



Review Article

A critical review of human milk sharing using an intersectional feminist framework: Implications for practice

Martha Jane Paynter, MDE MSc BScN RN*, Lisa Goldberg, RN PhD

Dalhousie University School of Nursing, Forrest Building, Dalhousie University, PO Box 15000, 5869 University Avenue, Halifax Nova Scotia, B3H 4R2, Canada

ARTICLE INFO

Keywords:

Milk
Human
Feminism
Breast Feeding
Nursing

ABSTRACT

Objective: Driven by a growing body of research demonstrating the health benefits of human milk over substitute feeding preparations, the demand for human milk donations in North America is rapidly increasing. In the context of an increasingly institutionalized and commercialized human milk market, informal peer-to-peer milk sharing networks are commonplace. Race, class, gender and sexual orientation are intersecting aspects of identity and power that influence participation in breastfeeding and the domain of milk exchange. Using an intersectional feminist framework, we critically review studies of participation in milk sharing to examine the identities and socio-political circumstances of milk sharing participants.

Design, Setting and Participants: We use an intersectional feminist framework to conduct a critical review of the evidence pertaining to human milk sharing participants in North America. The search strategy included relevant databases (Pubmed, CINAHL) and hand-searches of key journals. We include research studies with participants in the United States and Canada and where participants milk shared as recipients or donors.

Findings: Of those studies that examine socio-political identities such as race and class, participants are largely white and high-income. Many studies did not examine socio-political identities, and none examine sexual orientation. Themes we identify in this review include: (1) Socio-political identities; (2) Milk sharing supports parental health; (3) Socio-political influences; (4) Resistance against institutionalization.

Implications for Practice: Maternity care providers can advocate for improved access to breastfeeding support and pasteurized human donor milk to address inequities. Maternity care providers can bring consciousness of intersecting socio-political identities to discussions with families about milk-sharing.

Introduction

Driven by a growing body of evidence demonstrating the health benefit of human milk over substitute feeding, the demand for human milk donations in North America is increasing rapidly. There are now 27 “member” banks and five “developing” banks seeking to join the [Human Milk Banking Association of North America \(HMBANA\)](#), the governing body for non-profit milk banks. Two for-profit milk banks compete for donors in the United States: Medolac and Prolacta, paying “donors” approximately \$1/ounce ([Schreiber, 2017](#)). Milk is also sold privately online between private individuals, such as on [onlythebreast.com](#).

In the context of an increasingly institutionalized and commercialized human milk market, informal peer-to-peer milk sharing networks are commonplace ([Akre et al., 2011](#)). Through these networks, unpaid donors and families in need connect on social media to exchange unpasteurized milk. Race, class, gender and sexual identity are intersecting layers of identity and power that influence participation in breastfeeding ([Jones et al., 2015](#)) and milk exchange ([Sears Allers, 2014](#)). The

authors acknowledge trans-identified persons participate in breastfeeding, chestfeeding, and milk sharing ([MacDonald et al., 2016](#)). Using an intersectional feminist framework to inform our analysis, the aims of this paper are: (1) To critically examine and synthesize the research evidence regarding the identities and socio-political circumstances of milk-sharing participants in North America; (2) Discuss how milk sharing can be conceptualized as intersectional feminist praxis, disrupting or reinforcing dominant power structures; (3) Identify how this knowledge can inform maternity care provider practice to support families interested in milk sharing.

Background

Milk sharing is an ancient practice: wet-nursing traces to Babylonian times ([Thorley, 2008](#)). In contemporary milk exchange, milk-sharing and milk-donation have supplanted wet-nursing. The first breast pump was patented in the United States (US) in 1854 ([Garber, 2013](#)). Refrigeration technology allowed for longer-term milk storage, and the first

* Corresponding author.

E-mail address: mpaynter@dal.ca (M.J. Paynter).

milk bank opened in Vienna in 1909, followed by the first in the US in 1919 (Jones, 2003). Milk banks proliferated during the 20th century in the US and Canada, until the HIV/AIDS crisis brought operations almost to a halt in the 1980's (Jones, 2003). Across the globe, milk banking has widely different paths of initiation and expansion, and culturally-specific practices situated within specific breastfeeding cultures. In North America, milk-banking is dominated by the best practice guidelines created by HMBANA, which cover donor recruitment, milk transport, storage, processing, testing and distribution.

The US is credited with being the home of organized web-based milk sharing. The practice began in 2010 when Shell Walker, an American midwife, started *EatsonFeets.org*, and Emma Kasnica, an advocate for breastfeeding in Canada, started *Human Milk 4 Human Babies (hm4hb.net)* (Carter et al., 2015). The networks are governed by operating principles including no selling, no “trolling”, no judgment, no advice, and no referrals to other organizations, including milk banks (*eatsonfeets.org*, No Date). Unlike the focus among milk banks on fragile infants in neonatal intensive care units (NICU), shared milk is untriaged and available first-come, first-served.

The climate of human milk sharing spaces is shaped by the contemporary milk exchange landscape. HMBANA policy states that human milk is the best option for all infants in need and dispensing is triaged according to medical need (HMBANA). Yet only a portion of North American NICUs offer donor milk (Spatz, 2017). Dispensed at approximately \$4.50/ounce, health insurance coverage for pasteurized human donor milk (PHDM) is minimal in the United States, and in Canada is covered only as part of an inpatient hospital stay. Without insurance coverage, cost per infant could reach up to \$1050/week (Martino and Spatz, 2014). Access is decidedly unequal. Intersectional feminism provides a framework to examine this heterogeneity.

Boundy et al. (2017) conducted an important study to examine the racial demographics of hospitals using PHDM compared with those who do not through postal codes analysis. In the United States, the population is on average 12.3% Black (Boundy et al., 2017). The authors found that in the postal codes with more than 12.3% Black residents, 38.0% reported not using PHDM. By comparison, in the postal codes with less than 12.3% Black residents, only 29.6% of hospitals reported not using PHDM. More PHDM was available in the hospital in areas with fewer Black residents (Boundy et al., 2017). Evidence of racialized inequity in access to PHDM may impact milk sharing, by creating increased demand, or by exacerbating unequal access to human milk evidenced by racialized breastfeeding rates. This first glance at racial inequity raises questions about class, sexual identity and other socio-political identities and access to PHDM.

Intersectional feminist framework

Intersectional feminist frameworks emerged from Black Feminist critique of anti-discrimination provisions in American law that failed to protect identities at the juncture of multiple dimensions of discrimination, such as race, class and gender (Crenshaw, 1989; Hill Collins, 1990). Intersectional feminist theory provides a lens to expose how intersecting layers of social oppression such as poverty, racism, homophobia and misogyny cumulate in the experience of discrimination. Suitable for application to population and public health research in many areas, intersectional feminist theory is especially valuable in the examination of health issues that are themselves socially stigmatized, such as breastfeeding and milk sharing. Rogers and Kelly (2011) and Kelly (2009) argue for the integration of intersectional feminism into health research ethics and research to drive not only the focus of research towards the experiences of individuals experiencing oppression, but to shift the goal of health research to advance health equity.

An intersectional feminist framework begins with requiring an acknowledgement of identity among participants. A lack of specificity in analysis, a blindness to difference, does not promote inclusiveness but erases the importance of identity in shaping experience (Crenshaw,

1989). As a multi-dimensional approach, intersectional feminist theory centers on the lives of the most marginalized (CRIAOW, 2006). Reflexive and transformative, intersectional feminism frameworks acknowledge the hierarchies operating in feminist action (CRIAOW, 2006). In this critical review, we acknowledge the lack of attention in systematic review appraisal tools to the significant issue of identity and power. Researchers have identified the need for meaningful attention to gender in appraisal for inclusion in systematic reviews (Morgan et al., 2017). We add to that a call for attention to the intersecting identities of race, class and sexual orientation.

An intersectional feminist framework presents an analytical framework for conducting research and generating theory that aims to create solutions for advancing health equity. As an approach it is therefore not limited to analysis, it includes the generation of intersectional feminist “praxis” (Cho et al., 2013), which is to say, practice. Intersectional feminist frameworks are useful for maternity care providers in that insights can be taken up into clinical practice to centre the patient in their particular identity and context.

There are historical, gendered, racialized and classed assumptions about the labor of breastfeeding and the value of human milk. Forced wet-nursing was a tenet of slavery. Black women in the United States experience significantly lower breastfeeding rates than white women (Jones et al., 2015). Black Feminist scholars point out inequities in access to banked PHDM (Sears Allers, 2014). For example, in response to the lead-contaminated water crisis in Michigan, the United States Department of Agriculture offered affected families, who were predominantly Black, subsidized, ready-to-feed formula, despite a non-profit milk bank in-state (Best for Babes, 2016). An intersectional feminist framework identifies that the need for and access to human milk is both a racialized experience and one in which class and other identities intersect.

An intersectional feminist framework provides a critical lens to examine the raced, classed and gendered power inherent in debate about milk “donor” remuneration. For example, the American-owned, for-profit company *Ambrosia Lab* paid “donors” in Cambodia for human milk that would then be sold in the United States, until Cambodia banned the practice in 2017 (The Guardian, 2017). Mostly female sellers on *Onlythebreast.com* are vulnerable to fraud, and requests to be wet nursed or for pornographic photos (McNeily, 2016).

In this critical review, we use an intersectional feminist framework as a lens to read existing studies of milk sharing among participants in North America. We ask how identity is captured and interpreted in relation to the milk sharing experience and what themes pertaining to power and identity emerge in the studies.

Design and methods

We conducted a critical review of the evidence guided by intersectional feminist framework to examine milk sharing participation in North America. Drawing from feminist and philosophical traditions that employ methods of critique, reflexivity, and discourse, our analysis aimed to understand how and why intersecting socio-political identities influence research into women's lives (Jefferies et al., 2018; Searle et al., 2017). Specifically, how race, class, gender and sexual orientation are intersecting aspects of identity and power that influence participation in breastfeeding and the domain of milk exchange. The authors worked collaboratively on substantive and methodological content of the manuscript.

The search strategy was conducted in March 2018 and included relevant databases (Pubmed, CINAHL) and hand-searches of key papers. We applied MeSH headings and key words to title and abstract search including milk-sharing, milk sharing, human milk, donor, recipient, United States and Canada in combination with Boolean operators AND and OR. The CINAHL search phrase was (milk-sharing OR milk sharing) AND (human milk OR donor OR recipient) AND (Canada OR United States). We excluded non-research, case studies and reviews,

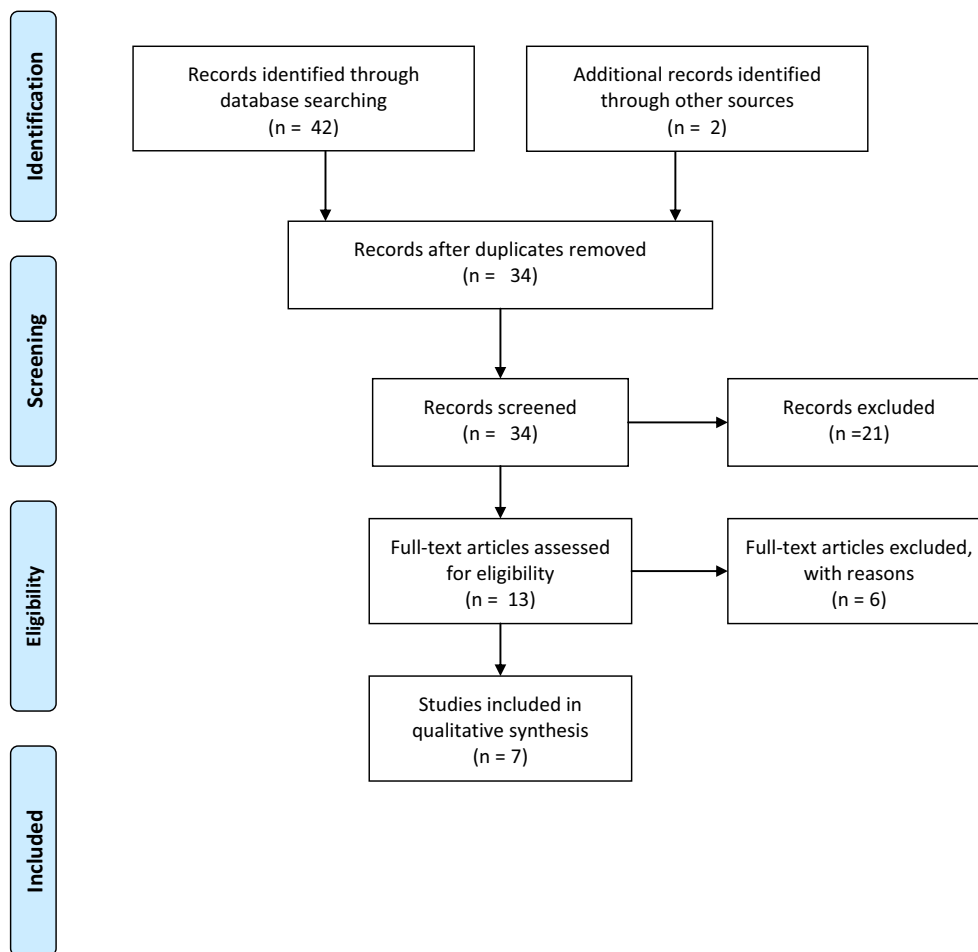


Fig. 1. Prisma diagram.

articles in languages other than English; studies about attitudes towards or awareness of milk sharing that were not specifically about participant experience, studies about milk sale, or donation to milk banks. We focused on North America because our expertise is in the area(s) of maternity nursing and feminist theory. More specifically, the first author's clinical and volunteer work related to milk banking and milk sharing is in a North American context.

The database search of PubMed generated 30 results and of CINAHL generated 12 results, for a total of 42. Ten of these articles were identified as duplicates. By scanning titles and abstracts, we excluded 21 articles as non-research or not studies of the experiencing of milk sharing. We identified two additional studies through hand search. We reviewed the full text of the resulting 13 and excluded six articles. Of these, two reused participant data of other included studies and four did not examine milk-sharing participants specifically. We did not exclude any articles based on appraisal using an intersectional feminist framework, as one of our objectives is to identify the extent to which studies in this area are attentive to identity (refer to Fig. 1: PRISMA diagram for details).

The seven studies reviewed include: three recent US surveys of milk sharing participants (Palmquist and Doehler, 2014; Reyes-Foster et al., 2015; Perrin et al., 2014); one US qualitative study (Perrin et al., 2016); one unpublished Canadian qualitative study (Papinacolaou, 2013); and three global surveys with American and Canadian participants among an international sample (Thorley, 2012; Gribble, 2013). The seven studies included in the review are summarized in Table 1.

By using an intersectional feminist framework as a critical lens to examine the studies, we first assessed the extent to which the studies exam-

ined the identities of gender, race, class and sexual orientation. We noted how power manifested in the studies, as parental self-empowerment through lactation challenges and barriers to accessing human milk, as a political belief in equity and access to human milk, and as individual-level action that resisted institutional control of access to human milk.

Results and discussion

Four themes emerged from our critical review of the literature. The first, "Identities Among Milk Sharing Participants", identifies the socio-economic identities that are analyzed in the articles where there is an absence of attention to race, class and sexual orientation. The second, "Milk Sharing Supports Parental Health" describes how milk-sharing participants in the included articles use the practice as a bridge to overcome lactation difficulties or how it supports their choice of human milk for their infants, a choice that may be challenged by identity and power. The third, "Politics Influences the Decision to Milk Share" explores how milk-sharing is motivated by political beliefs in equity for access to human milk. The fourth, "Milk Sharing as Resistance Against Institutionalization", captures how participants exercise power over their bodies, activities, and products by resisting health authority warnings against milk sharing.

Identities among milk sharing participants

An intersectional feminist framework asks of milk sharing: "Who participates? Who benefits?" Although it is possible for participants to be both donors and recipients at different times, most surveys differentiate between the characteristics of recipients versus donors. In an online

Table 1
Demographics of participants from included studies about milk sharing.

Authors, Year, Design	Participants, Setting	Income	Race	Education
Palmquist and Doehler (2014) Online Survey	661 donors and 221 recipients United States	Median household \$72,000 (recipients) \$57,500 (donors).	90% non-Hispanic white (NHW) (donors) 83% NHW (recipients)	Donors more likely to be college-educated
Reyes-Foster et al., (2015) Online Survey	392 milk-sharing families United States	62.3% income > \$50,000	89.3% white (donor); 87.5% white (recipients)	97% college-educated
Perrin et al., (2014) Mixed Methods analysis of online posts	532 donors; 413 recipients; 9 both, milk-sharing participants United States	NA	NA	NA
Perrin et al., (2016) Qualitative	27 United States	16 income > \$50,000	22 self-identified as white	19 at least college degree
Papinacolaou (2013) Qualitative	13 Canada	NA	NA	12 college-educated
Thorley, 2012 Online Survey	23 Global	NA	NA	NA
Gribble, 2013 Online Survey	97 donors and 41 recipients Global	NA	NA	NA

Note: No study asked about sexual orientation/ LGBTQ + identity.

study of 661 milk-sharing donors and 221 recipients across the United States, Palmquist and Doehler (2014) found socio-economic differences among the types of participants. Donors were more likely than recipients to be college-educated. The median household income was \$72,000 (recipients) and \$57,500 (donors). For comparison, the median household income in the US that year (2014) was \$53,647 and the poverty threshold for a family of four was \$24,230 (DeNavas-Walt & Proctor, 2015). There were no significant differences in employment status. The self-identified race of donors was 90% non-Hispanic white; and 83% of recipients identified the same. The authors asked respondents to indicate both sex and gender; three donors self-identified as male-gendered. In an online survey of 392 milk-sharing families in Florida, Reyes-Foster et al. (2015) found 89.3% of donors were white compared to 87.5% of recipients. They found 62.3% of respondents reported an income over \$50,000 and 97% were college-educated. Perrin et al. (2014), Thorley (2012), and Gribble (2013) did not report on participant race, income, or education level. Of Papinacolaou's (2013) 13 participants, all were married/common-law, all were working and all but one had at least post-secondary education; the author did not report on race or income. Of the 27 participants in interviews with Perrin et al. (2016), 22 self-identified as white, 19 had at least one college degree, 25 were married, and 16 reported an income of over \$50,000. No study asked about sexual identity. Thorley (2012) asked participants to self-identify culture or nationality. All the included studies relied on convenience sampling.

Generally, different populations use shared milk versus banked PHDM. PHDM remains economically unaffordable and unavailable for fragile infants in many parts of Canada and the United States (Spatz, 2017; Author, 2017; Author and Hayward, 2018). The use of PHDM among healthy newborns remains uncommon. Palmquist and Doehler (2014) found four percent (eight) of 221 milk sharing recipient families in their study reported a serious medical condition.

While the decision to breastfeed may be personal, social and economic structures shape success (Palmquist and Doehler, 2014). In a context of poor social support for and high pressure to succeed with breastfeeding, Palmquist and Doehler (2014) conclude that milk-sharing is a strategy to overcome breastfeeding challenges that might otherwise lead to early cessation. By applying an intersectional feminist framework, we find that white, high-income, college-educated families experience the privilege of participation. We recognize that milk sharing is a stigmatized practice. It is possible that participation is facilitated by self-confidence to seek or offer donations, to communicate with strangers, and to determine that the choice to use shared milk, despite risks, is appropriate.

Milk sharing supports parental health

Milk sharing to bridge interruptions or delays in lactation not only benefits the infant, but also the parent. Smith (2017) explores how milk sharing counters the dominant biomedical model of the breastfeeding body as problematic and subject to expert intervention by making the

milk sharer a source of abundance and the recipient self-resolving of insufficiency. Breastfeeding is associated with reduced risk of peripartum depression (Figueiredo et al., 2014) and reduces risks of developing chronic illnesses and non-communicable diseases (Dieterich et al., 2013). By supporting breastfeeding continuation, milk sharing supports parental health.

Breastfeeding is often talked about as a choice, but there is evidence it is not so much a choice as a challenging path. Breastfeeding initiation, a proxy for the choice to breastfeed, is high: In Canada, over 87% of women initiate breastfeeding (Health Canada, 2012), falling swiftly by discharge, to 61% (Chalmers, 2013). Exclusive breastfeeding for the recommended first six months of infant life is 26% in Canada (Gionet, 2015) and 18.8% in the United States (Centers for Disease Control (CDC), 2014). High rates of initiation and sharply reduced rates at discharge and at six months may reflect a lack of support for breastfeeding. That families participate in milk sharing to overcome lactation barriers, despite the risks and the logistics of participation, demonstrates the high value they place on feeding their infants human milk.

Politics influence the decision to milk share

The most common reason for women to milk share rather than donate to a bank may be lack of opportunity (Gribble, 2013). An intersectional feminist framework requires us to ask not only how geographic dispersion/isolation and inconvenience dissuade milk-bank donation, but also how lack of opportunity may manifest socio-politically. For example, lack of financial means for equipment to pump and safely to store the milk; lack of education about pasteurization and infection control; and being prescribed medications unacceptable to milk banks are just some factors that may be raced and/or classed.

There is an opportunity cost to participate in milk sharing and milk bank donation, although the latter is arguably higher. HMBANA guidelines include written and verbal screening, blood tests, family practitioner assurance of infant and sharer's health, and complex shipment instructions (HMBANA, 2018; Schrieber, 2017). Milk banks may use moral suasion to encourage donation to a bank instead of sharing online, emphasizing the ethics of triage to the critically ill. Milk sharing families may value that milk sharing in theory does not conduct triaging but rather is inclusive of all types of need. However, the research needs to examine whose need really counts and whose need is met through milk sharing practice to understand its impact on equity.

Milk sharing may continue for long-term social reasons including lesbian, gay, bisexual, transgender, queer, two-spirit and other sexualities (LGBTQ2S+) parenting, adoption, surrogacy, apprehension of children by Child Protection Services and separations from biological parents for other reasons. Macdonald et al. (2016) found a couple who identified as gay met with enthusiastic offers of shared milk. In these contexts, milk sharing could disrupt the historical, socio-cultural and political limitations on who is legitimized and privileged in breastfeeding discourse.

Milk sharing as resistance against institutionalization

HMBANA standards and the growth of non-profit milk banks have indisputably supported increased access to hospital-based use of PHDM. Pasteurization and institutionalization through banking infrastructure and governance has enhanced acceptability and shifted the understanding of PHDM from first food to medicine (Author, 2018). Milk sharing defies the medicalization of human milk. By making it a community-based interaction and an intra-family decision, milk sharing upsets institutional and medical control of the domain of human milk exchange. Health professional organizations and health authorities resist milk sharing: the American Academy of Nursing (2016), the Canadian Pediatric Society (Kim & Unger, 2010), Health Canada (2014), and the United States Food and Drug Administration (2017) have all issued warnings about milk sharing. Milk sharing operates between the binary of compliance with “Breast is Best” public messaging about the incomparable value of human milk, and defiance of health authority warnings against sharing it informally.

Indeed, unpasteurized before exchange, shared milk may harbor bacteria, contain trace medications or alcohol, transmit disease, and trigger food sensitivities (Health Canada, 2014). Yet the studies in our review find shared milk is generally surplus from nourishment of one’s own child or explicitly pumped for donation (Gribble, 2014). Sharers are accountable for the milk they share: Palmquist and Doehler (2015) found 96.1% of respondents to their survey about milk sharing donors met the recipients of their milk. Reyes-Foster et al. (2017) found the majority followed safe home milk handling guidance such as hand and pump hygiene and refrigeration/freezing. For sharers, the milk has economic value gifted to strangers— an empowering act. Participants value that the milk be received free of charge, and the need be genuine (Gribble, 2013).

Milk sharing networks rely on participant responsibility for safe milk exchange, for instance through the *Four Pillars of Safe Breast Milk Sharing*: (1) “Informed Choice” about the risks of all child feeding methods; (2) “Donor Screening” through donor self-exclusion, self-initiated screening, or declaration of medical concerns; (3) “Safe Handling” of the milk; (4) and “Home Pasteurization” (Walker and Armstrong, 2012, p. 34). Participants in several studies raise the importance of establishing trust, meeting each other, and developing a relationship (Thorley, 2012; Gribble, 2013; Papinocolaou, 2013). Independence and autonomy are key values.

As Gribble (2013) describes, philosophical positions motivate participants to milk-share rather than donate to milk banks. Milk sharing discourse includes statements such as “There is never a donation too small” ; “Every baby has a right to breastmilk” ; “Eats on Feets does not endorse any order of priority for sharing breastmilk with babies and young children” ; “The most rewarding aspect of milk sharing is perhaps the relationships that form between families” (Eats on Feets Nova Scotia, 2016). An intersectional feminist framework asks: are all families equally able to participate in these relationships, in this trust? How does systemic racism, poverty, and homophobia/transphobia in society exclude some and include others in these relationships?

Intersections of power and identity in milk sharing

Using an intersectional feminist framework, this review draws attention to the identity of milk sharing participants and how milk sharing interacts with systems of dominance. Research evidence suggests milk sharing is predominantly practiced by white, high-income, working, married women. There is little research examining the role of race, class, culture, religion, gender and sexualities in milk sharing. There is no conclusive evidence that milk sharing improves breastfeeding rates. Jones (2013) argues the popularity of milk-sharing between strangers speaks to the undermining of breastfeeding in North American society. There is no evidence milk sharing addresses or aims to address raced or classed breastfeeding gaps.

The practice of milk sharing resists dominant social and medical discourses and the institutionalization demonstrated by the milk bank (Swanson, 2011). Clinical triage is not the dominant ethic for distribution of the shared milk resource (Carter et al., 2015). Donor participants govern their bodies’ labor and recipient families exercise autonomy over infant feeding choices (Gribble and Hausmann, 2012). In the documentary *Breastmilk*, an African-American woman expresses anxiety about whether the white woman to whom she has arranged to donate her milk will welcome the donation when they meet (Lake et al., 2014). An intersectional feminist framework raises uncomfortable questions like who is participating, benefiting, and excluded.

Conclusion: implications for maternity care practice

Milk sharing is changing perinatal health care, policy, education, and research. The evidence that milk sharing recipients navigate breastfeeding delays and difficulties banking (Palmquist and Doehler, 2014) points to the inadequacy of the breastfeeding support they are receiving through the health care system and inadequate access to PHDM through non-profit milk banks. Maternity care providers must understand the reasons families seek shared milk and incorporate approaches to support these families. Maternity care providers can advocate for specialized breastfeeding support and access to PHDM for populations including low-income, racialized, and LGBTQ2S+ families. Maternity care providers must recognize that these families need and deserve extra support and resources.

Improving breastfeeding support and access to PHDM will not eliminate the demand for milk sharing, nor should it. Our analysis using an intersectional feminist framework finds milk sharing is mobilized as an act of resistance against institutions of control over gendered, raced, and classed bodies, experiences and decisions. The lack of evidence of diversity in participation in research about milk sharing may not necessarily point to a lack of diversity in participation in milk sharing itself, but that stigma and layers of social, economic and political discrimination and exclusion may dissuade people of color, people identifying as LGBTQ2S+, and people with lower incomes from sharing their experiences with researchers and maternity care providers.

Maternity care providers can appreciate this perspective and exercise non-judgment and confidentiality to encourage openness, dialogue, and support for patients across socio-political identities. *Perinatal Services of British Columbia* (2016) produced the first toolkit of its kind to guide discussions with families about milk sharing. Spatz (2016a) describes using a waiver, and Spatz (2016b) recommends fulsome assessment of health history and plans for safe milk transport and storage as critical elements in these discussions. Maternity care providers can become familiar with local milk sharing networks and recommend techniques to improve the safety of shared milk, such as encouraging lay screening, advising against payment, and instructing on milk handling/ home pasteurization. Maternity care providers can support families who bring shared milk into health facilities by discussing safety, assisting with refrigeration, and instructing on options for provision of the shared milk such as by supplemental nursing system or cup feeding to promote exclusive breastfeeding success if that is the family goal. Maternity care providers have a critical and much needed role in working with families in this area of practice.

While these tools are helpful, it is necessary for maternity care providers to be attentive to intersectionality and uphold non-judgment and confidentiality. Maternity care providers must not assume it is only white, high-income, college-educated families that are interested in participating in milk sharing, or that all families have the equipment and knowledge to participate. Maternity care providers can self-reflect about how systemic social, economic and political discrimination and exclusion impacts individual practice and patient support. Future research in milk sharing must explore the impact of intersecting identities in participation and access. As maternity care providers we hold intersecting identities, thus future research can also address how maternity care

providers navigate discussion of milk sharing with attention to socio-political inequalities in breastfeeding we experience. An intersectional feminist framework is a tool not only to examine research evidence and its' limitations, but to actualize the work of advocacy and justice within maternity care scope of practice to advance access to human milk and breastfeeding support.

Funding sources

None.

Acknowledgments

Martha J. Paynter is supported by the Canadian Institutes of Health Research Doctoral Scholarship, The Killam Pre-doctoral Scholarship, Nova Scotia Research and Innovation Graduate Scholarship, Maritime SPOR (Strategy for Patient-Oriented Research) Support Unit Doctoral Scholarship, the Canadian Nurses Foundation Dorothy Kergin Doctoral Award, the Nova Scotia Health Research Foundation Scotia Scholars Award, and the IWK Ruby Blois and Graduate Studentship Awards.

References

- Akre, J.D., Gribble, K.E., Minchin, M., 2011. Milk sharing: from private practice to public pursuit. *Int. Breastfeed. J.* 6 (8), 1–3. doi:10.1186/1746-4358-6-8.
- Author, 2017. Atlantic Canada needs a human milk bank. *Can. J. Nurs. Res.* v49 (4), 142–143. doi:10.1177/0844562117735479.
- Author, Hayward, K., 2018. Medicine, body fluid and food: the regulation of human donor milk in Canada. *Healthc. Policy* v13 (3), 20–26. doi:10.12927/hcpol.2018.25400.
- Best for Babes. 2016. Water crisis in Flint, Michigan: donor human milk needed! Bestforbabes.org, February 16. Retrieved from: <http://www.bestforbabes.org/water-crisis-flint-michigan-donor-human-milk-needed/>.
- Boundy, E.O., Perinne, C.G., Nelson, J.M., Hammer, H.C., 2017. Disparities in hospital-reported breast milk use in neonatal intensive care units — United States, 2015. *Morb. Mortal. Wkl. Rep.* v66 (48), 1313–1317 December 8.
- Canadian Research Institute for the Advancement of Women (CRIAOW), 2006. Intersectional feminist frameworks. *Can. Res. Inst. Adv. Women* Retrieved from [http://www.criaw-icref.ca/images/userfiles/files/Intersectional%20Feminist%20Frameworks-%20An%20Emerging%20Vision\(2\).pdf](http://www.criaw-icref.ca/images/userfiles/files/Intersectional%20Feminist%20Frameworks-%20An%20Emerging%20Vision(2).pdf).
- Carter, S.K., Reyes-Foster, B., Rogers, T.L., 2015. Liquid gold or Russian roulette? Risk and human milk sharing in the US news media. *Health, Risk Soc.* v17 (1), 30–45. doi:10.1080/13698575.2014.1000269.
- Centers for Disease Control (CDC). 2014. Breastfeeding Report Card. Centers for Disease Control. Retrieved from: <https://www.cdc.gov/breastfeeding/pdf/2014breastfeedingreportcard.pdf>.
- Chalmers, B., 2013. Breastfeeding unfriendly in Canada? *Can. Med. Assoc. J.* v185 (5), 375–376. doi:10.1503/cmaj.121309.
- Cho, S., Crenshaw, K., McCall, L., 2013. Toward a field of intersectionality studies: theory, application, and praxis. *J. Women Cult. Soc.* v38 (4), 785–810. doi:10.1086/669608.
- Crenshaw, K., 1989. Demarginalizing the intersection of race and sex: a black feminist critique of antidiscrimination doctrine, feminist theory, and antiracist policies. *Univ. Chic. Legal Forum* v1 (8), 139–167.
- DeNavas-Walt, C., Proctor, B.D. 2015. Income and Poverty in the United States: 2014. United States Census Bureau. Retrieved from: <https://www.census.gov/library/publications/2015/demo/p60-252.html>.
- Dieterich, C.M., Felice, J., O'Sullivan, E., Rasmussen, K.M., 2013. Breastfeeding and health outcomes for the mother-infant dyad. *Pediatr. Clin. N. Am.* v60 (1), 31–48. doi:10.1016/j.pcl.2012.09.010.
- Eats on Feets. No Date. Eatsonfeets.org.
- Eats on Feets Nova Scotia. 2016. Eats on Feets Nova Scotia. Retrieved from: <https://www.facebook.com/EOFNovaScotia/>.
- Figueiredo, B., Canario, C., Field, T., 2014. Breastfeeding is negatively affected by prenatal depression and reduces postpartum depression. *Psychol. Med.* v44 (5), 927–936. doi:10.1017/S0033291713001530.
- Food and Drug Administration (FDA), 2017. Use of donor human milk. Food Drug Adm. Retrieved from <https://www.fda.gov/ScienceResearch/SpecialTopics/PediatricTherapeuticsResearch/ucm235203.htm>.
- Garber, M. 2013. A Brief History of Breast Pumps. *The Atlantic*. October 13. Retrieved from: <https://www.theatlantic.com/technology/archive/2013/10/a-brief-history-of-breast-pumps/280728/>.
- Gionet, L. 2015. Breastfeeding Trends at a Glance. *Statistics Canada*. Retrieved from: <https://www.statcan.gc.ca/pub/82-624-x/2013001/article/11879-eng.htm>.
- Gribble, K.D., 2013. Peer-to-peer milk donors' and recipients' experiences and perceptions of donor milk banks. *J. Obstet., Gynecol., Neonatal Nurs.* v42, 451–461. doi:10.1111/1552-6909.12220.
- Gribble, K.D., 2014. 'I'm happy to be able to help:' Why women donate to a peer via internet-based milk sharing networks. *Breastfeed. Med.* v9 (5), 251–256. doi:10.1089/bfm.2014.0009.
- Gribble, K.D., Hausman, B., 2012. Milk sharing and formula feeding: infant feeding risks in comparative perspective. *Australas. Med. J.* v59 (5), 275–283. doi:10.4066/AMJ.2012.1222.
- Health Canada. 2012. Breastfeeding Initiation in Canada: Key Statistics and Graphics (2009-2010). Government of Canada. Retrieved from: <https://www.canada.ca/en/health-canada/services/food-nutrition/food-nutrition-surveillance/health-nutrition-surveys/canadian-community-health-survey-cchs/breastfeeding-initiation-canada-key-statistics-graphics-2009-2010-food-nutrition-surveillance-health-canada.html>.
- Health Canada. 2014. Safety of Donor Human Milk in Canada. Government of Canada. Retrieved from: <https://www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/infant-feeding/safety-donor-human-milk-canada.html>.
- Hill Collins, P., 1990. Black Feminist Thought in the Matrix of Domination. Black Feminist thought: Knowledge, Consciousness, and the Politics of Empowerment. Unwin Hyman, Boston, pp. 221–238 Retrieved from <http://www.hartford-hwp.com/archives/45a/252.html>.
- Human Milk Banking Association of North America (HMBANA). No Date. HMBANA Position Paper on Donor Milk Banking. HMBANA, Fort Worth. Retrieved from: <https://www.hmbana.org/sites/default/files/images/position-paper-donor-milk.pdf>.
- Human Milk Banking Association of North America (HMBANA), 2018. Guidelines For the Establishment and Operation of a Donor Human Milk Bank. HMBANA, Fort Worth.
- Jeffries, K., Goldberg, L., Aston, M., Tomblin Murphy, G., 2018. Understanding the invisibility of black nurse leaders using a black feminist poststructuralist framework. *J. Clin. Nurs.* doi:10.1111/jocn.14505, E-pub May 12.
- Jones, F., 2003. History of North American donor milk banking: one hundred years of progress. *J. Hum. Lactation* v19 (3), 313–318.
- Jones, F., 2013. Milk sharing: how it undermines breastfeeding. *Breastfeed. Rev.* v21 (3), 21–25.
- Jones, K.M., Power, M.L., Queenan, J.T., Schulkin, J., 2015. Racial and ethnic disparities in breastfeeding. *Breastfeed. Med.* v10 (4), 186–196. doi:10.1089/bfm.2014.0152.
- Kelly, U., 2009. Integrating intersectionality and biomedicine in health disparities research. *Adv. Nurs. Sci.* v32 (2), E42–E56.
- Kim, J.H., Unger, S., 2010. Human milk banking: Position statement. *Can. Pediatr. Soc.* 15 (9), 595–598.
- Lake, R., Epstein, A., Ben-Ari, D. 2014. Breastmilk. HBO Films, Santa Monica.
- MacDonald, T., Noel-Weiss, J., West, D., Walks, M., Beiner, M., Kibbe, A., Myler, E., 2016. Transmasculine individuals' experiences with lactation, chestfeeding and gender identity: a qualitative study. *BMC Pregnancy Childbirth* v16 (106), 2–17. doi:10.1186/s12884-016-0907-y.
- Martino, K., Spatz, D.L., 2014. Informal milk sharing: what nurses need to know. *Am. J. Matern./ Child Nurs.* v39 (6), 369–374. doi:10.1097/NMC.0000000000000077.
- McNeily, C., 2016. Got milk: the underground online marketplace for human breast milk. *Broadly*. February 1. Retrieved from https://broadly.vice.com/en_us/article/pg/ndn/got-milk-the-underground-online-marketplace-for-human-breast-milk.
- Morgan, T., Williams, L.A., Gott, M., 2017. A feminist quality appraisal tool: exposing gender bias and gender inequities in health research. *Crit. Public Health* v27 (2), 263–274. doi:10.1080/09581596.2016.1205182.
- Palmquist, A.E.L., Doehler, K., 2014. Contextualizing online human milk sharing: structural factors and lactation disparity among middle income women in the U.S. *Social Sci. Med.* v122, 140–147. doi:10.1111/mcn.12221.
- Palmquist, A.E.L., Doehler, K., 2015. Human milk sharing practices in the US. *Matern. Child Health* v12, 278–290. doi:10.1111/mcn.12221.
- Papinacolaou, A., 2013. The Online Sharing of Human Milk: A Content Analysis. Unpublished Master's Thesis. Queen's University, Kingston.
- Perinatal Services British Columbia, 2016. Informal (Peer-to-peer) milk sharing: the use of unpasteurized donor human milk. *Perinat. Serv. B.C.* Retrieved from http://www.perinatalservicesbc.ca/Documents/Guidelines-Standards/HealthPromotion/InformalMilkSharing_PracticeResource.pdf.
- Perrin, M.T., Goodell, L.S., Allen, J.C., Fogleman, A., 2014. A mixed-methods observational study of human milk sharing communities on Facebook. *Breastfeed. Med.* v9 (3), 128–134. doi:10.1089/bfm.2013.0114.
- Perrin, M.T., Goodell, L.S., Fogleman, A., Pettus, H., Bodenheimer, A.L., Palmquist, A.E., 2016. Expanding the supply of pasteurized donor milk: understanding why peer-to-peer milk sharers in the United States do not donate to milk banks. *J. Hum. Lactation* v32 (2), 229–237. doi:10.1177/0890334415627024.
- Reyes-Foster, B.M., Carter, S.K., Hinojosa, M.S., 2015. Milk sharing in practice: a descriptive analysis of peer breastmilk sharing. *Breastfeed. Med.* v10 (5), 263–269. doi:10.1089/bfm.2015.0009.
- Reyes-Foster, B.M., Carter, S.K., Hinojosa, M.S., 2017. Human milk handling and storage practices among peer milk-sharing mothers. *J. Hum. Lactation* v33 (1), 173–180. doi:10.1177/0890334416678830.
- Rogers, J., Kelly, U., 2011. Feminist intersectionality: bringing social justice to health disparities research. *Nurs. Eth.* V18 (3), 397–407. doi:10.1177/0969733011398094.
- Schreiber, M., 2017. Should women be paid for donating their breastmilk. *The Atlantic*. December 1. Retrieved from <https://www.theatlantic.com/health/archive/2017/12/breast-milk-donation/547250/>.
- Sears Allers, K., 2014. Inviting African-American mothers to sell their breastmilk, and profiting. *N.Y. Times*. December 3. Retrieved from <https://parenting.blogs.nytimes.com/2014/12/03/inviting-african-american-mothers-to-sell-their-breast-milk-and-profiting/>.
- Searle, J., Goldberg, L., Aston, A., Burrow, S., 2017. Addressing trauma informed care in queer birthing women in rural Nova Scotia. *J. Clin. Nurs.* v26 (21-22), 3576–3587. doi:10.1111/jocn.13727.
- Smith, A.L., 2017. Becoming-(Breastfeeding-)Woman: Women's Body Practices and Experiences at the Intersection of Breastfeeding, Milk Insufficiency, and Milk Sharing. University of Queensland, Brisbane Dissertation.

- Spatz, D.L., 2016a. Informal milk sharing. *MCN Am. J. Matern. Child Nurs.* v41 (2), 125. doi:[10.1097/NMC.0000000000000225](https://doi.org/10.1097/NMC.0000000000000225).
- Spatz, D.L., 2016b. Informal milk sharing in the United States. AWHONN. Retrieved from <https://awhonnconnections.org/2016/08/05/informal-milk-sharing-in-the-united-states/>.
- Spatz, D.L., 2017. Affordability and availability of pasteurized donor human milk. *MCN Am. J. Matern. Child Nurs.* v42 (6), 362. doi:[10.1097/NMC.0000000000000386](https://doi.org/10.1097/NMC.0000000000000386).
- Swanson, K.W., 2011. Body banks: a history of milk banks, blood banks and sperm banks in the US. *Enterp. Soc.* v12 (4), 749–760.
- The Guardian. 2017. Cambodia Bans Export Of Human Breast Milk After US Operation Raises Concerns. *The Guardian*, March 28.
- Thorley, V., 2008. Sharing breastmilk: wet nursing, cross feeding, and milk donations. *Breastfeed. Rev.* v16 (3), 24–29.
- Thorley, V., 2012. Mother's experiences of sharing breastfeeding or breastmilk, Part 2: The early 21st century. *Nurs. Rep.* v2 (e2), 1–9. doi:[10.4081/nursrep.2012.e2](https://doi.org/10.4081/nursrep.2012.e2).
- Walker, S., Armstrong, M., 2012. The Four Pillars of Safe Breast Milk sharing. *Midwifery Today*. Spring, pp. 34–36.