total migration globally, and 4.2% (11.06 million) of migrant women residing in developed countries (United Nations Department of Economic and Social Affairs [UN DESA], 2017). Currently, 13.4% of Canada's population are migrants from Africa, which is the second largest source of migrants in Canada after Europe (Statistics Canada, 2017). Further, there has been a four-fold increase in the flow of African migrants into Canada from 1972 (Statistics Canada, 2017). The behaviours of migrants often change as they acculturate to their new environment, often creating a unique characteristic distinct from both individuals back in their home country as well as their new neighbors (Sutherland, 2013).

Developing effective strategies to address breastfeeding disparities and to promote exclusive and prolonged breastfeeding among African migrant women in developed countries remains a challenge. Although there is considerable research on breastfeeding in general, little is known about African migrant women's breastfeeding experiences in the developed world. Understanding the specific breastfeeding experiences of African migrant women and the challenges they face post migration may help inform interventions and policies to support their breastfeeding practices.

Background

Breastfeeding, as a human behavior and activity, might be influenced by migration. Research suggests that when women migrate from societies with high rates of breastfeeding to countries with different infant feeding traditions and culture, some

women maintain traditional methods of infant feeding while others begin to adopt practices more aligned with the feeding practices of their adoptive country (Condon, Ingram, Hamid, & Hussein, 2003). For example, women in Africa are generally more likely to breastfeed their infants for up to 12 to 24 months after birth compared to women in other continents (Global Breastfeeding Scorecard, 2017). However, upon migration to western countries, the prevalence, and duration of breastfeeding among some women of African origin has been reported to decrease significantly and only lasts between two to eight months (Murphy, 2010).

The limited literature on breastfeeding among some non-White African migrant women in developed countries shows not only lower breastfeeding duration compared to when they were in Africa, but also a persistent decrease the longer they have been living in the new country (Murphy, 2010). Murphy (2010) reports that some women breastfed the children they had while in Africa for up to 16 months, but after migration breastfed the children they had in the United States for only two months. Unfortunately, the underlying reasons for this apparent disparity in breastfeeding rates are not fully understood, hence, appropriate solutions are lacking (Woldemicael, 2009).

The benefits of breastfeeding have been extensively reported by relevant health organizations such as the Canadian Pediatric Society (CPS, 2018), American Academy of Pediatrics (AAP, 2018), Canadian Nurses Association (2008), WHO (2018) and United Nations Children's Funds (UNICEF, 2017). Although the literature varies on the benefits of breastfeeding, accumulating evidence overwhelmingly suggests that breastfeeding may promote better infant health and reduce infant morbidity and mortality rates (Lamberti et al., 2011). Starting with the strongest evidence, a recent systematic review suggests that breastfeeding might have a positive correlation with neurodevelopmental outcomes in

children (Horta, De Sousa, & De Mola, 2018). Another systematic review reported a 43% decrease in otitis media among two-year-old children who were exclusively breastfed for the first six months after birth (Bowatte et al., 2015). In addition, a randomized controlled trial study conducted in Belarus also reported breastfeeding to have significantly reduced the risk of gastrointestinal infections by 40% and that of atopic eczema by 46% in children (Kramer et al., 2001). Furthermore, results from two meta-analyses show that breastfeeding appears to play a protective role in decreasing childhood obesity. Whaley, Koleilat, Leonard, and Whaley (2017) reported a 3% decrease in the risk of obesity for every month of exclusive breastfeeding among children between 2-5 years in the United States (US), similar to McCrory & Layte (2012)'s results in Ireland showing a 62% decrease in the risk of later obesity in infants breastfed for more than 26 weeks.

Breastfeeding provides benefits for mothers as well. Studies suggest that it may reduce the risk of breast and other gynecological cancers. Jordan et al. (2017), in a meta-analysis, revealed that breastfeeding longer than 6 months was associated with an 11% reduction in the risk of endometrial cancer. A case-control study by Huo et al. (2008) found a 7% reduction in the risk of breast cancer for every 12 months of breastfeeding in Nigerian women. Similar results were also obtained by Su, Pasalich, Lee, and Binns (2013) in a case-control study in the Guangzhou Province of Southern China, finding that prolonged breastfeeding between 10–31 months was associated with a 91% reduction in the risk of ovarian cancer. Exclusive breastfeeding can also help with child spacing which allows the mother's body to fully recover after childbirth (Fotso, Cleland, Mberu, Mutua, & Elungata, 2013). Additionally, lactational amenorrhea (LAM), effectively combined with exclusive breastfeeding, can be a possible cost-free method of contraception. Radwan, Mussaiger, and Hachem (2009), in a correlational study, reported that exclusive

breastfeeding up to six months yielded longer periods of LAM lasting 6-9 months among women in the United Arab Emirates. Similarly, in their prospective study conducted in India, Tiwari, Khanam, and Savarna (2018) also found that 89% of 298 women who used LAM as a method of contraception for a period of six months did not get pregnant. Conversely, Van der Wijden and Manion (2015) found no significant difference in pregnancy rates between women using LAM as a contraceptive device and non-exclusive breastfeeding amenorrhoeic women not using any contraceptive method. Finally, breastfeeding has been associated with reducing the risks of postpartum hemorrhage (Thompson, Heal, Roberts, & Ellwood, 2010). Based on the health benefits of breastfeeding, it is important to help these women to maintain their accustomed breastfeeding behaviors and practices after migration.

Despite these benefits of breastfeeding, global initiation and duration of breastfeeding rates still fall below the target of 75% of women initiating breastfeeding within the first hour of birth and 50% of infants breastfeeding for at least six months (WHO, 2018). Recent figures show that of 194 countries for which data was available, only 23, mainly developing countries, have achieved a six-month exclusive breastfeeding rate of 60% (WHO, 2018; Global Breastfeeding Scorecard, 2017). According to the Global Breastfeeding Scorecard (2017), 70% of African countries maintain breastfeeding until 2 years after birth which is generally higher than other parts of the world. These high breastfeeding rates have been attributed to culture and tradition in various parts of Africa. Most African cultures support and encourage mothers to breastfeed whenever the need arises, without fear of humiliation, public reprimand or need to “cover up”, whereas breastfeeding women in developed countries often feel the need to (Daglas & Antoniou, 2012). For example, a common practice in Nigeria is the celebratory maternal visit of

new mothers by older female relatives, for the purpose of taking care of any other children and managing the household chores while the new mother focuses solely on breastfeeding and nurturing her new child (Egwuatu, 1986). Furthermore, in Somalia, Ghana, Malawi, and Zimbabwe, new mothers are required to stay indoors for a period of 40 to 90 days after childbirth to facilitate breastfeeding (Missal, Clark, & Kovaleva, 2016).

The situation is far different for African women who have migrated to developed countries, whose population is quickly rising and currently accounts for one-third of the 36 million African migrant population in developed countries (United Nations Department of Economic and Social Affairs [UN DESA], 2017). With such large numbers of migrants in countries such as Canada, it is imperative that this group is assisted to strive to achieve the WHO's target of 50% breastfeeding rate in the first six months of an infant's life by 2025, through a better understanding of their experiences and challenges (Higginbottom, Hadziabdic, Yohani, & Paton, 2014).

Some authors have postulated possible reasons why African migrant women tend to breastfeed less post-migration. Rogers (1997) classified migrants as a vulnerable group at risk for emotional, social, and physical distress, by virtue of their past experience. Further, settling down in a foreign country adds to the challenges of childbearing. Factors such as lack of access to services, language barriers, and cultural differences place these women under significant physical and psychological stress (Nirmala, Kumar, & Virupaksha, 2014). The hormonal changes following pregnancy and childbirth and the struggle to try and find financial, social and emotional balance in a new and totally different environment, places these women at high risk of postnatal difficulties (Nirmala, Kumar & Virupaksha, 2014)

Significance of Study

Given the benefits of breastfeeding for women and children, enhanced understanding of the breastfeeding experiences among African migrant women is a starting place for us to begin to address the breastfeeding challenges these women face. Although there is considerable research on breastfeeding in general, no systematic review has been conducted that focuses specifically on African migrant women's breastfeeding experiences and issues in the developed world. Understanding the specific breastfeeding experiences of African migrant women and the challenges they face post-migration may help inform interventions and policies to support their breastfeeding practices. Research on breastfeeding challenges among African migrants in Canada and other developed countries is scant, and as such, this systematic review synthesizes results from qualitative studies, to provide an in-depth understanding of the personal breastfeeding experiences of non-White African migrant women in developed countries from their perspectives. The findings can inform public health policy and help healthcare professionals gain foresight in modifying systems of practice through ethnic inclusiveness in breastfeeding, nursing, and general health care. In addition, results can help influence a change in nursing education curricula and identify gaps in the literature that require further research.

Purpose of Study

The aim of this qualitative systematic review is to identify and synthesize available qualitative research about breastfeeding behaviour in non-White African migrant women to increase understanding of their experiences of breastfeeding while living in developed countries, the challenges they encounter and what support they need.

Research Questions

This review aimed to answer the following questions:

1. What are the breastfeeding experiences of non-White African migrant women residing in developed countries?
2. What challenges do these women face when breastfeeding their infants in developed countries?
3. What supports do they need to initiate and maintain exclusive breastfeeding of their infant?

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CHAPTER TWO

MANUSCRIPT

Background and Significance

Breastmilk has been described as the total nutritional package for the infant complete with protective antibodies; and prompt initiation and adequate duration is complementary to the health of both infant and mother (Kramer & Kakuma, 2012; WHO, 2018). However, factors such as migration and industrialization have been associated with changes in breastfeeding behaviours and practices (Dennis et al., 2007).

Migration dates back to the beginning of the human race with the first recorded migration being from Africa (Dorey & Blaxland, 2018). Many reasons account for migration. The search for a better life and better opportunities, conflict, inequality and a lack of sustainable source of revenue force people out of their homes, communities, and countries in search of a better future (Laczko et al., 2013). The migratory experience may come with the attendant issues of adjustment to a new environment, and language and cultural barriers, making migrants one of the most vulnerable members of society (Rogers, 1997). However, with the right policies, migration can be a powerful tool for sustainable economic growth and development as well as the enhancement of both home and host countries.

According to Laczko et al. (2013), international migration has been on the increase for the past 17 years. Africa accounted for 14.1% of total migration, with females making up almost half of all international migration (UN DESA, 2017). The numbers show that there are currently 258 million international migrants globally with African migrants making up 14% (36 million), of which 6.7% (17.28 million) are

women. Furthermore, as of 2017, about 4.2% (11.06 million) of African migrant women, the subjects of this study, resided in developed countries (UN DESA, 2017).

Migration numbers have been traditionally higher for men as they search for a means to provide for their families (Zlotnik, 2003), but changing gender roles has led to more women migrating out of Africa and taking up professional jobs in search for improved lives (Thomas & Logan, 2012) and support for their families (Food and Agriculture Organization of the United Nations [FAO], 2017). However, these migrant women have to balance working with the challenges of pregnancy, childbirth, breastfeeding, and postpartum recovery.

The behavior of migrants often becomes different post-migration as they acculturate to their new environment and become influenced by their experience of moving and the circumstances of their new locales. Breastfeeding appears to be one of such modified behaviours of non-White African migrant women and this study is an attempt to identify reasons for the differences between breastfeeding behavior pre- and post-migration and understand their breastfeeding experiences in developed countries post-migration.

The benefits of breastfeeding have been extensively reported by relevant health organizations such as the Canadian Pediatric Society (CPS, 2018), American Academy of Pediatrics (AAP, 2018), Canadian Nurses Association (2008), WHO (2018) and United Nations Children's Funds (UNICEF, 2017). Although the literature varies on the benefits of breastfeeding, accumulating evidence overwhelmingly suggests that breastfeeding may promote better infant health outcomes and reduce infant morbidity and mortality rates (Lamberti et al., 2011). A recent systematic review suggests that breastfeeding might have a positive correlation with neurodevelopmental outcomes in children (Horta, De

Sousa, & De Mola, 2018). Another systematic review reported a 43% decrease in otitis media among two-year-old children who were exclusively breastfed for the first six months after birth (Bowatte et al., 2015). In addition, a randomized controlled trial study conducted in Belarus reported breastfeeding to have significantly reduced the risk of gastrointestinal infections by 40% and that of atopic eczema by 46% in children (Kramer et al., 2001). Furthermore, two meta-analyses show that breastfeeding appears to play a protective role in decreasing childhood obesity. The study by Whaley, Koleilat, Leonard, and Whaley (2017) reported a 3% decrease in the risk of obesity for every month of exclusive breastfeeding among children between 2-5 years in the United States (US), similar to McCrory & Layte (2012)'s results in Ireland showing a 62% decrease in the risk of later obesity in infants breastfed for more than 26 weeks.

Breastfeeding benefits extend to mothers as well. Studies suggest that it may reduce the risk of breast and other gynecological cancers. Jordan et al. (2017), in a meta-analysis, revealed that breastfeeding longer than 6 months was associated with an 11% reduction in the risk of endometrial cancer. A case-control study by Huo et al. (2008) found a 7% reduction in the risk of breast cancer for every 12 months of breastfeeding in Nigerian women. Similar results were also obtained by Su, Pasalich, Lee, and Binns (2013) in their case-control study conducted in the Guangzhou Province of Southern China. They found that prolonged breastfeeding between 10-31 months was associated with a 91% reduction in the risk of ovarian cancer.

Additionally, exclusive breastfeeding can help with child spacing which allows the mother's body to fully recover after childbirth (Fotso, Cleland, Mberu, Mutua, & Elungata, 2013). Lactational amenorrhea (LAM), effectively combined with exclusive breastfeeding, can be a possible cost-free method of contraception. Radwan, Mussaiger,

and Hachem (2009), in a correlational study, reported that exclusive breastfeeding up to six months yielded longer periods of LAM lasting 6-9 months among women in the United Arab Emirates. Similarly, in a prospective study conducted in India, Tiwari, Khanam, and Savarna (2018) found that 89% of 298 women who used LAM as a method of contraception for a period of six months did not get pregnant. Conversely, Van der Wijden and Manion (2015) found no significant difference in pregnancy rates between women using LAM as a contraceptive device and non-exclusive breastfeeding amenorrhoeic women not using any contraceptive method. Finally, breastfeeding has been associated with reducing the risk of postpartum hemorrhage (Thompson, Heal, Roberts, & Ellwood, 2010).

Despite these benefits of breastfeeding, global initiation and duration of breastfeeding rates still fall below the target of 75% of women initiating breastfeeding within the first hour of birth and 50% of infants breastfeeding for at least six months (WHO, 2018). Breastfeeding until 2 years after birth is reported in 70% of African countries which is generally higher than other parts of the world. In comparison, evidence shows that less than 13.6% of non-White women from Africa residing in developed countries breastfeed for 11 months (Lee, Elo, & Culhane, 2010). The reasons for this reduction in breastfeeding rates post migration are not very clear.

Understanding the experiences of breastfeeding non-White African migrant women may help to reveal the factors responsible for the reduced rates of initiation and duration of breastfeeding in African migrants in developed countries and potentially help these women overcome breastfeeding challenges due to cultural differences and adjustment to a new environment. There is inadequate research on breastfeeding challenges among African migrants in Canada and other developed countries, and as such, this systematic

review synthesizes results from available qualitative studies to provide an in-depth understanding of the personal breastfeeding experiences of non-White African migrant women in developed countries from their perspectives. Findings from the study can help inform public health policy and assist healthcare professionals in their approach to educating and providing support to breastfeeding mothers. In addition, results can help influence a change in nursing education curricula and identify gaps in the literature that require further research with the ultimate result of global improvement of maternal and infant health parameters.

Literature Review

A search of the existing literature was conducted using multiple databases including CINAHL, PubMed, ProQuest- Dissertations and Theses Global, Scopus, Cochrane Library, and Web of Science (MEDLINE and Core Collection). In addition, grey literature was accessed using Google Scholar. Search terms were “breast feeding”, “breastfeeding”, breastfeeding experiences”, “immigrants”, “African immigrants”, “baby friendly initiative programs”, and “attitudes to breastfeeding”. Articles were included in the literature review if they were published in English and focused on the breastfeeding experiences of non-White migrant women of African origin residing in a developed country. The literature review resulted in four themes: (1) breastfeeding self-efficacy (2) facilitators and challenges of breastfeeding practices, (3) disparity between breastfeeding practices among African women in Africa and African women in host countries, and (4) factors affecting breastfeeding.

Breastfeeding Self-Efficacy

Breastfeeding self-efficacy has been defined as a mother's belief in her ability to organize and carry out the activities essential for breastfeeding her infant. The concept has been used to develop the breastfeeding self-efficacy scale short-form (BSES-SF), an assessment tool to predict duration and pattern of breastfeeding duration in studies comparing breastfeeding in women of different ethnocultural persuasions in studies (Blyth et al., 2002; Dai and Dennis 2003; Dennis and Faux 1999; Torres et al., 2003). Results from these studies indicate the potential of breastfeeding self-efficacy as a predictor of positive breastfeeding outcomes. According to Meedyia, Fahy & Kable (2010), a woman's intention to breastfeed, her self-confidence in her ability to breastfeed, and her social support are significant factors that determine the success of breastfeeding practices.

The breastfeeding self-efficacy assessment tool was based on Bandura's 1977 self-efficacy theory and developed by Dennis (2003) to predict: whether or not a mother chooses to breastfeed her infant; how much work she is willing to put to achieve the breastfeeding objective; whether she develops encouraging or discouraging thoughts; and her emotional and psychological reactions to breastfeeding challenges. Core concepts of breastfeeding self-efficacy include performance accomplishments, vicarious experiences, verbal responses, and physiological factors.

Performance accomplishment is facilitated by consistent practice in order to acquire personal mastery. In relation to breastfeeding self-efficacy, there is an increased possibility that a woman who previously attempted breastfeeding and succeeded will be more equipped with the knowledge and skills needed for successful breastfeeding and handling common difficulties (Dennis, 2003). Murphy (2010), in her study on the breastfeeding experiences of non-White women, enrolled in the Supplemental Program

for Women, Infants and Children in Oregon, USA, reported that maternal breastfeeding self-efficacy is an important aspect of facilitating breastfeeding.

Dennis (2003) proposed indirect experiences, such as learning breastfeeding skills by witnessing others, as a means of improving self-efficacy in breastfeeding. The other sources of improved breastfeeding self-efficacy are verbal encouragements and physiological factors. Physiological factors relate to the mother's ability to either overcome or succumb to emotional and physical stress that is associated with breastfeeding. Other factors might include women's experiences with breastfeeding-related pain. A phenomenological study by Murphy (2010) of 10 African American and African migrant women in Oregon, USA found that mothers expressed self-enhancing breastfeeding thoughts and confidence when they faced breastfeeding difficulties through acknowledging breastmilk as the healthiest choice for their infants. Further, the mothers interviewed did not worry about infants not sucking enough because they were confident that with constant breastfeeding the infant would learn how to latch on to successfully breastfeed.

McCarter-Spaulding and Gore (2009) conducted a descriptive study to investigate breastfeeding self-efficacy and its association with breastfeeding duration and pattern among 125 non-White women of African descent in New England, USA. The breastfeeding self-efficacy short scale (BSES-SF) designed by Dennis (2003) was used to measure self-efficacy. The BSES-SF is a 14-item questionnaire with a 5-point Likert scale ranging from 1 being "not at all confident" to 5 being "very confident". The results indicated higher breastfeeding self-efficacy scores in women with previous breastfeeding experience as suggested by Dennis (2003). In addition, women who effectively practiced exclusive breastfeeding one month after delivery had higher breastfeeding self-efficacy

scores than others who introduced formula to their infants before one month. This study highlighted the importance of African migrant women's perseverance to continue to breastfeed even though they encountered breastfeeding difficulties such as nipple pain and latching problems. In summary, breastfeeding self-efficacy, the mother's belief and confidence in her ability to breastfeed is a direct determinant of the success of breastfeeding and is in turn determined by previous experience, practice, education as well as witnessing others.

Facilitators and Challenges to Breastfeeding Practices

Several factors determine the breastfeeding practices of women in different geographical locations. According to Wandel et al. (2016), culture, social environment, and support from the health care system plays a significant role in the breastfeeding practices of African migrant women. Migrant women of African descent considered breastfeeding a natural phenomenon and an important process for the health, growth, and development of the child (Wandel, et al., 2016). This belief is reinforced by support from health clinics, relatives and friends thus encouraging breastfeeding amongst this demographic (Wandel, et al., 2016).

Religion may also play a role in breastfeeding practices. Breastfeeding is embedded in the teachings of the Islamic holy book, the Quran, which recommends breastfeeding for the first two years of life. This serves as a motivation for breastfeeding for the predominantly Muslim Somali migrants in Norway (Wandel et al, 2016). On the other hand, religious injunctions have shown to be a hindrance to breastfeeding. A survey of breastfeeding practices among Somali women by Ingram et al., (2008) in the UK revealed that although most of them would breastfeed anywhere, they would rather find a place where they feel comfortable, as most women would, irrespective of religious

persuasion. The Islamic tradition to keep the body covered when amongst strangers inhibits exclusive breastfeeding. In addition, the social stigma associated with breastfeeding in public subjects women to resort to the use of formula when out in the public with their infants because they could not breastfeed on demand under those circumstances (Condon, et al., 2003).

Ingram et al., (2008) studied the factors affecting breastfeeding practices in 22 Afro-Caribbean women, young mothers and Somali migrant women in the UK and noted that the Somali migrants' clothing from their home countries were designed to allow ease of access and support the women's desire to breastfeed anywhere, thus eliminating the feeling of embarrassment of being exposed while breastfeeding. On the other hand, the mothers in this study felt that the available public infant changing facilities, particularly for young mothers as well as breastfeeding mothers, were often inadequate and inappropriate, often doubling as restrooms. They felt that a dedicated breastfeeding room would be better if it was devoid of toilets which they considered unsightly.

In summary, several factors may facilitate or inhibit breastfeeding. Culture, social environment, and support from family and health care staff facilitate breastfeeding while social stigma associated with public breastfeeding inhibits breastfeeding practice. Religious injunctions may either pose as facilitators or challenges. The study scrutinized and identified which of these are important in African migrant women in developed countries.

Breastfeeding Disparities among African Women in Africa and African Women in Host Countries

Several studies have shown that migration may lead to shorter breastfeeding periods with the duration of breastfeeding decreasing as the length of stay in the new

country increases (Higginbottom, Hadziabdic, Yohani, & Paton, 2014; Murphy, 2010; Textor, Tiedje & Yawn, 2013). In addition, Fabiyi et al., (2016) found that although African migrant women in the United States intend to, initiate, and sustain breastfeeding behaviors at higher rates and longer duration than their US-born counterparts, there is a significant disparity in breastfeeding initiation and weaning durations between these non-White African migrants and African women residing in Africa.

In a qualitative study of 40 Sudanese migrants in Australia by Balmer & Paxton (2004), all the Sudanese women reported breastfeeding their children while in Sudan from five months to two years. These women felt there is a strong correlation between the length of breastfeeding and the health of the baby. However, when these same women migrated to Australia, not as many breastfed their infants. This sub-optimal breastfeeding pattern seems to be more pronounced in mothers migrating from home countries with high breastfeeding rates. The results of a study by Wandel et al., (2016) indicated shorter breastfeeding duration in migrant Somali women compared with native Norwegians in breastfeeding-friendly Norway. The authors reported that while 65% of Norwegian women exclusively breastfed at 3-months postpartum, only 21% of Somali migrants in Norway did the same. These changes in breastfeeding behaviors pre- and post-migration have been attributed to acculturation, which is the extent to which people from one culture adapt and acclimatize or accommodate their behaviours to fit into their perceptions of the customs of their host countries (Wandel et al., 2016).

Studies indicate that acculturation to the host country is inversely correlated to breastfeeding initiation and duration (Murphy, 2010; Rassin et al, 1993). Rassin et al. (1993) stated that migrant women who are more culturally adapted to the host country have about 16.8% decrease in breastfeeding duration and initiation rates than less

culturally adjusted migrant mothers. Similarly, Pak-Gorstein, Haq, and Graham (2009) reported that foreign-born mothers who are relatively new to the USA and still maintain strong beliefs of breastfeeding being paramount for the child's wellbeing have a much less precipitous drop in the rates of initiation and duration of breastfeeding than more culturally adapted mothers.

In summary, migration seems to be associated with a decrease in breastfeeding initiation and duration, with the degree to which a migrant adapts to the culture of the host country appearing to be a major determining factor in breastfeeding decisions. The study further explored this relationship and how to improve the breastfeeding practices of these women in spite of acculturation.

Factors Affecting Breastfeeding

Numerous interrelated factors contribute to a woman's decision and ability to breastfeed. These can be divided into factors that contribute to breastfeeding initiation and those that determine the risk of non-initiation or premature cessation (Blyth et al. 2002). Each set of factors may be modifiable or not, depending on the possibility of mitigating circumstances. Brand, Kothari, and Stark (2011) found that although breastfeeding is usually initiated without issues in the vast majority of cases, the challenges that some may experience present a substantial threat to exclusive breastfeeding, particularly within the first two weeks postpartum. The most common modifiable factors that contribute to breastfeeding initiation are prenatal intention to breastfeed and breastfeeding self-efficacy (Blyth et al., 2004). Scott and Binns, (1999) and Kong and Lee (2004) confirmed this in their findings that conscious prenatal intentions, as well as the mother's understanding of, and attitudes about, the health benefits of breastfeeding, are the strongest indicators of breastfeeding initiation, duration,

and cessation. As noted earlier, the women and girls in countries with high breastfeeding rates perceive breastfeeding as a normal component of child rearing hence they are already primed for the process well beforehand. On the other hand, Giles et al (2007) reported that young, low income, single and migrant mothers are particularly susceptible to poor breastfeeding practices.

Family integration and participation may also play a significant role in modulating breastfeeding practices. According to Kessler et al. (1995) study on 133 women who were interviewed during the third trimester of pregnancy and again 7-10 days post-partum on whose opinion on breastfeeding matters most to them, the infant's father and maternal grandmother were the selected ones in 71% and 29% of cases respectively. These results indicate that fathers play a significant role in the breastfeeding decisions of new mothers and hence facilitating paternal support is essential to efficient breastfeeding practices. While most migrant women do emigrate in the company of their husbands, many do not, and the majority do not have the maternal grandmothers with them in their new abode, hence they are deprived of this support (Thomas & Logan, 2012).

Where breastfeeding has been successfully initiated, several primarily modifiable factors contribute to women breastfeeding non-exclusively or premature cessation. Ertem, Votto, and Leventhal (2001), in their longitudinal observational study on 64 mothers in the US, explored the predictors and timing of premature cessation of breastfeeding and found two peaks for termination: during the first week postpartum and between two weeks and two months postpartum. The principal reason cited for termination of exclusive breastfeeding was insufficient milk supply; the perception that breastmilk produced is insufficient to meet the needs of a child affects a mothers'

confidence in breastfeeding and leads to early termination of breastfeeding. This finding was corroborated by similar studies by Binns and Scott (2002) and McCann, Baydar, & Williams (2007). Other reasons were infant-related such as medical conditions and feeding difficulties, pain, and emotional reasons were consistent regardless of cultural background or socioeconomic status (Brand, Kothari & Stark, 2011; Hauck et al., 2011; Wandel et al., 2016). Although Ogbo, Page, Idoko, and Agho (2018) found poor maternal education and low household income to be primary indicators of non-exclusivity of breastfeeding in their study in Nigeria; these variables may not apply to migrants in developed countries.

Another contributing factor to early termination of exclusive breastfeeding, particularly for migrant mothers in host countries, is a lack of the support they otherwise receive in their countries of origin (Fabiya et al., 2016). Results of a study with 20 middle class US-born and migrant non-White women of African origin in the US, indicated migrant mothers received unsupportive glances and dissuasive comments about breastfeeding (Fabiya et al., 2016). Such dissuasive behaviours and social stigma ultimately alter a mother's perception and practice of breastfeeding (Fabiya et al., 2016). Similarly, Balmer & Paxton (2004) in their study of Somali immigrants in Australia reported that a common cultural practice in Sudan involves new mothers being looked after by female relatives for 40 days after birth. This assistance comes in the form of cooking, cleaning, and looking after other children and entertaining guests. Thus, young mothers in Sudan and other African countries benefit from a great support system of friends and family which was not available in Australia, hence exclusive breastfeeding becomes difficult to maintain (Balmer & Paxton, 2004).

Exclusive breastfeeding and duration may also be influenced by the need of the mothers to earn an income for the family. Even in African countries, families, where the mother needs to work to supplement the family income, tend to be associated with non-exclusivity of breastfeeding (Ogbo, Page, Idoko & Agho, 2018), but it is more pronounced in Western countries where a majority of African female migrants have to return to work soon after giving birth due to economic necessity and lack of job security (McCarter-Spaulding & Gore 2009). Further, Raisler (2000) in a longitudinal study in the US, reported that although most low-income non-White American women believed that breastfeeding was the best method, they still fed their infants formula. These women most often had jobs that they needed to go back to and because returning to work made breastfeeding very challenging, most terminated breastfeeding and introduced formula before returning to employment (Raisler, 2000). In Canada, the maternity leave legislation provides more income protection for women working full time, whereby longer maternity leaves are available for those who work full-time (Government of Canada, 2019). Unfortunately, migrant women in Canada are more likely to work part-time than full time, and so are not afforded this extra protection (Hudon, 2015).

In summary, most of the evidence points to the fact even though breastfeeding is widely acknowledged by most health authorities as the best nutrition for infants, the rate of initiation, inclusiveness, and duration of the practice falls below the WHO-recommended levels. Studies show that the level of initiation and duration of breastfeeding varies significantly in different parts of the world with the highest levels in the more traditional societies of Africa and Asia, and relatively lower in the more industrialized countries. Several factors affect the initiation, exclusivity, and duration of breastfeeding including prenatal intention to breastfeed, breastfeeding self-efficacy, as

well as infant related and economic factors. Multiple studies demonstrate a disparity of breastfeeding behavior between non-White migrants of African origin and African women in Africa, in terms of the initiation, exclusiveness, and duration of breastfeeding with the migrants less likely to breastfeed and for lower duration than indigenous Africans due to several possible factors.

Due to paucity of research, what is less understood, are the breastfeeding experiences of this group, their challenges, and what is required to bring their breastfeeding practice up to standard. Before now, no systematic review has been conducted that focuses specifically on African migrant women's breastfeeding experiences and issues in the developed world. Thus, to address this gap in knowledge, there is a need for a systematic review of available data to determine the breastfeeding experiences and challenges faced by non-White African migrant women in the developed world and what supports they need to ensure the adequacy of nutrition for the infant and the health of both mother and baby. This systematic review will identify the breastfeeding experiences of these women from their own perspectives.

Purpose of Study

The aim of this qualitative systematic review is to identify and synthesize available qualitative research about breastfeeding behaviour among non-White African migrant women to increase understanding of their experiences of breastfeeding while living in developed countries, the challenges they encounter and what support they need.

Research Questions

This review aims to answer the following questions:

1. What are the breastfeeding experiences of non-White African migrant women residing in developed countries?

2. What challenges do these women face when breastfeeding their infants in developed countries?
3. What supports do they require to enable them to initiate and maintain exclusive breastfeeding of their infant?

Methodology

This study is a qualitative systematic review which is used to gather information on a topic by systematically searching for evidence from qualitative research studies and through analysis and interpretation bring the results together. The review followed the guidelines for Enhancing Transparency in Reporting the Synthesis of Qualitative Research (ENTREQ) by Tong, Flemming, McInnes, Oliver, and Craig (2012). The ENTREQ statement is a set of evidence based 21-item guide that provides meticulous steps on conducting and reporting synthesis of qualitative research in a way that ensures transparency. The statement addresses the following: (1) aim, (2) synthesis methodology, (3) approach to searching, (4) inclusion criteria, (5) data sources, (6) electronic search strategy, (7) study screening methods, (8) study characteristics, (9) study selection results, (10) rationale for appraisal, (11) appraisal items, (12) appraisal process, (13) appraisal results, (14) data extraction, (15) software for data synthesis, (16) number of reviewers, (17) coding, (18) study comparison, (19) derivation of themes, (20) quotations and (21) study output, all of which are required for various stages of qualitative research synthesis. Since its inception, the ENTREQ statement has been utilized by other qualitative systematic reviewers in healthcare. For instance, Coates, Cupples, Scamell, and McCourt (2018) utilized the ENTREQ guidelines in a qualitative systematic review of women's experiences of induction of labour.

Search Strategy and Data Sources

The study search ranged from February to May 2018 and a comprehensive search method was used to access literature pertaining to the topic across various databases. The PICO model (Population, phenomenon of Interest and Context) (Curtin University Library, 2018) which was developed to include components of qualitative studies was used to search for studies, where the population for this review was African migrant women, phenomenon of interest was breastfeeding experiences, and the context was developed countries (see Appendix A). After consulting the university health sciences research librarian, search terms were refined, and appropriate databases were selected. Terms used in the search strategy were “breast feeding”, “breastfeeding”, breastfeeding experiences”, “immigrants”, “African immigrants”, “baby friendly initiative programs”, “attitudes to breastfeeding”, “breastfeeding AND African migrants”, “breastfeeding experiences AND perceptions AND baby-friendly initiatives” “breastfeeding experiences OR perceptions AND black women OR African women”, “African migrants AND breastfeeding experiences”, “African refugees AND breastfeeding experiences”, asylum seekers AND breastfeeding experiences”, “asylum seekers AND African AND breastfeeding”. The primary reviewer, before the commencement of the review, accessed the Center for Reviews and Disseminations (CRD) and Cochrane Database for Systematic Reviews (CDSR) to check for any existing systematic review on the topic. The search did not include any filters for time span, in order to cover a wide scope of studies. The studies identified were selected according to the eligibility criteria (outlined below). For the search strategy, each concept of the research question was individually searched and then a combination of concepts was searched thereafter. Furthermore, a combination of concepts were searched thereafter to access more studies.

The following databases were assessed; Cochrane Library, Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubMed, ProQuest-Dissertations and Theses Global, Scopus, and Web of Science (MEDLINE and Core Collection). Grey literature were accessed using Google Scholar. A personal online account with a username and password was created for each database to keep track of the searches and search terms used. Search results were screened to find relevant studies, and a manual search of references of the included studies was conducted to find more studies that did not appear in the databases searched. The results of the search yielded 1225 studies initially which was narrowed to a total of 10 studies included in the review as illustrated in Figure 1 below, and Appendix B.

Inclusion and Exclusion Criteria

The PICO table (see Appendix A) and the research questions guided the development of inclusion and exclusion criteria for this review. Studies were included if: (1) they were peer reviewed and published in English, (2) they focused on experiences of non-White, immigrant/migrant, asylum seekers or/and refugee women of African descent living in developed countries with past or current breastfeeding experiences and/or utilization of breastfeeding services, and (3) used qualitative design with narrative reporting of data.

Studies were excluded if they included: (1) non-White immigrant, migrant, and/or refugee women or asylum seekers residing in other developing or under developed countries (2) white African women (3) non-White African women with maternal or infant health challenges (4) non-White African women with substance addictions, and (4) studies that did not indicate the women's countries of origin and/or resettlement countries or the information was unclear.

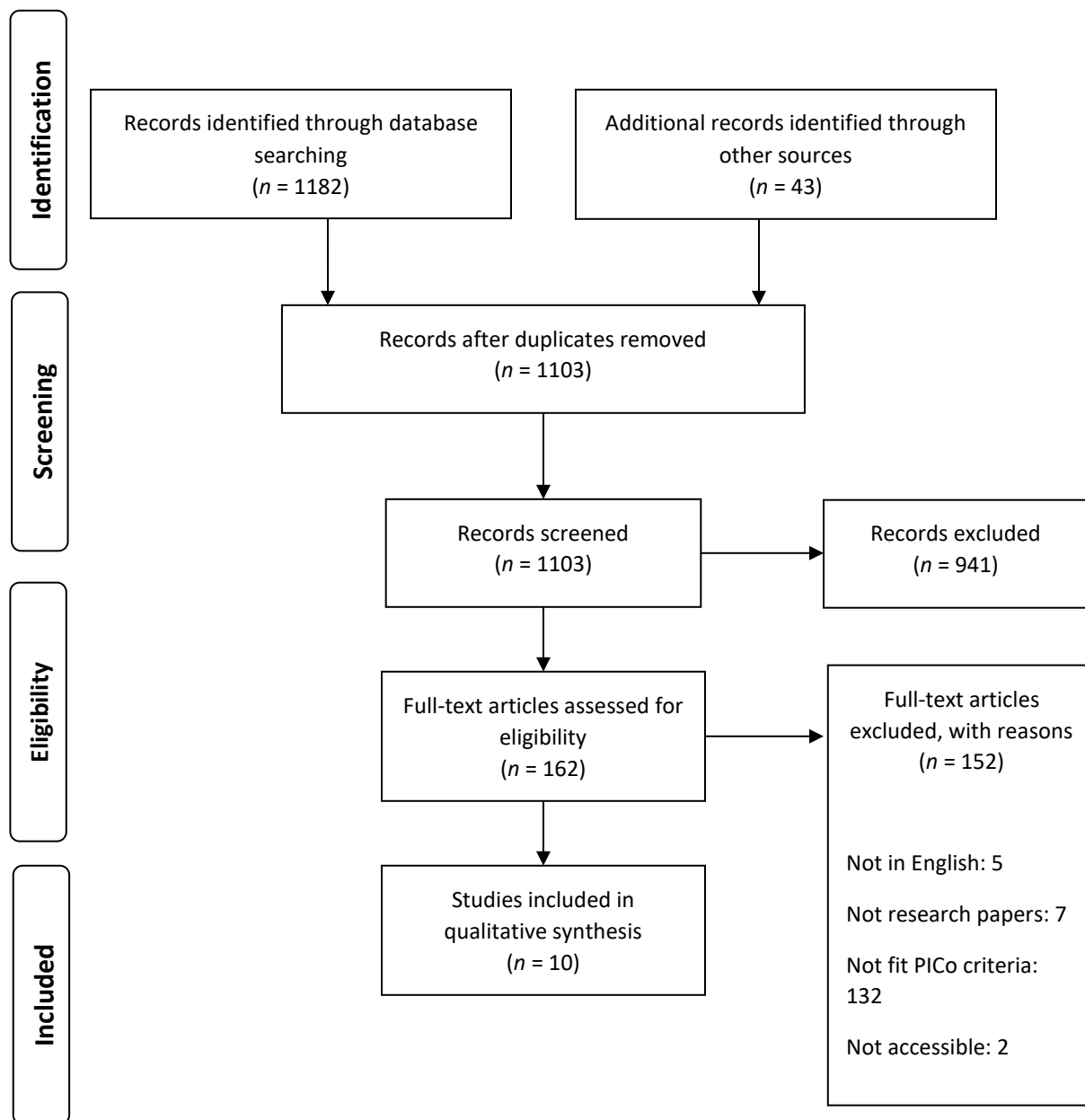
Search Results and Study Selection

Tong, Flemming, McInnes, Oliver, and Craig (2012) recommended the need for independent reviewers other than the primary reviewer to review the search strategy and conduct the quality appraisal of included studies as a means of strengthening transparency. As such, the search process was carried out independently by the primary reviewer and then re-executed by an independent reviewer (CM), who is a graduate nursing student with previous experience in research. CM repeated the search strategy using the same search terms, eligibility criteria, and databases and came up with 12 studies, of which five out of these studies were already identified by the primary reviewer for inclusion in the review and two studies (one from Google Scholar and one from Proquest) that met the eligibility criteria were included for the review. There were disagreements between both reviewers about including the remaining five studies out of the 12 studies identified by CM. However, after careful reassessment and discussion of each of the study's aim, design, participant's country of origin and country of residence, a consensus was reached between both reviewers and all five remaining studies were excluded because they did not meet the PICO criteria (results described below). Although if both reviewers had not reached a consensus, a third reviewer would have been involved in order to reach a final decision.

Following the comprehensive independent search of all data sources used in the review by both reviewers, a total of 1225 studies were found, 1182 were found from the databases and 43 were found through other sources such as Google scholar and manual search of included studies. After 122 duplicates were removed, 1103 studies were left for the first stage of screening, completed by reviewing the titles and abstracts of all studies. An additional 941 studies were excluded for not meeting the eligibility criteria. Next, the

second stage screening involving an in-depth reading and evaluation of the full texts of the remaining 162 studies was carried out and 152 studies were excluded because five were not published in English, seven were not research papers, 132 did not fit PICO criteria, and six were duplicates. Two studies were inaccessible after one author gave no response after being contacted twice, and the other study had limited access to only members of the organization where it was published. Both the primary and independent reviewers reassessed and approved the 10 selected studies for final review (see Figure 1, below).

Figure 1. Study Selection Process. Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) Flowchart



Quality Assessment of Studies

To improve rigor, validity, and trustworthiness of the results of this systematic review, an appraisal of study quality was conducted (Butler, Hall, & Copnell, 2016). The quality of included studies was assessed using the Critical Appraisal Skills Programme Qualitative Checklist [CASP] (2018) (see Appendix C). This tool was used because it is concise and constructively addresses important areas to look out for in qualitative evidence. The checklist is comprised of 10 questions addressing various parts of a study including aims, methodology, study design, recruitment strategy, data collection, researcher/participant relationship, ethical concerns, data analysis, findings and value of the research. For questions 1 to 9, the options were “yes”, “can’t tell” or “no”. For question 10, “how valuable is the research?” the checklist did not provide any option, however, the options of high, medium or low was adopted from Coates et al. (2018) who used the same tool in their qualitative systematic review. The first two questions on the checklist are described as screening questions, and if answered “yes” allows the researcher to proceed with the appraisal. The remaining eight questions are detailed questions that assess the methodology of the research. The CASP checklist can be used to evaluate rigor, relevance, and validity of studies but since this tool does not have a scoring system, Butler, et al., (2016)’s scoring system was used to provide further appraisal of study quality, where “yes” = 1, “can’t tell” = 0.5 and “no” = 0. The scoring system also indicates that a score of 9-10 shows high quality, 7.5-9 shows moderate quality, less than 7.5 shows low quality, and any study less than 6 requires exclusion. However, no study was excluded because a sensitivity analysis by Carroll, Booth, and Lloyd-jones, (2012) suggests that excluding articles from a systematic review based on quality does not affect the richness of findings from the review. Although, in order to

prevent an overlap in the appraisal scores of the included studies, all articles that scored above 9 were grouped as high quality, while articles with scores of 7.5-9 were grouped as moderate quality. Lastly, the articles with scores less than 7.5 were grouped as low quality.

Data Extraction

Before data can be extracted, a clear distinction as to what constitutes data is necessary (Butler, Hall, & Copnell, 2016). In this qualitative systematic review, data constitutes first and second order constructs including direct quotes from the participants as well as the researcher's interpretation under "results" or "findings" in the studies (Thomas & Harden, 2008). Noyes and Lewin (2011) proposed that a systematic review of qualitative research requires a meticulous inclusion of relevant data to improve validity. Relevant information for the review was extracted according to the type of study, for example phenomenological, ethnographic or grounded theory study. The data extraction table (see Appendix D) includes the name(s) of the authors, year of publication, country, journal research was published in, research design, number of participants, country of origin of participants, sampling technique, data collection methods, data analysis, and results.

Data Analysis

Thematic synthesis developed by Thomas and Harden in 2008, was utilized in this review because it aims to enhance transparency and in-depth understanding beyond the primary studies through generating new meanings and constructs. Thematic synthesis originates from thematic analysis to explore personal experiences and views. So far, thematic synthesis has been successfully applied in qualitative research synthesis by other authors (Coates et al., 2018; Morton, Tong, Howard, Snelling, & Webster, 2010).

According to CRD (2009), thematic synthesis involves recognizing similar and repetitive information in the studies and grouping them under various headings. The three stages of thematic synthesis include coding of line-by-line texts, creating descriptive themes, and developing analytical themes.

Data synthesis began with the use of NVivo 12 Pro, a software for qualitative data analysis. Firstly, line by line coding of the quotations and texts under “findings” or “results” which described the same meanings, feelings and concepts were copied verbatim into NVivo and categorized into codes which allowed translation of the findings from one included study to another. Secondly, in order to interpret the codes and their meanings, the codes were categorized under the three research questions: (1) experiences of breastfeeding, (2) challenges of breastfeeding, and (3) breastfeeding supports. Direct quotes were used to reflect the themes relevant to the participants’ stories and the researchers’ interpretations describing the breastfeeding experiences of African migrant women. Finally, the synthesis involved inductively generating analytical themes, which was achieved using word frequency query on NVivo to show the prominent words and concepts. To find the most prominent words, a benchmark of 200 most occurring words in all the studies was used as a limit, with a minimum of three words at least, used to avoid excluding small words that may be relevant to the study. The use of stemmed terms (exact words and similar words) were also enabled in the word frequency to allow a broader search. The final themes were developed and compared across the studies through reading and re-reading each study to ensure the themes were reflective of African migrant women’s breastfeeding experiences, challenges and support in developed countries.

Results

The search yielded 10 studies after the process of screening and quality assessment was done all of which have been described under the “Search and study selection” area of this thesis.

Characteristics of Included Studies

A total of 10 studies were included in this review with full details of the characteristics of each study described in Appendix D. Two studies mentioned using a qualitative design (Fabiyyi, Peacock, Hebert-Beirne, & Handler, 2016; Wandel et al., 2016). One study was a mixed method study (Condon, Ingram, Hamid, & Hussein, 2003). Another study used qualitative descriptive approach (Gallegos, Vicca, & Streiner, 2015). Higginbottom et al. (2013) utilized a focused ethnography design and Steinman et al. (2010) employed a grounded theory approach. One study indicated using a qualitative thematic synthesis design (Tyler, Kirby, & Rogers, 2014). Although the three remaining studies (Hill, Hunt, & Hyrkäs, 2012; Ingram, Cann, Peacock, & Potter, 2008; Textor, Tiedje and Yawn, 2013) did not mention the designs used in their various studies, the methodologies indicated qualitative designs. All 10 studies were published between 2003 to 2016 in peer-reviewed journals.

All studies were conducted in developed countries with two studies conducted in Australia (Gallegos, Vicca, & Streiner, 2015; Tyler, Kirby, & Rogers, 2014), four in the USA (Fabiyyi et al., 2016; Hill et al., 2012; Steinman et al., 2010; Textor, Tiedje and Yawn, 2013); two in the U.K. (Condon et al., 2003; Ingram et al., 2008); and one study was conducted in Norway (Wandel et al., 2016) and Canada (Higginbottom et al., 2013).

Participants

Among all included studies, a total of 240 participants above 18 years of age were included (see Appendix D). Participants’ origins and location varied considerably. One

study included 10 African-American women and 10 African-born women; five from Nigeria, four from Ghana, and one from Sierra Leone (Fabiya et al., 2016). Two studies (Higginbottom et al., 2013; Tyler, Kirby, & Rogers, 2014) included 22 Sudanese migrant women. Three studies (Hill et al., 2012; Steinman et al., 2010; Wandel et al., 2016) included a total of 77 Somali migrant women. Ingram et al. (2008) included 22 participants; five Somali migrant women, three Afro-Caribbean, nine South Asian, and five young mothers whose ethnicities were not indicated. Gallegos et al. (2015) included 31 participants; three women from Sierra-Leonne, four from Burundi, 15 from Democratic Republic of Congo and eight women and one man from Liberia. Textor, Tiedje and Yawn (2013) included 19 participants in their study; five Somali migrant women, four Mexican migrant women and 10 Caucasian nurses. Lastly, Condon et al. (2003) included 26 women migrant in their study including six Somali, five Pakistani, nine Bangladeshi, two Asian, one Punjabi, two Caribbean and one mixed race, and 23 Caucasian women were used as the comparison group. Participants' duration of residency in host countries varied from less than a month to 21 years. However, three studies did not indicate the participants' duration of residency in the host countries of U.K, and the U.S.A (Condon et al., 2003; Ingram et al., 2008; Textor, Tiedje and Yawn, (2013).

Study Purposes

The purposes of the studies differed considerably (see Appendix D). One study explored the barriers to exclusive breastfeeding among non-White, minority women, and young mothers (Ingram et al., 2008). Another described differences in breastfeeding practices among African-born and African-American women (Fabiya et al., 2016). Gallegos et al. (2015) explored the breastfeeding experiences of African refugee mothers. Likewise, Wandel et al. (2016) sought to understand infant feeding practices among

Somali-born mothers. One study explored Sudanese immigrant women's infant feeding practice before and after migration to Australia (Tyler, Kirby, & Rogers, 2014). Condon et al., (2003) explored cultural influences on breastfeeding and weaning among minority women while Higginbottom et al., (2013) described the maternity experiences of Sudanese migrants. The remaining three studies examined Somali immigrant women's health care experiences and beliefs regarding pregnancy and birth (Hill et al., 2012), examined breastfeeding initiation and exclusivity among mothers from Somalia and Mexico (Textor, Tiedje, & Yawn, 2013), and explored Somali mothers' beliefs and practices around infant feeding and education (Steinman et al., 2010).

Results of Quality Appraisal

Both the primary reviewer and a second reviewer ([FM] who holds an MScN) appraised the quality of the studies independently using the CASP (2018) checklist. Independent appraisal scores for the included studies varied between both reviewers with a difference ranging from 0.5-2.5 points. There were disagreements about the quality of reporting in three studies (Condon et al., 2003; Textor, Tiedje & Yawn, 2013; Tyler, Kirby, & Rogers, 2014) as well as the scores for the methodologies, ethical considerations and data analysis methods. However, with both reviewers re-reading the papers independently and collectively, a consensus was reached on the quality scores. Three studies were rated high quality papers with scores greater than 9. One study scored 10 (Steinman et al., 2010) and two studies scored 9.5 (Higginbottom et al., 2013; Wandel et al., 2016). Five studies were of moderate quality with four studies scoring 9 (Condon et al., 2003; Fabiyi et al., 2016; Gallegos et al., 2015; Ingram et al., 2008) and one study scoring 8 (Hill et al., 2012). Two studies (Tyler, Kirby, & Rogers, 2014; Textor, Tiedje,

& Yawn, 2013) were rated as low quality with scores of 7 and 5 respectively (see Appendix D). As indicated earlier, no papers were excluded based on the CASP score.

Findings

The review revealed the breastfeeding experiences of African migrant women in developed countries, including the challenges they faced and the desired support they needed to initiate and maintain exclusive breastfeeding. Although each study explored the unique breastfeeding experiences among African migrant women from various African countries, salient themes were generated which collectively described the breastfeeding experiences of these women and their required support.

Thematic synthesis of the data in this review generated eight analytical themes encompassing the breastfeeding experiences of African migrant women. The identified themes are: *Breastfeeding as the accepted norm*, *Breastfeeding is convenient and enjoyable*, *Breastfeeding is stressful*, *Women's inadequate breastfeeding knowledge*, *Perceived insufficient milk supply*, *Preference of formula*, *Family and friends' support*, and *Health professional's support*. The themes show the differing experiences of various groups of African migrant women. While some women generally enjoyed breastfeeding and expressed resilience at the occurrence of challenges other women expressed unfavourable breastfeeding experiences and supplemented with formula earlier than they intended.

Breastfeeding as the Accepted Norm

A majority of the African migrant women in eight studies felt that breastfeeding was a natural and normal part of childbirth and motherhood (Condon et al., 2003; Fabiyi et al., 2016; Gallegos et al., 2015; Higginbottom et al., 2013; Hill et al., 2012; Steinman et al., 2010; Textor, Tiedje and Yawn, 2013; Wandel et al., 2016). The women attributed

the belief to the prominent African culture which allows young girls to witness and participate in the care of newborns within their families and communities. In some studies, women emphasized breastfeeding as a natural thing to do as a mother. For example, one Liberian woman living in Australia stated: “It’s just part of our lifestyle” (Gallegos et al., 2015, p.730). Secondly, the women referred to their breastmilk as God’s gift and also mentioned the fact that the Quran advised women to breastfeed makes breastfeeding only normal for them to practice (Steinman et al., 2010).

Higginbottom et al. (2013) indicates that for the majority of the women in these studies, to breastfeed their infants was a cultural norm and they were hesitant to formula feed. The women indicated how their communities advocated breastfeeding as the best form of infant feeding. As stated by a Somali woman “As a younger generation if we don’t want to breastfeed, we really don’t have a choice sometimes. Because the elders, neighbors and grandparents ... breastfeeding is the typical thing” (Textor, Tiedje & Yawn, 2013.p.43).

Breastfeeding is Convenient and Enjoyable

The African migrant women in these studies who maintained long breastfeeding durations described their breastfeeding experiences as pleasant. Six studies illustrated this theme (Condon et al., 2003; Fabiyi et al., 2016; Gallegos et al., 2015; Higginbottom et al., 2013; Steinman et al., 2010; Tyler, Kirby, & Rogers, 2014). The women valued the close relationship they had with their infants while breastfeeding and described breastfeeding moments as relaxing (Condon et al., 2003). One Somali woman in the UK stated “the baby has more ‘tendresse’ to you, more kind on you. It is the best relationship, the baby likes you so much, only wants the mother” (Condon et al., 2003. p.346). The women in the study by Condon et al. (2003) also described breastfeeding as being easier

and less time consuming compared to bottle feeding. They also appreciated the fact that they did not have to prepare or clean feeding bottles. A commonly cited reason for continuing breastfeeding is the “ready to eat” nature of breastmilk. African migrant women appreciated the fact that they could breastfeed anytime especially at night without having to get out of bed. Results from one study (Steinman et al., 2010) highlighted how African migrant women take advantage of the usual drowsiness of the fully breastfed child to perform other duties. One woman stated: “if you want to put a kid to sleep, it’s quicker to first breastfeed because that relaxes him and helps him fall asleep quicker” (p.76)

Another study highlighted the freedom Sudanese migrants experienced while breastfeeding in Canada (Higginbottom et al., 2013). Sudanese women in this study expressed frustration with breastfeeding while in Sudan and felt that breastfeeding their infants was more convenient in Canada. This is because of the traditional requirements that prevents a woman from having any sexual relations with her husband while breastfeeding to avoid pregnancy and commit fully to nurturing her child. During this time, women had to endure seeing their husbands having multiple sexual partners. However, while in Canada, this tradition is not maintained and with available forms of contraception and the criminalization of polygamy in Canada, women expressed satisfaction with breastfeeding in Canada as they are generally able to conveniently breastfeed while maintaining sexual relationships with their husbands.

Breastfeeding is Stressful

While some African migrant women in these studies generally indicated having enjoyed their breastfeeding experience and considered breastfeeding as convenient, others expressed frustrations with breastfeeding and debated continuing breastfeeding.

Four studies captured the women's breastfeeding experiences as stressful (Condon et al., 2003; Fabiyi et al., 2016; Higginbottom et al., 2013; Steinman et al., 2010). Some of the women thought breastfeeding was too demanding as they experienced physical exhaustion while combining breastfeeding with parenting other children and taking care of household responsibilities. This was evident in a comment by an African migrant in the U.K. who said, "if you are not pumping, you are breastfeeding...it kind of holds you back...you have to be with your baby 24/7 if you are breastfeeding" (Fabiyi et al., 2016, p.2105).

Women's Inadequate Breastfeeding Knowledge

Eight studies in this review revealed that the majority of the African migrant women lacked an understanding of what actually constitutes exclusive breastfeeding and what to expect while breastfeeding (Condon et al., 2003; Fabiyi et al., 2016; Gallegos et al., 2015; Hill et al., 2012; Ingram et al., 2008; Steinman et al., 2010; Textor, Tiedje, and Yawn, 2013; Wandel et al., 2016). While some women thought exclusive breastfeeding meant giving breastmilk while adding small quantities of solid food, others were not familiar with the term at all. As stated by a Somali woman, "yes I give her some porridge, but I still exclusively breastfeed since she does not eat that much porridge" (Wandel et al., 2016, p.489). Some women thought that breastmilk did not contain enough nutrients to promote growth of infants and supplemented breastfeeding with both cow's milk and goat's milk (Steinman et al., 2010). A majority of the African migrant women in these studies felt confused about some breastfeeding challenges they encountered such as, managing poor milk flow, nipple pain and breast engorgement due to poor knowledge about breastfeeding and problems associated with breastfeeding.

Two studies (Fabiyi et al., 2016; Wandel et al., 2016) indicated that the women

wished they had more skills that could help them enjoy breastfeeding. Most women expressed not being well prepared for breastfeeding. Women mentioned the constant persuasion from some health professionals to exclusively breastfeed as misleading because health professionals had failed to educate them on the possible breastfeeding difficulties that might arise and how to handle these problems. Other women felt the health professionals did not provide enough information on how to resolve the perception of insufficient breastmilk. As indicated by a Somali woman in Norway, “I don’t think that they are spending enough time to explain. . . that if there is not enough milk, it is just to put the child to the breast often, and then it will come” (Wandel et al., 2016, p.490).

Perceived Insufficient Breastmilk Supply

All 10 studies indicated insufficient breastmilk supply as the most common reason for some women to resort to formula feeding and for others to cease breastfeeding earlier than recommended. Insufficient milk supply was identified across the studies as “not enough breastmilk”. Some of the participants claimed they were forewarned by their relatives that breastmilk alone was not capable of satisfying an infant’s needs and therefore perceived the need to supplement with formula. As stated by one Somali woman “I received a clear message from everyone around me that breastmilk was not enough” (Wandel et al., 2016, p.490). Importantly, it was observed that the difficulties women faced with insufficient milk supply subjected some to begin early formula supplementation, but they did not quit breastfeeding. This was reported in six studies (Condon et al., 2003; Fabiyi et al., 2016; Hill et al., 2012; Steinman et al., 2010; Textor, Tiedje & Yawn, 2013; Tyler, Kirby, & Rogers, 2014) where women resorted to formula feeding but continued to breastfeed intermittently. However, the women indicated that

supplementing with formula deterred their intentions to breastfeed for 2 years. Most women continued to breastfeed for as long as 9 months to one year.

While some women thought their African culture largely influenced their perception of insufficient milk supply, a few believed the changes in lifestyle due to migration caused a reduction in their production of milk. One woman, in particular, believed her insufficient milk supply was a “Norwegian problem” because it only began upon her arrival in Norway (Wandel et al., 2016. p.489). It was observed that women in these studies readily substituted with formula once they suspected that breastmilk was no longer enough for their infants. This belief was largely tied to change in their diet. Breastfeeding women in Africa are given specially prepared traditional foods such as soaked rice, soaked peanuts, and cassava leaves during the postpartum period believed to stimulate flow of breastmilk (Gallegos et al., 2015). However, not having access to these cultural meals in developed countries was associated with women believing they had a low milk supply.

Preference for Formula

Most African migrant women in these studies who resorted to formula feeding did so in situations such as returning to work or school, or when in public. Some thought that formula made their babies ‘chubby’ which they equated to being healthy. This was a relatively commonly shared belief among African migrant women in these studies. Other commonly cited reasons for formula feeding was the fact that it allowed other family members to feed the infants while the new mothers took time to work or perform other activities, as well as with formula, it was easier to measure the quantity of each feeding (Steinman et al., 2010) which is impossible with direct breastfeeding.

Most employed women in all studies opted for formula even after the decision to exclusively breastfeed was made. Four studies identified the absence of conducive breastfeeding environments at work as a common reason African migrant women supplemented with formula (Condon et al., 2003; Gallegos et al., 2015; Textor, Tiedje & Yawn, 2013; Tyler, Kirby, & Rogers, 2014), including women who initiated breastfeeding with the aim of it being exclusive. Although the absence of conducive breastfeeding environments outside the home is a structural challenge, other women devised other means to continue breastfeeding in public, for example using private areas like dressing rooms. Women also mentioned that they felt uncomfortable breastfeeding or expressing breastmilk at work due to dissuasion from their bosses and therefore supplemented with formula.

Support for Breastfeeding

The women in these studies reported receiving support from family members, friends and health professionals. However, support received were described as either positively or negatively influencing breastfeeding experiences.

Family and friends' support. The presence of family support was seen to have a strong connection to breastfeeding decision making and experiences of African migrant women in these studies. Family support was described to be equally impeding as it was motivating. All 10 studies mentioned the positive influence of family support in helping mothers achieve their breastfeeding goals. The infant's grandmothers, partners, friends and the immediate communities all play significant roles in helping African migrant women maintain breastfeeding in developed countries. Instances where support from family yielded positive outcomes came in various ways including advice, breastfeeding guidance, preparing traditional African meals that women believed to improve

breastfeeding, and general assistance during the postpartum period. Specifically, the grandmothers of the infants significantly influenced women's breastfeeding decisions and practices. As one woman stated, "I wanted to wean by six months, but my mum-in-law would call me and beg me...Honestly, she was a motivating factor... because I would have stopped" (Fabiya et al., 2016, p.2105).

Partner support was reported as being very valuable among African migrant women. Men's involvement in breastfeeding is rarely practiced in Africa as men often take up passive roles in maternity and infant care (Kavela, 2007). These women valued their husband's opinions on breastfeeding especially when accompanied with kind gestures and assistance around the house. Although friends were considered as influential, the women believed the absence of familial ties limited the amount of help offered to them.

Total absence of family support or discouragement and negativity from family and friends were the most commonly cited by women in these studies as factors impeding breastfeeding. Two women in Norway and USA mentioned being encouraged to give their infants water and were reprimanded by family members when they did not (Fabiya et al., 2016; Wandel et al., 2016). One woman in Norway stated "I did not give water, and I was criticized by my family and relatives. They told me: He is a human being, he gets thirsty and that milk does not quench thirst. . . while the health clinic said: no, he does not need water" (Wandel et al., 2016. p.490). Other women who did not protest family's opinions were encouraged to give their infants water in the first week postpartum to 'cleanse their intestines' which was a part of their culture (Gallegos et al., 2015). In other cases, family and friends discouraged the women from feeding infants colostrum because of they believed it was contaminated and dirty (Steinman et al., 2010).

Another woman mentioned being discouraged by her friend to continue breastfeeding, “while we are here in America, just do bottle-feeding. That makes it easier for you” (Fabiya et al., 2016.p.2107). However, African migrant women believed positive breastfeeding support from family members would have made breastfeeding experiences easier and more favorable.

African migrant women in these studies who had no family close by expressed frustration at the absence of family support during the postpartum period and yearned for the presence of a familiar face to offer help with breastfeeding. These women felt their breastfeeding skills would have been more effective back home in Africa where they receive immense support. Four studies highlighted African women’s concerns regarding the absence of family support (Fabiya et al., 2016; Gallegos et al., 2015; Tyler, Kirby, & Rogers, 2014; Wandel et al., 2016). One migrant from Congo living in Australia stated “nobody helps me here, but if I was in Africa, I could call my mother, sisters, even my neighbours, to help me...”(Gallegos et al., 2015, p.732).

Health professionals’ support. In these studies, positive breastfeeding support from health care professionals was highly valued by the women. Six studies discussed examples where health professional’s support positively influenced breastfeeding experiences (Condon et al., 2003; Fabiya et al., 2016; Hill et al., 2012; Steinman et al., 2010; Tyler, Kirby, & Rogers, 2014; Wandel et al., 2016). Furthermore, African migrant women in these studies more readily accepted breastfeeding advice from health care providers when it favored their beliefs. Generally, health care professionals were considered very helpful when they listened to the women’s concerns and addressed their questions concerning infant positioning, latching and breast discomforts. Although the women appreciated the presence of health care professionals’ during prenatal and

postpartum periods, their advice was more often valued when rationales were provided. For instance, when Somali women in the UK combined breastmilk with infant formula, they observed the nurses' disapproval but because nurses did not provide any explanation to these women, they misinterpreted this as nurses being against the practice because they did not like mixed feeding (Condon et al., 2003).

African migrant women in these studies also preferred when information was given by word of mouth because it was easier for them to remember (Wandel et al., 2016). The women also desired to have more access to lactation consultants especially after discharge from the hospitals. Similarly, these women were also interested in enrolling for prenatal and postnatal community groups with other African women where they can socialize to discuss and seek help concerning breastfeeding (Ingram et al., 2008).

The African migrant women in these studies also expressed a desire for more information on all aspects of breastfeeding from health professionals. For example, some women did not expect that breastfeeding would be difficult and needed health professionals' help when they had to deal with infant's positioning and latching problems. In the cases where women felt they received insufficient information from health professionals, they turned to the internet and books for information (Wandel et al., 2016). Some women suggested the use of posters in the hospital environments to reinforce the benefits and difficulties associated with breastfeeding to improve mother's readiness for breastfeeding (Fabiya et al., 2016). The women in these studies also wanted more information on the use of breast pumps. The women felt insecure about using breast pumps because they were not educated on how to operate it, thus did not consider it as an alternative method to feed infant breastmilk when in public (Hill et al., 2012)

In some cases, health professionals were seen to negatively influence breastfeeding experiences of African migrant women. Some women felt constantly pressured by health professionals to breastfeed and expressed frustration when they faced breastfeeding challenges but were not offered appropriate guidance. For example, a Somali woman in Norway stated ‘I felt an enormous pressure to breastfeed at the health clinic, and it was a bit like breastfeed, breastfeed, breastfeed. In a way you felt like a failure if you couldn’t do it’ (Wandel et al., 2016. p.490). Other cases involved health professionals feeding the infants formula prior to consulting with the infant’s mothers (Higginbottom et al., 2013) or when they encouraged, consented to, and distributed breastmilk substitute to women postpartum (Textor, Tiedje & Yawn, 2013). The women felt this practice contradicted the health professionals’ advice on exclusive breastfeeding which contributed to the ambivalence with breastfeeding decision making.

Language barriers prevented African migrant women from receiving adequate and appropriate information (Gallegos et al., 2015). The women also expressed disappointment with the scarcity and absence of professional interpreters in the health facilities and felt shunned when health professionals did not reach out to them due to language differences. As relayed by a Sudanese woman “A woman can feel like she is being ignored but that is not the problem, the problem is not being able to communicate” (Tyler, Kirby, & Rogers, 2014. p.17). African migrant women who did not speak fluent English or did not speak any English experienced difficulties in achieving optimal care due to poor communication with health professionals as illustrated in four studies (Gallegos et al., 2015; Steinman et al., 2010; Tyler, Kirby, & Rogers, 2014; Wandel et al., 2016). In the cases where male interpreters were utilized, women were worried about their modesty and being exposed.

Discussion

The results of this systematic review provide an increased understanding of the breastfeeding experiences and challenges of African migrant women in developed countries and revealed important types of support that can improve breastfeeding initiation and maintenance. As revealed in this review, African migrant women appreciated breastfeeding as a natural duty and as an expectation of mothers which is consistent with the findings from a study of women's perceptions of breastfeeding in UAE (Radwan & Sapsford, 2016). Many of the women in this review breastfed and acknowledged breastmilk as beneficial for their infants. They also expressed willingness to carry on breastfeeding for as long as they needed to. This social acceptance of breastfeeding practices can be likened to the accommodating African culture that allows normalization of breastfeeding one's child.

Most of the African migrant women who had pleasant breastfeeding experiences had family support, especially from grandmothers. The constant advice and encouragement from the grandmothers of the infants were seen to greatly influence breastfeeding experiences of African migrant women. Similarly, the results from a systematic review by Negin, Coffman, Vizintin, and Raynes-Greenow (2016) also found the grandmother's positive role in breastfeeding as a crucial indicator of exclusive breastfeeding. Although partner support was not frequently mentioned like infant's grandmother's support, it does appear to also bear a great impact in the breastfeeding experiences among the women in this review especially when there was an absence of extended family members (Condon et al., 2003; Fabiyi et al., 2016; Gallegos et al., 2015). Similarly, among women who discontinued breastfeeding earlier than anticipated, the negative influence from family and partners such as verbal discouragement and

disagreement in breastfeeding patterns between the women and family members seemed to be a driving force. Therefore, it is necessary for appropriate family involvement and education about breastfeeding before and after childbirth to enhance breastfeeding support and reinforce positive outcomes of breastfeeding. This is consistent with the finding from a systematic review by Sinha et al. (2015) which revealed breastfeeding counselling of family members yielded positive outcomes in initiating and maintaining exclusive breastfeeding among women.

Although African migrant women in this study appreciated the participation of their partners during breastfeeding there was little mention of the participation of fathers in breastfeeding. The women expressed frustration with having to take care of the home while breastfeeding. The role of African men in breastfeeding indicate that they rarely participated in breastfeeding because they shared a common assumption that breastfeeding is a woman's job (Kavela, 2007). It is possible that this belief has its root in the patriarchal ideologies of the African culture that exclude men from actively participating in women's health including breastfeeding. African men often assume the role of passive observers in breastfeeding, and only begin to take up active roles in care taking when the infants are older (Kavela, 2007). African men are highly respected and known to command authority concerning household affairs, however when it comes to breastfeeding they are absent (Yourkavitch, Alvey, Prosnitz, & Thomas, 2017). It possible that the gender norms in Africa regarding feminine and masculine responsibilities might be responsible for African men's lack of participation in breastfeeding. Therefore, it is important that researchers explore how to actively increase African men's involvement in breastfeeding both within and outside Africa to significantly contribute to positive breastfeeding experiences among African migrant

women and reveal new findings that can improve practice. The absence of family support also negatively affected the women in this study. Women expressed frustrations and stress with having to cope with breastfeeding their infants on their own, which led to early cessation of exclusive breastfeeding. Health care professionals need to be aware of the presence of family and community support as vital components to provide culturally safe breastfeeding services when caring for African migrant population.

Among the challenges of breastfeeding African migrant women experienced, the perception of maternal insufficient milk supply was the most prominent and emphasized in all studies. Each of these women experienced breastfeeding uniquely and their perception of inadequate breastmilk supply frequently resulted in termination of exclusive breastfeeding and shortening of intended breastfeeding duration. Importantly, these women lack knowledge to identify insufficient breastmilk and therefore made decisions based on presumptions. The signs some women used to indicate insufficient breastmilk included baby's refusal to suck and fussiness after sucking.

Perceived insufficient milk supply is a global breastfeeding problem that has been identified among women across various demographics (Robert, Coppieters, Swennen, & Dramaix, 2014). A systematic review by Gatti (2008) found women from developed countries used infant satiety too early into breastfeeding session to identify perceived insufficient breastmilk milk. Other identified cues included infant's fussiness and temperament after breastfeeding similar to comments made by the women in this review. Interestingly, African migrant women in this study believed that a decrease in breastmilk only begins after migration. There was a common conviction shared among the women that their breastmilk was produced in much lesser quantities in their host countries compared to their home countries and they took drastic measures including feeding cow's

milk to their infants (Steinman et al., 2010). Low breastmilk production may be due to the limited access to traditional special foods breastfeeding women are served postpartum. Further research is required in order to understand any possible relationship between traditional postpartum meals and breastmilk flow and women's perception of low milk supply, actual incidence of low milk supply and migration.

African cultural breastfeeding practices such as early introduction of water, honey, and porridge jeopardizes exclusive breastfeeding (Engebretsen et al., 2010). In some cases, the women discarded colostrum in the first days following birth because they believed it was contaminated which delayed breastfeeding initiation (Textor, Tiedje, & Yawn, 2013). Health professionals need to discourage these harmful cultural practices through extensive education and culture adjustments. Nurses can make these cultural adjustments by familiarizing with the African culture of breastfeeding to encourage its beneficial practices while discouraging the harmful ones. For example, the period of maternal rest and eating healthy breastmilk stimulating meals promote breastfeeding, which nurses can encourage African migrant women to maintain while discouraging harmful practices like expelling colostrum and giving infants water before six months postpartum. Nurses should also provide a clear understandable rationale for the information they provide to African migrant women. The fact that African migrant women in this review misinterpreted nurses' opposition to mixed feeding for mere dislike means that further justification is needed with the health advice given. Considering the significant language barriers mentioned in these studies it is necessary that an African language interpreter is always present at the services of African migrant women. However, it is important that these interpreters are preferably female, since majority of

the women were concerned about conversing with male interpreters while unclad and breastfeeding.

Other factors that affected breastfeeding practice were also identified in this review. Where some women wanted to maintain breastfeeding, they lacked necessary assistance and their choices were sometimes overridden by health professionals who fed their infants formula without their consent (Higginbottom et al., 2013) and family members who suggested infant supplement. However, an important discovery from this review was that despite the numerous breastfeeding challenges, most women in this review faced, there was a unique perseverance to maintain breastfeeding up to 9-12 months among majority of the women. Although women may have supplemented with formula early postpartum, they continued to breastfeed. The findings suggest that African migrant women appreciated breastfeeding and will more likely engage in exclusive breastfeeding if these identified difficulties are alleviated.

Implications for Nursing Practice, Education, Research and Policy

Understanding the breastfeeding experiences of African migrant women from their own perspectives is important in helping health professionals to identify areas of breastfeeding care that need improvement. Inaccurate knowledge and misinformation have been observed to play a major role in breastfeeding experiences of these of women. A major source of inaccurate information comes from the families of the breastfeeding African migrant women. The support of family and friends is a significant determinant of breastfeeding among African migrant women in developed countries (Boyle, 2015). While positive breastfeeding support from grandmothers can increase breastfeeding initiation by 12%, negative grandmothers' influence on breastfeeding can decrease the initiation of breastfeeding by up to 70% (Negin et al., 2016). Although families especially

maternal relatives provide emotional and mental support, their information are sometimes inaccurate and therefore it is imperative that the support and advice offered be accurate to ensure safe health of both mothers and infants. Nurses can play a role by encouraging African migrant women to involve family members and relatives in breastfeeding education.

Breastfeeding support groups help to promote breastfeeding by providing a safe place for women to discuss similar challenges (Ingram et al., 2008). Importantly, establishing groups of skilled professionals addressing women's breastfeeding concerns within the African community where women can attend after being discharged from the hospital should be considered when developing strategies to help these women. As religion is highly valued by Muslim African migrant women and breastfeeding is advocated in Islam, Imams, Sheikhs and Sheikhas should be involved in these support groups to encourage breastfeeding.

The effect of culture on breastfeeding practices of African migrant women cannot be overlooked. Women in this review integrated various aspects of their cultural beliefs into breastfeeding practices which includes giving infants water as early as one week after birth to cleanse their intestines as well as expelling colostrum from the breasts because they believed it made the child sick. Although significant steps have been taken to decrease infants' formula use in hospitals in Canada by implementing the Baby-Friendly Initiative [BFI] (Canada Status Report, 2014), there are still health professionals in hospitals that promote breastmilk substitute to African migrant women (Higginbottom et al., 2013). The media culture of persistent advertisement of formula in hospitals and health professionals' offices discouraged exclusive breastfeeding among African migrant

women since the women perceived this to contradict the breastfeeding advice (Higginbottom et al., 2013).

African migrant women need to be educated on recognizing the markers for infants' hunger and satiety. Many women in this review thought that their infants' restlessness, irritability, and continuous crying after breastfeeding meant they did not receive enough breastmilk. It is also imperative that these women have access to accurate, evidence-based information at all times as they have been known to turn to the internet for answers. Some barriers to seeking professional help include cost of services and language barriers. Some health care facilities in Canada utilize interpretation and translation services to ensure equity in health information and care but these services do not include African languages (Sultana, Aery, Kumar, & Laher, 2018). Therefore, there is limited use of these services in addressing breastfeeding concerns of African migrant women. It is imperative that African language interpreters are included into these women's care team from the start of the pregnancy through labour, delivery and postpartum.

According to Wandel et al (2016), African migrant women preferred spoken words of advice from health professionals as it was easier to remember, therefore health information needs to be accurate and disseminated through face to face discussions, teaching groups and the use of physical demonstrations by peers and through videos. It was observed that migrant women who received approval to formula-feed by health professionals ended up not breastfeeding long enough. It is also important that health professionals work to promote and maintain Baby Friendly Initiative in their facilities and provide African migrant women with appropriate breastfeeding information.

The findings from this review indicates the necessity of increasing the scope of breastfeeding in nursing schools to include various breastfeeding cultures. Health professionals were observed in this review to initiate supplementary feeding when women complained of breastfeeding problems such as nipple pain and infant's inability to latch (Fabiya et al., 2016), and in other cases proceeded to feed infants formula without asking the mother's opinion (Higginbottom et al., 2013). Also, nurses need to be educated on managing a wide range of breastfeeding and breast problems such as mastitis, nipple pain and breast engorgement in order to offer women best evidence-based interventions without terminating breastfeeding (Gartner et al., 2005). It might be necessary to assign African nurses, if available, to educate and care for African migrant women in developed countries. This can help develop a safer and empathetic environment which will in turn yield positive breastfeeding outcomes. Furthermore, cultural and social awareness training should be provided to health care providers in order to eliminate any feeling of 'being pressured' to breastfeed that migrant women may experience and to promote culturally sensitive care.

There is still a culture of non-acceptance of public breastfeeding in developed countries (Wallace, 2016). The African migrant women in the reviewed studies, reported the lack of secluded public breastfeeding facilities hampered their ability to maintain exclusive breastfeeding. As a majority of the women in the studies were Muslims, they reported a discomfort about public breastfeeding due to religious obligations. Encouragingly, health organizations like the Toronto Public Health Unit and Porcupine Health Unit of Canada have taken positive steps towards improving breastfeeding acceptance in public. For example, human size cut outs of actual breastfeeding mothers

are placed in various public locations in order to encourage and normalize breastfeeding in public (Lagerquist, 2017).

Strengths and Limitations

To the best of my knowledge, this is the first systematic review of qualitative research on the breastfeeding experiences of African migrant women in developed countries. The comprehensive search of databases by two independent reviewers aimed to identify all studies on the topic and only peer reviewed articles were included for this review. Two reviewers also independently appraised the quality of the studies and majority of the studies are of high quality according to the CASP criteria. The use of an inductive approach of thematic synthesis without any preconceived theories concerning the review ensured that the themes were identified directly from the data.

The review was limited to studies of breastfeeding experiences of African migrant women published only in English language and may be subject to language bias because there was no translation of non-English articles. It is important to note that although a comprehensive search strategy was carried out only electronic databases were accessed and not every grey literature was assessed which means that this review is not representative of all research in this area. Furthermore, authors were not contacted to clarify misunderstandings regarding their various methods which may have led to possible reduced scores during the appraisal phase. However, the studies were of relatively high quality and only one had low quality with a score of five but was still included in the data analysis. Lastly, since most of the participants in the primary studies originated from Somalia and Sudan, this may mean that the results may be culturally streamlined towards these groups.

Conclusion

This qualitative systematic review describes the breastfeeding experiences of African migrant women in developed countries, the breastfeeding challenges they faced as well as the desired supports to promote breastfeeding. The study indicates that African migrant women shared similar breastfeeding challenges with other groups of women who are not migrants but revealed unique findings. The results revealed that the influence of family, especially the infant's grandmother, is significant in fostering breastfeeding behaviors and practices among African migrant women. It is important for health professionals to take steps to actively involve family in breastfeeding practices with extensive education on the beneficial role each family member can play to promote breastfeeding. Partner support and involvement in breastfeeding was also highly valued by these women but cultural norms and beliefs hinders African men from active participation. Further research is needed to explore male partner involvement and its impact in breastfeeding in both Africa and developed countries.

Secondly, it is imperative for health professionals to pay close attention to the cultural practices that interrupt exclusive breastfeeding and collaborate with team members to ensure proper education of women on the composition and benefits of breastmilk to infants. This would likely promote exclusive breastfeeding and reduce the possibility of formula supplementation that occur due to breastfeeding challenges.

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CHAPTER THREE

DISCUSSION, IMPLICATIONS AND CONCLUSIONS

The results from the 10 studies included in this review revealed the various breastfeeding experiences of non-White African migrant women in developed countries. Regardless of their countries of origin and host countries, the African migrant women in the studies share similarities in breastfeeding experiences, challenges and the desired support for promoting positive breastfeeding behaviours. Based on the results of this study, it is evident that family support is an essential factor in promoting breastfeeding among African migrant women in developed countries. The findings show that African migrant women appreciate breastmilk as the ideal nutrition for newborns because all the women in the studies had breastfed although cultural practices were observed to have interrupted exclusive breastfeeding. The findings uncovered eight themes: *Breastfeeding as the accepted norm*, *Breastfeeding is convenient and enjoyable*, *Breastfeeding is stressful*, *Women's inadequate breastfeeding knowledge*, *Perceived insufficient milk supply*, *Preference of formula*, *Family and friends' support*, and *Health professional's support*.

The theme *Breastfeeding as the accepted norm*, highlights the positive reception of breastfeeding by African migrant women. The theme revealed the women's unique acknowledgment of breastfeeding as a standard requirement of motherhood and identifies a strong facet which health professionals can use to foster breastfeeding among these women. *Breastfeeding is convenient and enjoyable* revealed how African migrant women preferred the readily available nature of breastmilk and how they appreciated the closeness they shared with their infants. The theme *Breastfeeding is stressful* outlined the difficulties some of the women experienced with breastfeeding. This theme revealed the

different ways women described coping or not coping with the demands of breastfeeding. *Women's inadequate breastfeeding knowledge* revealed the various levels of understanding of breastfeeding especially exclusive breastfeeding. This theme displayed poor breastfeeding knowledge among the women and the extent to which cultural beliefs and practices led to premature weaning. *Perceived insufficient milk supply*, a commonly cited barrier to breastfeeding, represented the challenges African migrant women faced with milk supply and their belief of breastmilk not to be enough for their infants, as well as the breastfeeding exclusivity and duration. *Preference of formula* illustrated how women opted for formula in the event of breastfeeding challenges especially when in public or at work and when they wanted other family members to feed the infants so they could perform other tasks. *Family support* showed the importance of positive support from the infant's grandmothers, mothers-in-law, partners, relatives and friends on the breastfeeding experiences of African migrant women. Lack of support negatively impacted the women's breastfeeding experiences. The final theme, *Health professionals' support*, highlighted all forms of encouragement, advice, and education proffered by doctors, nurses, midwives, and lactation consultants. After synthesis of the qualitative studies and examining what it is like for African migrant women to breastfeed in developed countries, various implications for nursing practice, research, education, and for policy makers have been identified. These implications can be used in various settings by health care professionals, breastfeeding advocates and policy makers to improve breastfeeding practices, behaviours and experiences of African migrant women in developed countries.

Implications for Nursing Practice

Understanding the breastfeeding experiences of African migrant women from their own perspectives is important in helping health professionals to identify how they may better support these women to achieve more positive breastfeeding outcomes. Recognizing the barriers and facilitators of breastfeeding among African migrant women is beneficial in improving breastfeeding experiences. In this study, the lack of support of family and friends was an apparent determinant of breastfeeding among African migrant women in developed countries. Family involvement in patient care has been associated with positive health outcomes (Boyle, 2015). These beneficial outcomes also apply to breastfeeding care and experiences.

Grandmothers of the infants and partners of the new mothers were observed to have a greater influence on breastfeeding practices than other relatives. African migrant women are often times cajoled by their mothers or older relatives to persevere through breastfeeding. Grandmothers of infants are known to be actively involved in breastfeeding and give their advice to new mothers (Jonasi, 2007). It is imperative that the grandmothers offer this support and advice with appropriate information, because in some instances grandmothers can persuade African migrant women to introduce water or other meals to infants too early in postpartum due to cultural beliefs. While positive breastfeeding support from grandmothers can increase breastfeeding initiation by 12%, negative grandmothers' influence on breastfeeding can decrease the initiation by up to 70% (Negin et al., 2016). Hence, it is necessary for nurses to involve the woman's family support in both prenatal and postpartum breastfeeding education and maternity services of African migrant women and also advocate for family and community involvement in the breastfeeding promotion services. In the cases where African migrant women do not have their families with them in host countries, nurses can also involve grandmothers and

relevant family members through the use of media platforms like Skype and FaceTime where applicable.

Grandmothers are revered by African women because of their vast wisdom, long years of cultural maternity practices and experiences which they most often pass down to their generations (Jonasi 2007). However, some knowledge and practices do not always align with western practices and might result in conflict between cultural practices and women's acceptance of exclusive breastfeeding practices. Therefore, nurses must employ cultural adjustments as a strategy to effectively involve African grandmothers in appropriate breastfeeding practices in developed countries. Nurses can develop breastfeeding programs to educate grandmothers on properly adhering to exclusive breastfeeding and encourage use of safe maternal cultural diets the women believe stimulates breastmilk production (Aubel et al., 2001). Lastly, nurses should ensure maintenance of culturally safe practices during home visits to reinforce exclusive breastfeeding and prolonged breastfeeding duration. This is in order to prevent possible community or cultural influence that could lead to early supplementation.

Kavela (2007) states that male partners of African women are often not actively involved in breastfeeding and do not know what role to play and this was not an exception for African migrant women in this study. Women expressed feelings of isolation during postpartum and appreciated when their male spouses supported breastfeeding through words of encouragement or by merely doing the house chores and taking care of other children (Condon et al., 2003; Fabiyi et al., 2016; Gallegos et al., 2015). Nurses can include spouses of the women in breastfeeding and infant care classes before and after childbirth. This can be done through organizing prenatal classes allowing free discussions and showing breastfeeding and infant care videos among expectant

fathers (Wolfberg et al., 2004). These classes can be facilitated by a fellow father who actively participated/participates in breastfeeding and can include testimonials from other fathers while guided by health professionals who are also available to answer any questions. These strategies have effectively improved male partner involvement in breastfeeding among men across various cultures in 40 low and middle income countries (Yourkavitch et al., 2017).

The women in this study identified insufficient milk supply as a major challenge which inhibited exclusive breastfeeding, shortened breastfeeding durations and led to supplementing with formula. It was observed that African migrant women used inaccurate indicators for reporting insufficient milk supply such as infant's crankiness or crying after breastfeeding, and perceived absence of the feeling of milk flow. It is necessary for nurses to educate these women on the accurate markers of insufficient milk supply such as monitoring infant's weight gain or loss, and monitoring the number and extent of soiled or wet diapers after each feeding (Lou et al., 2014). Nurses can also adopt milk management strategies to alleviate maternal perception of insufficient milk supply among African migrant women. This includes educating women on the physiology of milk production and supply, encouraging skin to skin contact and breastfeeding immediately after birth and continuing even when they feel an absence or poor flow of breast milk. Since African migrant women expressed discomfort and uncertainty about using breast pumps because it was new to them and they could not operate them, nurses could consider encouraging women to employ alternative means to ensure milk flow such as hand expressing (Health Service Executive, 2017). Nurses should extensively educate and guide women on how to express breastmilk using breast pumps until they are confident and comfortable enough to practice on their own. In addition, nurses should

also emphasize on the need for relaxation and encourage women to have timed routine for breastfeeding and expressing breastmilk as infants grow older to promote relaxation. As mentioned by Wandel et al (2016), African migrant women preferred spoken words of advice from health professionals as it was easier to remember, therefore health information can be disseminated through face to face discussions, teaching groups and the use of physical demonstrations by peers and through videos.

Another concern is that women in this study reported resorting to formula feeding due to being excessively pressured to breastfeed by health professionals. The women felt the nurses pressured them to breastfeed without offering guidance on how to successfully breastfeed their infants (Wandel et al., 2016). In this instance, it is necessary for nurses to modify their approaches to breastfeeding advocacy by using mild and non-forceful approaches when advocating for breastfeeding among African migrant women so they may feel less pressured. Nurses can also carefully monitor African migrant women to recognize when they are facing difficulties with breastfeeding and offer appropriate help and guidance. In the light of this, it might be necessary to assign African nurses, if available to educate and care for African migrant women in developed countries. This can be helpful in developing rapport between the nurses and the women to facilitate culturally sensitive breastfeeding advocacy approaches which might yield positive breastfeeding outcomes. For example, African nurses can encourage breastfeeding through the use of motivational breastfeeding African words and statements. Also, training nurses on cultural safety, competency, and sensitive approaches to addressing African migrant women needs is necessary to promote breastfeeding practices in this population.

Women in this study indicated preference for breastfeeding support groups with fellow African women as helpful in promoting breastfeeding due to similarities in cultures and language (Ingram et al., 2008). Importantly, establishing groups of skilled professionals addressing women's breastfeeding concerns within the African community where women can attend after being discharged from the hospital should be considered when developing strategies to help these women. Nurses should work with lactation consultants to assist African migrant women with proper infant positioning and latching as well as with dieticians to advise on nutritional needs of both infant and mother to ensure African migrant women's breastfeeding needs and concerns are duly met. Religion is highly valued by most African migrant women in this review, who identified as Muslims. Since breastfeeding is advocated in Islam, inviting revered male and female religious leaders such as Imams, Sheikhs and Sheikhas during antenatal, postnatal classes as well as in local community breastfeeding groups to advocate for breastfeeding can improve the women's breastfeeding experiences.

Finally, the persistent advertisement of formula in hospitals and health professionals' offices should continue to be discouraged as this interferes with exclusive breastfeeding among African migrant women because the messages are contrary to the breastfeeding advice offered by health professionals (Higginbottom et al., 2013). African migrant women were observed to value the information provided by health professionals. Therefore, it is important for nurses and doctors to reflect on their own behaviours towards breastfeeding and ensure clarity in the breastfeeding information provided to these women. In order to ensure exclusive breastfeeding among African migrant women, it is essential that health professionals continuously advocate for breastfeeding promotion

and only offer breastmilk substitutes to women who are unable to breastfeed due to medical disorders or personal decision.

Implications for Nursing Education

The findings from this review indicate that increasing the curriculum content on the scope of various breastfeeding cultures in nursing schools is necessary. Women demonstrated concern in making breastfeeding decisions due to incongruity in breastfeeding advice from health professionals. Health professionals were observed in this review to initiate supplementary feeding when women complained of breastfeeding problems such as nipple pain and infant's inability to latch (Fabiya et al., 2016), and in other cases proceeded to feed infants formula without asking the mother's opinion (Higginbottom et al., 2013). Notably, African migrant women in this review who received approval to formula feed by health professionals reported not breastfeeding for as long as they had planned. Educating undergraduate nursing students and practicing nurses on the importance of properly managing breastfeeding problems is imperative in improving nurses' knowledge and problem-solving skills at hospital settings during practice.

Currently, some undergraduate nursing breastfeeding education curricula include courses on anatomy and physiology of the breasts, physiology of lactation, benefits of breastfeeding and risks of artificial feeding as well as management of some breast conditions (Ontario Public Health Association, 2009). However, there is need to integrate other clinical skills in breastfeeding, such as proper manual milk expressions, appropriate use of breast pumps, knowledge of lactogenesis, maternity care, and leadership in maternal and child health to help improve nurses' skills in breastfeeding. Visual learning and lab simulations on breastfeeding with women from diverse cultures should be used as

teaching models to expose nursing students to the importance of diversity in clinical practice. More emphasis should be made on educating nursing students and nurses in practice on the composition and benefits of breastmilk to ensure consistency and accuracy in the information given to women. Also, nurses need to be educated on managing a wide range of breastfeeding and breast problems such as nipple pain and breasts engorgement in order to offer women best evidence-based interventions to help women make informed breastfeeding choices.

The Registered Nurses of Ontario Association (2018) best practice guidelines suggest that nurses regularly educate breastfeeding women on proper infant positioning and latching as effective ways to prevent nipple pain and breast engorgements. Nurses are also required to use anticipatory guidance to help African migrant women cope with breastfeeding and alleviate the stress associated with breastfeeding problems. It is also important for nurses to educate African migrant women of the prevalence of nipple pain as a common problem among breastfeeding women (Puapornpong et al., 2017) and how the pain reduces within a few days notwithstanding the kind of treatment used (Jackson & Dennis, 2016).

Importantly, there is need for nurses and nursing students to remain up to date with trends in breastfeeding and other health related areas through immersing themselves in current evidence-based research and systematic reviews. As a means to improve cultural competency among nursing students and practicing nurses, it is necessary for nursing schools to collaborate with other nursing institutions across the globe to help nursing students to become familiar with various structural and cultural contexts that may positively or negatively influence the reception of maternity and health care services by

African migrant women. This is necessary to help nurses employ practical knowledge and critical approaches towards problem solving among this population.

Implications for Research

The women in this review integrated various aspects of their African cultural beliefs into their breastfeeding practices which included giving infants water as early as one week after birth and expelling colostrum from the breasts because they believed it was dirty. As such, research is required to conduct narrative studies and grounded theory studies on African migrant women from various parts of Africa to hear their stories and understand their decision-making regarding breastfeeding. It is also important to assess the knowledge of African women regarding exclusive breastfeeding, to determine the effects of cultural beliefs on the breastfeeding behaviors and practices, and how these beliefs impacted practices in home countries considering that the prevalence and duration of breastfeeding were higher than post migration.

African migrant women mentioned witnessing labour, delivery and childcare as children and teenagers helped them to develop decisions to initiate and maintain breastfeeding. These childhood experiences of childcare suggest the need for future research to explore the association of such experiences on breastfeeding decision making, initiation, and duration.

The African migrant women in this review believed that their infants' restlessness, irritability, and continuous crying after breastfeeding meant they did not receive enough breastmilk. Hence, the women concluded that breastmilk alone was unable to satisfy their babies and supplemented with formula. The cues which African migrant women use as measurements for low breastmilk supply requires further investigation to ascertain their degree of accuracy in revealing insufficient milk supply.

Interestingly, other African migrant women attributed insufficient breastmilk to change in diet. This suggests the need for further research to assess other indicators of breastmilk insufficiency among African migrant women. Research can also be carried out among other populations of varying races to monitor patterns of breastfeeding of mothers and infants and compare the similarities and differences in their perceptions and actual occurrence of breastmilk insufficiency with that of African migrant women. Furthermore, exploring these research areas, perception of breastmilk supply and contributing factors, and management of breastfeeding challenges, can develop scientifically supported and reliable markers to help identify poor breastmilk supply and interventions of proper management.

The women in this review stated turning to the internet for breastfeeding support and education during postpartum. Being in a highly technical world, African migrant women can access the internet for any information however, it is important that these women are accessing evidence-based information. The use of the internet for accessing breastfeeding related information was found to reduce the likelihood of breastfeeding at two weeks postpartum if the information received was unhelpful (Newby, Brodrigg, Ware, & Davies, 2015). Further research is needed to also determine whether African migrant women are accessing credible breastfeeding information sources and if this information can be translated to these women in various African languages. The findings indicate that African migrant women receive breastfeeding information from family, health professionals' and internet. Therefore, future researchers need to investigate which of these sources of breastfeeding information has the most effect on African migrant women's breastfeeding practices and experience to help health professionals plan future intervention strategies.

Although women in this review experienced difficulties in managing breastfeeding problems such as proper latching, nipple pain and engorgement, only a few stated seeking professional assistance especially from lactation consultants. Factors such as costs of services and language barriers might be associated with African migrant women seeking professional assistance late in postpartum or not seeking professional assistance at all. This lack of access between African migrant women and lactation consultants is worth investigating further. Such knowledge will be useful in improving breastfeeding services for African migrant women experiencing breastfeeding difficulties and also equip women on strategies to manage similar breastfeeding problems in later pregnancies.

Implications for Policy Makers

African migrant women in this review expressed personal conflict and ambivalence with public breastfeeding which makes it challenging for women to meet the WHO recommended breastfeeding on demand. Although some women tried to maintain breastfeeding in public settings, it was problematic due to the lack of access to conducive breastfeeding designated facilities in public places. A majority of the women in these studies were Muslims and as such were very particular about modesty and maintaining privacy. Government bodies and policy makers need to implement structural reforms to accommodate women's public breastfeeding needs. For example, there is a need to provide safe and conducive breastfeeding rooms with comfortable seats and ventilation that will accommodate women's needs in public places.

There is still ongoing controversy on the public acceptance of breastfeeding in developed countries where women are still humiliated for breastfeeding their infants (Wallace, 2016). At provincial levels, resources could be invested towards promoting

public acceptance of breastfeeding through reinforcing awareness and public breastfeeding education. For instance, the Toronto Public Health Unit and Porcupine Health Unit of Canada have taken positive steps towards improving breastfeeding acceptance in public through awareness by using life size cut outs of breastfeeding women situated in public places to help demystify the negative connotations around public breastfeeding.

Another commonly mentioned barrier to breastfeeding exclusivity and duration is the absence of breastfeeding designated areas in the workplace. Women found it difficult having to breastfeed in washrooms and unequipped offices. Government policies and laws in countries such as the Pregnancy and Human rights in Workplace policy in Canada, the Breastfeeding in Workplace Policy in U.K., and Working Environment Act of Norway mandates employers to provide favorable breastfeeding rooms to include comfortable chairs with arm and back rests, fridge for storing expressed milk, electric port for pumping breastmilk for their staff. These laws also prohibit any forms of workplace discrimination against breastfeeding yet working women still find it challenging to maintain breastfeeding practices in workplace settings. Further steps taken to promote breastfeeding in workplace is the establishment of paid breastfeeding breaks and longer paid maternity leaves to award women ample time to exclusively breastfeed and maintain prolonged breastfeeding. Although all countries mentioned above have set in place paid maternity leaves up to 35 weeks and benefits to working mothers, the US still has no paid maternity leave policy in place (Organization for Economic Co-operation and Development [OECD], 2017). While Australia has workplace breastfeeding promoting laws, there is still no legislation that grants women paid breastfeeding breaks (Australian Breastfeeding Association, 2017). This suggests the need for policies to be

strengthened in order to improve breastfeeding practices and achieve the desired global breastfeeding objectives.

Lastly, the findings suggest that language barriers subjected women to difficulties in assimilation and even misinterpretation of breastfeeding education due to the unavailability of language interpreters. Health facilities, policy makers, and service providers should employ the services of professional interpreters to ensure patent interpretation and breastfeeding services to reach the versatility of clients. Health facilities in Australia (New South Wales Government, 2017) and Canada (Sultana et al., 2018) utilize interpretation and translation services to ensure equity in health information and services. However, there is limited use of these services in addressing breastfeeding concerns of African migrant women as women in this review expressed frustrations of miscommunications with health team due to the absence of interpreters (Gallegos et al., 2015; Wandel et al., 2016). Language interpreters and translators should be invited to health care centers at prenatal classes, during labour and delivery, and at breastfeeding educational programs either by being physically present or through media services such as Skype or through telephone communication. This is to help relay sensitive information regarding breastfeeding and infant health to the women to help them explore various safe health and breastfeeding options. However, it is important for nurses to pay attention to the issues of trust that might exist between women and interpreters and provide strategies to allow initial contact between women and the interpreters to create a rapport that will make interaction easier.

Conclusion

This qualitative systematic review provides insight on the breastfeeding experiences of African migrant women in developed countries while also highlighting the

array of breastfeeding challenges they are faced with. African migrant women saw breastfeeding as a lifestyle and expressed willingness to maintain breastfeeding if they had the necessary support. The support from infant's grandmothers during breastfeeding was seen as very important to African migrant women. From the results of this review, it is evident that perceived insufficient breastmilk supply significantly affects breastfeeding. It is imperative for health professionals to pay more attention to African migrant women population during postpartum periods and improve efforts for promoting their breastfeeding practices.

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Appendix A: Qualitative Systematic Review Inclusion and Exclusion Criteria using PICO

PICO Elements*	Inclusion Criteria	Exclusion Criteria
Population	<ul style="list-style-type: none"> • Studies that include breastfeeding practices of non-White African women of all ages who were born in Africa but live in developed countries • Studies that include breastfeeding practices by non-White African migrant women who might be primiparous, multiparous women, postpartum women and women with multiple gestations • Studies that explore breastfeeding experiences of non-White women in developed countries with a clear distinction of their ethnicities 	<ul style="list-style-type: none"> • Studies that explore breastfeeding experiences of White African migrant women • Studies that include women with substance addiction • Studies that include breastfeeding women with diseases • Studies that include women with sick or preterm infants or infants with special needs • Studies that explore breastfeeding experiences of non-White women in developed countries but do not clearly distinguish the ethnicity of the participants.
Phenomenon of Interest	<ul style="list-style-type: none"> • Studies that explore breastfeeding experiences of migrant women with a clear description of each participant's ethnicity • Studies that explore breastfeeding initiative programs for migrants including African migrants • Studies that illustrate the available breastfeeding services for non-White women including African migrant women • Studies that examine the perceptions and attitudes of African migrants to breastfeeding services • Studies that examine breastfeeding decisions and behaviors of African migrants 	<ul style="list-style-type: none"> • Studies that do not examine breastfeeding experiences of non-White African migrant women
Context	<ul style="list-style-type: none"> • Studies that explore breastfeeding experiences of non-White women and non-White African migrants in developed countries • Studies that explore breastfeeding initiative programs in developed countries 	<ul style="list-style-type: none"> • Studies that explore the breastfeeding experiences of African women in Africa • Studies that explore breastfeeding experiences of non-White African migrant women in other developing countries.

*PICO elements for qualitative studies coined from Curtin University Library (2018)

Appendix B: Study Search Results

Electronic Database/source	Search terms	Number of studies
Cochrane Database of Systematic Reviews (CDSR)	Breastfeeding*” OR “breast feeding*” AND “attitudes to breastfeeding*” OR “breastfeeding experiences*” AND “perceptions of breastfeeding*” “baby friendly initiative*” AND “African migrants*” OR “African women*” OR “immigrant women*” OR “African migrants*” OR “breastfeeding AND immigrants*” OR “refugees*” OR asylum seekers*”	0
Center for Reviews and Dissertations (CRD)	As above	0
PUBMED	As above	107
Web of Science	As above	542
PROQUEST	As above	93
CINAHL	As above	305
Google Scholar	As above	17
Manual search	As above	26
SCOPUS	As above	114
Racer Interlibrary loan	N/A	21
Total		1225
Duplicates removed		122
Papers excluded		941
Full text papers reviewed		162
Full text papers excluded with reasons		152
Papers included		10

Appendix C: Quality Appraisal Tool for Included Studies

CASP Qualitative criteria	Yes	Can't Tell	No	Comments
Section A: Are the results valid?				
1. Was there a clear statement of the aims of the research?				
2. Is a qualitative methodology appropriate?				
Is it worth continuing?				
3. Was the research design appropriate to address the aims of research?				
4. Was the recruitment strategy appropriate to the aims of the research?				
5. Was the data collected in a way that addressed the research issue?				
6. Has the relationship between the researcher and the participants been adequately considered?				
Section B: What are the results?				
7. Have ethical issues been taken into consideration?				
8. Was the data analysis sufficiently rigorous?				
9. Is there a clear statement of findings?				
Section C: Will the results help locally?				
10. How valuable is the research?				

Quality assessment tool coined from CASP (2018)

Scoring system Yes: 1 point Can't tell: 0.5 points No: 0 points	High quality paper: 9-10 Moderate quality paper: 7.5-9 Low quality paper: <7.5 Exclude: <6
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Scoring tool for qualitative research by Butler, Hall, and Copnell (2016)

Appendix D: Characteristics of Included Studies

Author, year, country, journal	Purpose	Design	Participants	Country of origin of participants	Sampling technique	Data collection	Data analysis	Results
Wandel et al. (2016), Norway, <i>Women and Birth</i>	To explore infant feeding practices among Somali born mothers	Qualitative design	22 women (ages 21-40)	Somalia	Snowballing	In-depth interviews and focus groups	Grounded theory analysis	Women believed breastfeeding was important for infant health but lacked knowledge of exclusive breastfeeding and introduced water to infants before one week postpartum.
Tyler, L., Kirby, R., & Rogers (2014), Australia, <i>Breastfeeding Review journal</i>	To highlight and compare immigrant's women infant feeding choices and patterns before and after moving to a regional city	Qualitative thematic design	10 women (ages 25-36)	Sudan	Purposive	In-depth semi-structured interviews	Thematic analysis	Concerns about insufficient milk supply led women to supplement with formula before 6 months. Women believed poor milk supply was due to absence of traditional African diet.

<p>Condon, Ingram, Hamid, & Hussein (2003), U.K, <i>Community Practitioner</i></p>	<p>To examine the patterns of infant feeding and weaning behavior among women from minority ethnic groups</p>	<p>Mixed methods design</p>	<p>49 women (average age 28-29 years)</p>	<p>26 women from Somalia, Pakistan, Bangladesh, Afro-Caribbean, 23 Caucasian women as comparison group</p>	<p>Convenience and Purposive</p>	<p>Focus group and telephone survey</p>	<p>Thematic analysis, chi-square and t-tests</p>	<p>All women initially enjoyed the convenience of breastfeeding, although Somali women later expressed frustration and exhaustion with breastfeeding. Family and religion motivated Somali women to continue breastfeeding up to 2 years.</p>
<p>Steinman et al. (2010), USA, <i>Maternal and Child Nutrition</i></p>	<p>To explore mothers' beliefs and practices around infant feeding and education, towards developing a culturally informed infant nutrition curriculum for health providers</p>	<p>Qualitative grounded theory</p>	<p>37 women (Ages 21-51)</p>	<p>Somalia</p>	<p>Purposive</p>	<p>Focus groups</p>	<p>Content analysis</p>	<p>Women were skeptical about breastfeeding in public. Breastfeeding decisions were partly influenced by religious doctrines. Women lacked knowledge of use of breast pumps. Ambivalence about benefits of colostrum. Women appreciated</p>

								active communication with health providers.
Hill, Hunt, & Hyrkäs (2012), USA, <i>Journal of Transcultural Nursing</i>	To describe immigrant women's health care experience and beliefs regarding pregnancy and birth	Not stated	18 women (Ages 23-42 years)	Somalia	Convenience	Focus groups	Thematic content analysis	Women shared a common preference for chubby or fat babies believing them to be healthier. Expressed concerns of insufficient breastmilk but did not mention indicators. Women preferred working with the same health professionals.
Gallegos, Vicca, & Streiner, (2015), <i>Maternal and Child Nutrition</i>	To explore the breastfeeding experiences of refugee women from Africa	Qualitative descriptive design	30 women and one man (ages not stated)	3 from Sierra-Leonne, 8 women and one man from Liberia, 4 from Burundi, and 15 from Democratic Republic of Congo	Snowballing	Semi-structured interviews and group discussions	Thematic analysis	All women initiated breastfeeding but did not maintain exclusive breastfeeding. Cultural practices and family support influenced breastfeeding practices

Fabiya, Peacock, Hebert-Beirne, & Handler (2016), USA, <i>Maternal and Child Health Journal</i>	To explore infant feeding experiences from mothers' perspective and how these experiences differed by nativity or immigrant status	Qualitative design	20 women (ages 21-39 years for African born and 22-38 for African American)	10 African-born women from Ghana, Nigeria and Sierra-Leonne and 10 African American women	Purposive	Semi-structured interviews	Thematic analysis	African migrant women appreciated being exposed to breastfeeding and maternity care as children and teenagers as influential in breastfeeding practices. Mothers and mothers-in-law of African-born women had strong influences on their breastfeeding decisions. Family, friends and partners were also sources of discouragement from breastfeeding.
Higginbottom et al.(2013), Canada, <i>Pregnancy and Childbirth</i>	To present research findings on the maternity experiences of immigrant women in an urban Canadian city	Focused ethnography	12 women (Mean age 36.6 years)	Sudan	Purposive	Focus groups	Roper and Shapira's (2000) ethnographic analysis	Sudanese women appreciated breastfeeding their infants but expressed discomfort with the patriarchal tradition that allowed their

								spouses marry other wives during their breastfeeding periods. Women appreciated breastfeeding in Canada more than in their home country because of laws against polygamy and the autonomy concerning using contraceptive that allowed them to breastfeed and engage in sexual relations with their partners
Ingram, Cann, Peacock, & Potter (2008), U.K, <i>Maternal and Child Nutrition</i>	To explore the barriers to exclusive to 6 months with black and minority ethnic groups and with young mothers, and strategies for overcoming these barriers,	Not stated	22 women (Ages 25-40 for Somali women, 20-40 for South Asian women, 22-33 for Afro-Caribbean women and 16-23 for	3 Afro-Caribbean, 5 Somali, 9 South Asian, 5 young mothers	Purposive	Focus groups	Thematic analysis to develop themes and framework analysis to compare responses on each theme	All women desired conducive breastfeeding in public places. Women wished partners were more supportive and participated in breastfeeding. All women

	including peer support		young mothers)					except Afro-Caribbean women preferred breastfeeding support groups within their own communities.
Textor, Tiedje and Yawn, (2013), USA, <i>Minnesota Medicine</i>	To examine breastfeeding initiation and exclusivity among mothers from Somali and Mexico and cultural influences that might lead to misunderstandings between mothers and their nurses and lactation consultants	Not stated	19 women (women above 18 years)	5 Somali 4 Mexican 10 nurses	Not stated	Focus groups with nurses and in-depth semi structured interviews with immigrant women	Not stated	All women wanted to initiate breastfeeding but cultural beliefs of colostrum being contaminated prevented exclusive breastfeeding. Most Somali women experienced difficulty with accepting nurses' advice over family's especially their own mother. Women believed they had insufficient breast milk. Both groups of women expressed

								discomfort with publicly breastfeeding. Nurses offered women formula while stile in hospital. Nurses expressed being more comfortable with caring for Caucasian women than immigrant women
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Appendix E: Detailed Summary of Quality Appraisal of Included Studies from CASP 2018

Author, Year	Clear statement of research aims	Is a qualitative methodology appropriate?	Was the research design appropriate to address the aims of the research?	Was the recruitment strategy appropriate to the aims of the research?	Was the data collected in away that addressed the research issue?	Researcher/ participants relationship adequately considered?	Ethical issues considered	Was the data analysis sufficiently rigorous?	Is there a clear statement of findings?	How valuable is this research?	Score
Wandel et al. 2016	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Medium	9.5
Tyler, Kirby and Rogers, 2014	Yes	Yes	Yes	Yes	No	Can't tell	Yes	No	Can't tell	High	7
Steinman et al., 2010	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	10
Higginbottom et al., 2013	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Medium	9.5
Gallegos, Vicca and Striener, 2015	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes	Yes	Yes	Medium	9
Condon, Ingram, Hamid, and Hussein, 2003	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Can't tell	Can't tell	High	9
Fabiyi, Peacock, Herbert-Beirne and Handler, 2016	Yes	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Yes	Medium	9
Ingram, Cann, Peacock, and Potter 2008	Yes	Yes	Can't tell	Yes	Yes	Yes	Yes	Yes	Can't tell	High	9

Hill, Hunt, and Hyrkäs 2012	Yes	Yes	Yes	Can't tell	Yes	Can't tell	Can't tell	Can't tell	Yes	High	8
Textor, Tiedje and Yawn, 2013	Yes	Yes	Can't tell	Can't tell	Can't tell	No	No	No	Can't tell	High	5

Coates, Cupples, Scamell, and McCourt (2018)

Appendix F: Themes in Each Study

Studies	Breastfeeding as the accepted norm	Breastfeeding is convenient and enjoyable	Breastfeeding is stressful	Women's inadequate knowledge of breastfeeding	Perceived maternal insufficient milk supply	Preference for formula	Friends and family support	Health professional support
Wandel et al. (2016)	✓			✓	✓	✓	✓	✓
Tyler, L., Kirby, R., & Rogers (2014)		✓		✓	✓	✓	✓	✓
Condon, Ingram, Hamid, & Hussein (2003)	✓	✓	✓	✓	✓	✓	✓	✓
Steinman et al. (2010)	✓	✓	✓	✓	✓	✓	✓	✓
Hill, Hunt, & Hyrkäs (2012)	✓			✓	✓	✓	✓	✓
Gallegos, Vicca, & Streiner, (2015)	✓	✓		✓	✓	✓	✓	
Fabiyi, Peacock, Hebert-Beirne, & Handler (2016)	✓	✓	✓		✓	✓	✓	✓
Higginbottom et al.(2013)	✓	✓	✓				✓	
Ingram, Cann, Peacock, & Potter (2008)				✓	✓	✓	✓	
Textor, Tiedje and Yawn, 2013	✓			✓	✓	✓	✓	✓

Appendix G: Themes and Quotations from Participants

Themes	Quotations from participants in primary studies
Breastfeeding as the accepted norm	<p>I think that breastfeeding is a great foundation for babies. My mum taught me the importance of breastfeeding cos' there's a lot of viruses going around and he never got really sick . . . Its just part of our lifestyle (Gallegos et al., 2015).</p> <p>As a younger generation if we don't want to breastfeed, we really don't have a choice sometimes. Because the elders, neighbors and grandparents . . . breastfeeding is the typical thing (Textor, Tiedje & Yawn, 2013)</p>
Breastfeeding is convenient and enjoyable	<p>The baby has more 'tendresse' to you, more kind on you. It is the best relationship, the baby likes you so much, only wants the mother (Condon et al., 2003)</p> <p>If you want to put a kid to bed, it's quicker to first breastfeed because that relaxes him and that seems to help the baby fall asleep quicker (Steinman et al., 2010)</p>
Breastfeeding is stressful	<p>If you're not pumping, you're breastfeeding, and when you breastfeed, breast milk digests like [gestures] that. So, you have to do it frequently. So it kind of holds you back. You can't really do much. You can't do nothing. You have to be with your baby 24/7 if you're breastfeeding (Fabiya et al., 2016)</p> <p>You don't get enough rest, you don't even remember to take enough to drink, and for your breasts to produce milk, you have to be drinking a lot of fluids (Steinman et al., 2010)</p>
Women's inadequate breastfeeding knowledge	<p>Yes I give her some porridge, but I still exclusively breastfeed since she does not eat that much porridge (Wandel et al., 2016)</p> <p>I am breastfeeding him exclusively, but sometimes when we are out. . . or I do not have the opportunity to breastfeed him. . . I would usually give him a little bit of formula (Wandel et al., 2016)</p> <p>You do not know how many ounces did the baby take in. In the bottle you can make sure, but how long would you have to breast feed each day, and how would you know that the baby was full? You can't see it (Textor, Tiedje, & Yawn, 2013)</p>
Perceived insufficient milk supply	<p>When the baby is hungry he's hungry and (when) breast milk is not enough for that baby . . . we have to add another something (Gallegos et al., 2015)</p>

	<p>Yes breastmilk is not like the milk back home, breastmilk in Sudan is much more ... in Australia doesn't produce a lot of milk because the food here is much different (Tyler, Kirby, & Rogers, 2014)</p> <p>They think the baby will not grow [fat enough] on breast milk (Hill et al., 2012)</p> <p>My mother has six children and she has not given these children anything else than breast milk for two years. . . in Norway it is common to hear that there is not enough milk in the breast, but in Somalia we do not have that problem (Wandel et al., 2016)</p> <p>I think it is a cultural conviction, this thing that breast milk is not enough. . . I think this is the reason why my breastfeeding came to an end. . . I always felt that pressure: it is not enough, it is not enough, you have to give something else in addition, and when they first begin with the bottle they refuse the breast (Wandel et al., 2016)</p>
<p>Preference of formula</p>	<p>I would have just stopped and start giving them the formula because the formula's easier and anyone can help me feed it, like the father of the baby could do it, my siblings could help, anyone could do it. But the breast, it's just me (Steinman et al., 2010).</p> <p>One thing you cannot tell is your breast milk. You don't know how much the baby took, you know, your breast so adding your formula it's very tough how you're going to decide it (Steinman et al., 2010)</p> <p>It might be because they (in Somalia) have time and have a lot of people around to help out. I believe that is the reason (for breastfeeding longer in Somalia). For example, I have three kids, I stress and I do not manage to breastfeed all the time. . . therefore I give formula (Wandel et al., 2016)</p>
<p>Family and friend's support</p> <ul style="list-style-type: none"> • Positive 	<p>I wanted to wean him by six months, but my mum-in-law would call me and beg me and tell me "Are you still breastfeeding him? Please breastfeed him. It's very good. I'm telling you, you want to help him, he will not fall sick often, he will not do this".... Honestly, she was the motivating factor. She was. Because I would've stopped (Fabiya et al., 2016)</p>

<ul style="list-style-type: none"> • Negative or absence 	<p>One friend helped me in knowing that I could actually pump more breast milk than I thought I could (Fabiya et al., 2016)</p> <p>I did not give water, and I was criticized by my family and relatives. They told me: He is a human being, he gets thirsty and that milk does not quench thirst. . . while the health clinic said: no, he does not need water (Wandel et al., 2016)</p> <p>Nobody helps me here, but if I was in Africa, I could call my mother, sisters, even my neighbours, to help me taking care of my house works and other kids. But here in Australia, I'm in the house for months and I don't know even my next house person (Gallegos et al., 2015)</p> <p>While we are here in America, just do bottle-feeding. That makes it easier for you (Fabiya et al., 2016)</p> <p>Back home you have someone with you all the time (Tyler, Kirby, & Rogers, 2014)</p>
<p>Health professional's support</p> <ul style="list-style-type: none"> • Positive • Negative 	<p>My mom just knew the typical position [for breastfeeding], but then there are all these positions that you can use. It helped after I came to lactation, they could show me exactly the different positions I could use (Textor, Tiedje, & Yawn, 2013)</p> <p>...But at health clinic XX it is such a calm atmosphere, they came in and I felt like they saw me. . . due to this atmosphere there was a possibility to maybe talk about those things (Wandel et al., 2016)</p> <p>What kinds of things would have helped me overcome? I guess if I would see more posters at your practitioners office saying "Breastfeeding is hard, but you've got to do it." Cause they make it seem like "Oh, just breastfeed, it's good for your baby (Fabiya et al., 2016)</p> <p>For example how to know that they had enough breast milk and what to do if they did not manage to produce enough milk. 'I don't think that they are spending enough time to explain. . . that if there is not enough milk, it is just to put the child to the breast often, and then it will come (Wandel et al., 2016)</p>

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