Ethno-cultural Factors that Influence Infant Feeding Practices among Ethnically Diverse Women in Western Countries: A Rapid Review of the Evidence

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Key Take Home Messages

*The question:* In western countries, what ethno-cultural factors influence infant feeding choices and practices among ethnically diverse women, during the first six months of life?

- Currently, there is no high quality synthesized evidence that provides information on ethno-cultural factors that influence infant feeding choices and practices.

- It is recommended that Peel Public Health:
  - Utilize the findings from the following internal reports to inform practice decisions:
    - 2009-2010 Breastfeeding Duration Survey
    - *Ethno-cultural Factors that influence Infant Feeding among South Asians in the Region of Peel: Findings from Stakeholder Consultations*

Revisit the literature in three to five years to assess new research evidence.
Executive Summary

Issue
Personnel at local hospitals believe that ethno-cultural factors, especially among the South Asian community, were influencing women not to breastfeed. The perception is that ethno-cultural infant feeding beliefs and practices may be responsible for the high levels of formula supplementation at hospital discharge and low exclusive breastfeeding and breastfeeding duration in Peel (1-3).

Purpose
This review aims to increase knowledge of ethno-cultural factors that may influence infant feeding choices and practices and guide the development of culturally appropriate key messages, programs and policies to support exclusive breastfeeding.

Research Question
In western countries, what ethno-cultural factors influence infant feeding choices and practices among ethnically diverse women, during the first six months of life?

Context
Exclusive breastfeeding rates are low in Peel Region and pre-discharge formula supplementation of newborns as well as the distribution of take-home formula samples is prevalent at local hospitals (1-3). Hospital partners implicate the ethno-cultural diversity of Peel as a key contributing factor to this phenomenon. Peel Region is very diverse with approximately half of its population belonging to ethnic minority groups (4). Until recently, little or no data on ethnic variation in breastfeeding rates were available. However, preliminary findings from the 2009-2010 Breastfeeding Duration Survey show that recent immigrants (living in Canada for
less than 5 years) are significantly more likely to initiate breastfeeding than Canadian-born mothers and are also significantly more likely to breastfeed at six months compared to non-immigrants (2). Comparisons between South Asian, Caribbean and South American women show no variation in breastfeeding initiation, exclusivity or six month duration but East Asian women are more likely to breastfeed at six months relative to the rest of the population (2).

**Methods**

Searches were conducted in Ovid Medline, PsychInfo, CINAHL, Sociological Abstracts, Cochrane reviews, and websites of Centers for Disease Control and Prevention and the World Health Organization. Literature was included if it was in English and if the research was conducted in countries similar to Canada, including United States, United Kingdom, Australia, and New Zealand.

**Search Results**

Five potentially relevant reviews were found and relevance assessment eliminated three. Quality assessments were conducted for the remaining two reviews but yielded very weak ratings. These reviews were excluded due to poor quality.

**Conclusion**

Currently, there is no high quality synthesized evidence to identify ethno-cultural factors that influence infant feeding choices and practices.
1 Problem Statement

The low rate of exclusive breastfeeding is a public health concern in the Region of Peel.
Exclusive breastfeeding for the first six months of life with continued breastfeeding up to two years and beyond is recommended by the World Health Organization (WHO), the Canadian Paediatric Society (CPS) and the Breastfeeding Committee for Canada (5-7). In Peel, the exclusive breastfeeding rate at six months postpartum was as low as 10 percent in 2005 but increased substantially to 23 percent in 2010 (1,2). Although this increase is promising, it is far from ideal. Feeding practices are established early after birth and Peel’s low exclusive breastfeeding rate is influenced by early neonatal formula supplementation, high levels of pre-discharge formula supplementation of newborns and the distribution of formula samples at local hospitals (3).

In discussions with hospital personnel, the ethno-cultural beliefs of residents have been implicated as a key factor in the low levels of exclusive breastfeeding in general and in the high levels of in-hospital formula supplementation of infants specifically. Hospital staff expressed the belief that mothers from visible minority groups tend to opt for formula feeding during their hospital stay. The challenge facing the Family Health Division is to determine if, or how, the ethno-cultural diversity of Peel’s population influences infant feeding choices, decisions and practices and to develop culturally appropriate key messages, programs, policies, and initiatives to support exclusive breastfeeding.
2  Context

Breastfeeding plays an important role in healthy child development. The Family Health Division actively promotes exclusive breastfeeding for the first six months of life with continued breastfeeding up to two years as per international and national recommendations (5-7). Exclusive breastfeeding is defined as feeding only breast milk, with no other foods or drinks, except vitamin and mineral supplements or medicines (5). Research links breastfeeding to numerous infant and maternal health benefits. For instance, a review prepared for the Agency for Healthcare Research and Quality, identified that for infants, breastfeeding is associated with a reduction in obesity in later life, ear, lower respiratory and diarrheal infections, and sudden infant death syndrome (8). As well, for mothers, associations between breastfeeding and uterine healing, weight loss, and reduced risk of certain types of cancers have been reported (8, 9).

2.1  Diversity and Growth in Peel

Culturally, Peel is very diverse, with immigrants comprising 49 percent of the population (4). The three main visible minority groups in the region are South Asians (23.6%), Blacks (8.3%), and Chinese (4.7%) while the top three minority ethnic groups for women of child bearing age (15-49 years) are South Asians (26.3%), East/Southeast Asian (10.9%), and Blacks (9.5%) (10). The region has experienced rapid population growth due to both immigration and new births. Approximately 16,000 new babies are born each year in Peel. There has been a 59% increase in the number of live births between 1986 and 2006, compared to a 12% increase in the rest of the Greater Toronto Area (11). The increase in births combined with the ethno-cultural diversity of Peel’s population underscores the importance of understanding the role of ethno-cultural factors in infant feeding practices and is a timely and important issue for the Family Health Department.
2.2 Breastfeeding Rates in Peel

Local epidemiologic data show that while breastfeeding initiation rates are high in the region, exclusive breastfeeding at 6 months post partum has been an ongoing source of concern. In 2005, approximately 94% of mothers in the region initiated breastfeeding, 58% breastfed (mixed and exclusive) until six months and 10% breastfed exclusively to 6 months (1). Preliminary findings from the 2009-2010 Breastfeeding Duration Survey reveal that breastfeeding initiation remained high at 97%, breastfeeding at six months (mixed and exclusive) is relatively unchanged at 58%, and exclusive breastfeeding at six months postpartum more than doubled to 23% (2). Although the increase in breastfeeding exclusivity is promising, there is much room for improvement.

2.3 Ethnic Variation in Breastfeeding

Until recently, there was no mechanism in place to measure ethnic variation in breastfeeding initiation, duration and exclusivity in Peel. In an attempt to fill the void, the 2009-2010 cycle of the Breastfeeding Duration Survey collected demographic data on ethnicity and immigration status. Preliminary findings reveal that most mothers in Peel initiate breastfeeding. However, mothers who reported their ethnic origin as Canadian are significantly less likely to initiate breastfeeding than mothers who are recent immigrants, defined as living in Canada for less than five years (96% versus 100%) (2). Recent immigrants are also significantly more likely to report breastfeeding at six months than non-immigrant mothers (66% versus 53%) (2). There is some indication that acculturation may influence breastfeeding exclusivity at six months for longer term immigrants, defined as living in Canada for 11 years or more. These were significantly less likely to exclusively breastfeed at six months (26% versus 14%) when compared to recent
immigrants or Canadian born mothers (2). These data do not support the perceived notion that immigrants, particularly recent ones, do not choose to breastfeed.

Comparisons in breastfeeding initiation, exclusivity at six months and any breastfeeding at six months between East Asian, South Asian, Caribbean, and South American women with the rest of the population show no statistically significant differences with one exception; East Asian women are more likely to breastfeed at six months compared to the general population (2). These findings challenge the view that women of ethnic backgrounds are more likely than their Canadian counterparts to introduce formula to their babies.

Nationally, limited data are available on breastfeeding prevalence for minority groups. The 2007-2008 Canadian Community Health Survey (CCHS) reports that 96.2 percent of Asian women in Canada initiate breastfeeding but this is a broad category which includes women of Korean, Filipino, Japanese, Chinese, South Asian and South East Asian backgrounds (12). The survey does not provide breastfeeding duration and exclusivity data for this or other ethnic groups.

### 2.4 Formula Supplementation at Local Hospitals

The method of infant feeding at time of discharge from hospital is reported within the Integrated Services for Children Information System (ISCIS) database for mothers who consent to have their information forwarded to their local public health unit. A review of Peel data for the years 2004-2007 demonstrated an apparent decrease in percentage of mothers feeding infants breast milk only, and an increase in mixed feeding (breast milk plus formula) (4). Further exploration of this trend was requested by the Medical Officer of Health.
In response, Peel Public Health surveyed a sample of more than 1,100 new mothers in 2009 in order to estimate the proportion of mothers whose infants were supplemented with formula, the proportion given formula to take home, and mothers’ perceptions of the reasons for giving formula to their newborns. The results displayed in table 1 show a range in hospital formula supplementation rates of 54 to 72% by local hospitals, and formula samples given to 24 to 44% of mothers surveyed (3).

Table 1: Exclusive Breastfeeding and Formula Supplementation at Hospital Discharge

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Exclusive Breastfeeding at Hospital Discharge</th>
<th>Formula Supplementation Prior to Hospital Discharge</th>
<th>Distribution of Formula Samples at Hospital Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brampton Civic Hospital</td>
<td>28%</td>
<td>72%</td>
<td>43%</td>
</tr>
<tr>
<td>Credit Valley Hospital</td>
<td>46%</td>
<td>54%</td>
<td>32%</td>
</tr>
<tr>
<td>Trillium Health Centre</td>
<td>46%</td>
<td>54%</td>
<td>24%</td>
</tr>
</tbody>
</table>

Peel Public Health hosted a series of meetings, in July and August of 2010, to discuss these findings with each of the three hospitals located within Peel. Representatives from the Office of the Medical Officer of Health and Family Health Division met with key hospital staff and administrators to discuss the report and its recommendations. A salient theme which emerged from these discussions is the belief that the findings were reflective of the ethno-cultural diversity of the population. Hospital personnel’s perception was that mothers from visible minority ethnic backgrounds were reticent to breastfeed and often requested formula supplements for their newborns.

Peel Public Health uses an evidence-informed decision making framework to inform practice and it was decided to conduct a rapid review of the literature to assess empirical support for the argument raised by hospital staff. The findings will inform the development of culturally
appropriate key messages, programs, and policies, and collaboration with key partners to support exclusive breastfeeding.

3 Conceptual Model

A conceptual model of the variables associated with breastfeeding was developed by adapting a model from Lee, Elo, McCollum and Culhane, who expanded demographic and socioeconomic factors into cultural context, social and political environments, and maternal and infant characteristics (13). Input from Peel Public Health’s breastfeeding staff was solicited and incorporated into the model to reflect the local context in Peel (Appendix A). While this conceptual model provides a broad overview of factors that influence infant feeding, the “cultural context” component, which addresses factors such as ethno-cultural theories of parenting, beliefs about breastfeeding, history of breastfeeding, and acculturation, is germane to this discussion.

4 Literature Review

The purpose of this rapid review is to determine evidence of ethno-cultural factors which could influence infant feeding choices and patterns. Initially, the intent was to limit the search to breastfeeding behaviours among the South Asian population, but this yielded limited results. The search question was therefore broadened to examine infant feeding practices among all visible minority ethnic groups living in Westernized countries.¹

¹ Although the term originally had a literal geographic meaning, western world generally refers to Europe and the Americas. (Ovid MeSH Heading, retrieved on 2012-01-12. This review included a search for studies located in Europe, the U.S., Australia and Canada.)
Specifically, the search question was: *In western countries, what ethno-cultural factors influence infant feeding choices and practices among ethnically diverse women, during the first six months of life?*

Because this research question did not focus on interventions, but instead focused on understanding infant feeding decision factors and descriptive situations, the PICO format used to generate search terms was modified as outlined below:

<table>
<thead>
<tr>
<th>P (Population)</th>
<th>Mothers of diverse ethnic background living in westernized countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>E (Exposure or Situation)</td>
<td>Breastfeeding beliefs, values and practices that are culturally based</td>
</tr>
<tr>
<td>C (Comparison)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>O (Outcome)</td>
<td>Types and description of infant feeding behaviours (breastfeeding, formula feeding and mixed feeding, breastfeeding duration and exclusivity)</td>
</tr>
<tr>
<td>T (Time)</td>
<td>Birth to 6 months</td>
</tr>
</tbody>
</table>

### 5 Search Strategy

Literature searches were conducted in Ovid Medline, PsychInfo, CINAHL, Sociological Abstracts, and Cochrane reviews. Searches of the grey literature were done by searching websites for the Centers for Disease Control and Prevention and the World Health Organization.

The search terms were the same in each case and included:

**Population:** mothers, new mothers, post partum mothers  
**Exposure:** ethnic groups, ethnicity, culture, immigrants, minority groups  
**Outcome:** breastfeeding, infant feeding, bottle feeding, formula feeding, formula supplements, artificial baby milk, and breastmilk supplements

Search strategies for Ovid Medline, PsychInfo and CINAHL databases are included in Appendix B.
5.1 Inclusion and Exclusion Criteria

Studies were restricted to English Language only and limited to westernized countries such as Canada, United States, United Kingdom, Australia, and New Zealand. The inclusion criteria were kept sufficiently broad to capture all ethno-cultural groups, but restricted the infant feeding timeline to between birth and 6 months. Initially, study types were restricted to syntheses, systematic reviews and reviews but this was later extended to include single studies.

5.2 Search Results

The search strategies yielded a total of 249 articles. Of these, five potentially relevant reviews and 32 potentially relevant single studies were considered. However, for the purposes of this review, Family Health management decided to exclude the single studies due to limited internal capacity to undertake a synthesis of single studies. Relevance assessment of the five review articles eliminated three of the five, and quality assessment was completed for the final two. (Refer to Appendix C: Literature Search Flowchart for a detailed synopsis of this process.)

The first review selected for critical appraisal, completed by Thurlier and Mercer, provided evidence from an unspecified number of U.S. and international papers, published in English between 1998 and 2008, on factors associated with breastfeeding duration (14). Variables are grouped under four headings: biological, social, psychological and demographic. Included studies discussed race as a predictor of breastfeeding and longer lengths of stay in the United States of America (U.S.) as associated with reduced breastfeeding duration (14). However, the authors did not compare or combine results across studies or develop their own conclusions.
The second review selected for critical appraisal was completed by Gill and focused on immigrant Hispanic women living in the U.S (15). It described breastfeeding beliefs, attitudes and practices, and suggested interventions to increase breastfeeding exclusivity and duration among Hispanic women (15). This review drew on 38 studies conducted in the U.S. between 1998 and 2008. No description of the included studies is provided and the authors did not develop their own conclusions.

5.3 Critical Appraisal and Findings

Both reviews were critically appraised, independently, by two authors using the Quality Assessment Tool for Review Articles developed by Health-evidence.ca. The reviewers concurred in rating both reviews as “weak” (2 out of 10 for the Thurlier and Mercer and 1 out of 10 for Gill). Each review scored one point for search strategies that covered the minimum of 10 years (14,15). However, the Thurlier and Mercer review received an additional point for the use of appropriate inclusion criteria (14). Both reviews were excluded due to poor quality and it was concluded that currently, there is no high quality synthesized evidence available to identify ethno-cultural factors that influence infant feeding patterns.

5.4 Decision

In spite of the dearth of synthesized evidence to answer this research question, Peel Public Health has collected local data that provide additional insight about ethno-cultural variations in breastfeeding that can inform program planning. The first, the 2009-2010 Breastfeeding Duration Survey, provides epidemiologic data on breastfeeding variation by immigration status and key visible minority groups. The second, a descriptive qualitative study, identifies and
discusses ethno-cultural factors that influence infant feeding patterns in the local South Asian community. The findings from these two sources provide valuable information that can be used to inform some practice decisions.

The following recommendations are suggested:

- Integrate the key findings and recommendations from the following internal reports to develop a conceptual map that will inform key messages, programs, policies, and initiatives to support exclusive breastfeeding and to educate stakeholders:
  - *Formula Supplementation for Newborns in Peel Region Hospitals*
  - *2009-2010 Breastfeeding Duration Survey*
  - *Ethno-cultural Factors that Influence Infant Feeding among South Asians in the Region of Peel: Findings from Stakeholder Consultations*

- Update search on this question in three to five years to assess new research evidence and to inform the feasibility of conducting a new rapid review based on search findings and program priorities.
References


10. Source: Canadian Community Health Survey Cycle 4.1 (2007/2008), Ontario Share File, distributed by the Ministry of Health and Long-Term Care


Appendices

Appendix A: Concept Model

Appendix B: Search Strategy

Appendix C: Literature Search Flowchart
Appendix A: Concept Model – Factors that Influence Breastfeeding

(Adapted from Lee, Elo, McCollum & Culhane, 2009)

Demographic and Socioeconomic Factors
- Race/Ethnicity and Nativity
- Socioeconomic Factors
  - Education
  - Employment
  - Income
  - Other demographics
    - Age at birth
    - Birth order

Cultural Context
- Ethno-theories of parenting
- Beliefs about breastfeeding
- History of breastfeeding
- Acculturation
- Issues of sexuality

Social & Political Environments
- Network interactions
- Social supports
  - Peer, family
  - Social influence
- Health care practices and support
  - Physicians, hospitals, public health
- Informational sources
- Marketing of formula

Maternal Well-being and Behaviours
- Health status
- Psychosocial well being
- Health behaviours

Breastfeeding Practices
- Infant-feeding knowledge
- Informed Decision
- Breastfeeding Intention
- Breastfeeding Behaviours
  - Initiation
  - Duration
  - Exclusivity

Infant Characteristics
- Health at birth
- Temperament
- Appetite

Improved child and maternal health
- Child Health
  - Example:
    - Reduced obesity in later life
    - Reduced ear, lower respiratory & diarrheal infections
    - Reduction in SIDs

- Maternal Health
  - Example:
    - Uterine healing
    - Weight loss
    - Reduced risk of ovarian cancers
Appendix B: Search Strategy

Medline Search Strategy
1 Mothers/ (21450)
2 new mother$.tw. (765)
3 post partum mother$.tw. (31)
4 post-partum mother$.tw. (31)
5 exp Ethnic Groups/ (95930)
6 ethni$.tw. (63906)
7 cultur$.tw. (712989)
8 cultur$.tw. (712989)
9 "Emigrants and Immigrants"/ (3142)
10 immigrant$.tw. (12418)
11 Minority Groups/ (8916)
12 visible minorit$.tw. (73)
13 Breast Feeding/ (22710)
14 breastfeed$.tw. (10009)
15 breast feed$.tw. (10479)
16 Infant Formula/ (1787)
17 infant feed$.tw. (2978)
18 Bottle Feeding/ (2985)
19 bottle feed$.tw. (1209)
20 bottle fed.tw. (799)
21 formula fed.tw. (1345)
22 formula feed$.tw. (940)
23 formula supplement$.tw. (300)
24 artificial baby milk.tw. (14)
25 breast milk substitute$.tw. (203)
26 feeding practice$.tw. (2116)
27 1 or 2 or 3 or 4 (21974)
28 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 (848063)
29 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 (33775)
30 27 and 28 and 29 (341)
31 exp Infant/ (854731)
32 30 and 31 (220)
33 meta-analysis.mp,pt. (47776)
34 (search or systematic review or medline).tw. (149791)
35 cochrane database of systematic reviews.jn. (7763)
36 or/33-35 (179056)
37 exp guideline/ (21379)
38 (practice guideline or guideline).pt. (21379)
39 37 or 38 (21379)
40 36 or 39 (199427)
41 (comment or letter or editorial or note or erratum or short survey or news or newspaper article or patient education handout or case report or historical article).pt. (1485827)
42 40 not 41 (191056)
Psychinfo Search Strategy

Database: PsycINFO <2002 to August Week 4 2011>
Search Strategy:
-----------------------------------------------------------------------------------------------
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3    post partum mother$.tw. (8)
4    post-partum mother$.tw. (8)
5    ethni$.tw. (30445)
6    cultur$.tw. (95983)
7    cultur$.tw. (95983)
8    immigrant$.tw. (8317)
9    Minority Groups/ (4853)
10   visible minorit$.tw. (80)
11   Breast Feeding/ (1104)
12   breastfeed$.tw. (1215)
13   breast feed$.tw. (512)
14   infant feed$.tw. (310)
15   Bottle Feeding/ (69)
16   bottle feed$.tw. (80)
17   bottle fed.tw. (28)
18   formula fed.tw. (40)
19   formula feed$.tw. (87)
20   formula supplement$.tw. (13)
21   artificial baby milk.tw. (0)
22   breast milk substitute$.tw. (4)
23   feeding practice$.tw. (241)
24   1 or 2 or 3 or 4 (10335)
25   exp Infant/ (0)
26   meta-analysis.mp,pt. (6612)
27   (search or systematic review or medline).tw. (25212)
28   exp "Racial and Ethnic Groups"/ (36539)
29   exp Immigration/ (7027)
30   5 or 6 or 7 or 8 or 9 or 10 or 28 or 29 (139709)
31   11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 22 or 23 (1894)
32   24 and 30 and 31 (107)
33   26 or 27 (30309)
34   32 and 33 (0)
35   limit 32 to yr="2007 -Current" (75)
| S44 | s40 not s43 | Search modes - Boolean/Phrase | Interface - EBSCOhost Search Screen - Advanced Search Database - CINAHL with Full Text | 72 | Edit S44 |
| S43 | s41 or s42 | Search modes - Boolean/Phrase | Interface - EBSCOhost Search Screen - Advanced Search Database - CINAHL with Full Text | 11184 | Edit S43 |
| S42 | TI presentation* | Search modes - Boolean/Phrase | Interface - EBSCOhost Search Screen - Advanced Search Database - CINAHL with Full Text | 4998 | Edit S42 |
| S41 | TI abstract* | Search modes - Boolean/Phrase | Interface - EBSCOhost Search Screen - Advanced Search Database - CINAHL with Full Text | 6558 | Edit S41 |
| S40 | s38 and s31 | Limiters - Published Date from: 20070101-20111231 Search modes - Boolean/Phrase | Interface - EBSCOhost Search Screen - Advanced Search Database - CINAHL with Full Text | 79 | Edit S40 |
| S39 | s38 and s31 | Search modes - Boolean/Phrase | Interface - EBSCOhost Search Screen - Advanced Search Database - CINAHL with Full Text | 132 | Edit S39 |
| S38 | s33 or s34 or s35 or s36 or s37 | Search modes - Boolean/Phrase | Interface - EBSCOhost Search Screen - Advanced Search Database - CINAHL with Full Text | 42003 | Edit S38 |
| S37 | TX cochrane | Search modes - | Interface - EBSCOhost | 23598 | Edit |
| S36  | TX medline | Boolean/Phrase | Interface - EBSCOhost Search Screen - Advanced Search Database - CINAHL with Full Text | 27267 | Edit S36 |
| S35  | PT meta analysis | Boolean/Phrase | Interface - EBSCOhost Search Screen - Advanced Search Database - CINAHL with Full Text | 1317 | Edit S35 |
| S34  | PT systematic review | Limiters - Published Date from: 20070101-20111231; Exclude MEDLINE records | Interface - EBSCOhost Search Screen - Advanced Search Database - CINAHL with Full Text | 3233 | Edit S34 |
| S33  | MW meta analysis | Limiters - Published Date from: 20070101-20111231; Exclude MEDLINE records | Interface - EBSCOhost Search Screen - Advanced Search Database - CINAHL with Full Text | 1215 | Edit S33 |
| S32  | s31 | Limiters - Published Date from: 20070101-20111231; Exclude MEDLINE records | Interface - EBSCOhost Search Screen - Advanced Search Database - CINAHL with Full Text | 167 | Edit S32 |
| S31  | s5 and s13 and s30 | Boolean/Phrase | Interface - EBSCOhost Search Screen - Advanced Search Database - CINAHL with Full Text | 1137 | Edit S31 |
| S23 | TX formula supplement* | Search modes - Boolean/Phrase | Interface - EBSCOhost 
Search Screen - Advanced Search 
Database - CINAHL with Full Text | 337 | Edit S23 |
| S24 | TX infant formula | Search modes - Boolean/Phrase | Interface - EBSCOhost 
Search Screen - Advanced Search 
Database - CINAHL with Full Text | 2527 | Edit S24 |
| S25 | TX artificial baby milk | Search modes - Boolean/Phrase | Interface - EBSCOhost 
Search Screen - Advanced Search 
Database - CINAHL with Full Text | 36 | Edit S25 |
| S26 | TX breast milk substitute* | Search modes - Boolean/Phrase | Interface - EBSCOhost 
Search Screen - Advanced Search 
Database - CINAHL with Full Text | 197 | Edit S26 |
| S27 | MW breastfeeding | Search modes - Boolean/Phrase | Interface - EBSCOhost 
Search Screen - Advanced Search 
Database - CINAHL with Full Text | 128 | Edit S27 |
| S28 | MW breast feeding | Search modes - Boolean/Phrase | Interface - EBSCOhost 
Search Screen - Advanced Search 
Database - CINAHL with Full Text | 10251 | Edit S28 |
| S29 | TX feeding practice* | Search modes - Boolean/Phrase | Interface - EBSCOhost 
Search Screen - Advanced Search 
Database - CINAHL with Full Text | 1628 | Edit S29 |
| S30 | s14 or s15 or s16 or s17 or s18 or s19 or s20 or s21 or s22 or s23 or s24 or s25 or s26 or s27 or s28 or s29 | Search modes - Boolean/Phrase | Interface - EBSCOhost 
Search Screen - Advanced Search 
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Appendix C: Literature Search Flowchart

Overview of the Search Process
Query: In a westernized context, what are the ethno-cultural factors that influence mothers’ infant feeding choice and practice in the first 6 months of life?

- Grey Literature (0)
- CINAHL (72)
- Medline (102)
- PsychINFO (75)
- Sociological Abstracts (0)

Total identified articles = 249

Removal of Duplicates (42)

Primary relevance assessment 207

Non-relevant (based on title and abstract screening) (170)

Potentially relevant reviews (5)
Potentially relevant single studies (32)

Relevance assessment of full document versions (reviews only) (5)

Non-relevant articles (3)*

Total relevant articles (2)

- Systems
- Summaries
- Synopses of Syntheses
- Syntheses (2)
- Synopses of Single studies
- Single studies

Quality assessment of relevant articles (2)

- Strong articles (0)
- Moderate articles (0)
- Weak articles (2)*