

This article was downloaded by:[McIntyre, Lynn]  
[McIntyre, Lynn]

On: 10 July 2007

Access Details: [subscription number 780434799]

Publisher: Taylor & Francis

Informa Ltd Registered in England and Wales Registered Number: 1072954

Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## Ecology of Food and Nutrition

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713641148>

### Milk as Metaphor: Low-Income Lone Mothers' Characterization of their Challenges Acquiring Milk for their Families

Online Publication Date: 01 May 2007

To cite this Article: McIntyre, Lynn, Williams, Patricia and Glanville, N. Theresa , (2007) 'Milk as Metaphor: Low-Income Lone Mothers' Characterization of their Challenges Acquiring Milk for their Families', Ecology of Food and Nutrition, 46:3, 263 - 279

To link to this article: DOI: 10.1080/03670240701407640

URL: <http://dx.doi.org/10.1080/03670240701407640>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article maybe used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

© Taylor and Francis 2007

---

## **MILK AS METAPHOR: LOW-INCOME LONE MOTHERS' CHARACTERIZATION OF THEIR CHALLENGES ACQUIRING MILK FOR THEIR FAMILIES**

---

### **LYNN McINTYRE**

Professor, Department of Community Health Sciences,  
Faculty of Medicine, University of Calgary, Calgary,  
Alberta, Canada

### **PATRICIA WILLIAMS**

Associate Professor, Department of Applied Human  
Nutrition, Mount Saint Vincent University, Halifax,  
Nova Scotia, Canada

### **N. THERESA GLANVILLE**

Professor, Department of Applied Human Nutrition,  
Mount Saint Vincent University, Halifax, Nova Scotia,  
Canada

This study investigated the discourses of low-income lone mothers in Atlantic Canada when they were asked to comment on challenges they faced in providing food in general, and milk in particular, for their families. Data were collected between 1999 and 2006 over the course of two studies through face-to-face interviews and focus groups. We also sought mothers' views on ways to increase access to milk. Transcripts were re-analyzed to assess the symbolic meaning of milk to these women. We found that milk is a metaphor for

Address correspondence to Lynn McIntyre, Professor, Department of Community Health Sciences, Faculty of Medicine, University of Calgary, Heritage Medical Research Building, Room G021, 3330 Hospital Drive NW, Calgary, Alberta, Canada T2N 4N1. E-mail: [lmcintyr@ucalgary.ca](mailto:lmcintyr@ucalgary.ca)

an elite commodity that is perceived to be vital to health and is a root source of stress.

**KEYWORDS** milk, food insecurity, mothers, metaphor

## INTRODUCTION

This special issue of *Ecology of Food and Nutrition* highlights the work of nutritional anthropologists, many of whom were inspired by Christine Wilson. We are interlopers—a physician and two dietitians who have found, through listening to the voices of women experiencing food insecurity, that milk has a profound meaning to them. We offer our interpretation of the biocultural meaning of milk to low-income lone mothers as a contribution to nutritional anthropology, and to salute the pioneering work of Christine Wilson.

Milk, the most frequently consumed commodity of the dairy food group, is a nutritious food and is recommended in Canada's Food Guide to Healthy Eating as part of the daily intake of both adults and children (Health and Welfare Canada and Ontario Ministry of Health, 1993). In order to meet the requirements for nutrients provided by milk, most notably calcium and vitamin D, two to four glasses must be consumed each day by each person in a household with amounts varying by age and sex (Health and Welfare Canada and Ontario Ministry of Health, 1993; Institute of Medicine, 1997). In Canada, milk is a regulated commodity meaning that producers of milk are guaranteed a set price for a unit of milk, and are assigned a set production volume known as a milk quota. In turn, consumers are guaranteed a stable supply of high quality product sold at a set base price with a variable retail mark-up. The resulting price is high relative to other markets. For example, the price of a liter of milk in Canada is twice as high as the United States where milk prices are governed by competitive market forces. As a result, in Canada, milk is an expensive beverage that is not uniformly available to all who wish to purchase it.

We have conducted research with low-income lone<sup>1</sup> mothers<sup>2</sup> for several years using both qualitative and quantitative methods to learn

<sup>1</sup>The use of the term "lone" versus "single" mother is a widely-accepted convention in Canada and signifies that women are caring for their children alone, regardless of their marital status.

<sup>2</sup>Our specific population has been women in Atlantic Canada who are living alone with at least two children under the age of 14 years.

about their food insecurity, nutritional adequacy of the foods they and their children consume, and the challenges they face in food provisioning (McIntyre et al., 2003; Glanville and McIntyre, 2006). These mothers talk a lot about milk:

“ . . . oh my god, like I, I only had one glass of milk this week.”

“And I have gone in and drunk a cup of E\_'s milk and then her milk run out before the day before the milkman comes or the night before and I feel you know I feel really bad that I did that and here I am giving her canned milk you know, pouring it in making her hot chocolate out of that, and then I know it is not going to hurt her but it is just the fact that I drank her milk you know.”

“ . . . they're always trade-offs if you're gonna get enough milk for your kids. If you're on low income for instance you're always deciding whether to buy the cheaper shampoo this month and having your hair look crappy or whether your kids get enough milk, right?”

Milk consumption by low-income families is highly income-sensitive. When we examined consumption within households by week of month according to income receipt, all members of the household drank more milk at the beginning of the month when the most money was available to purchase food (see Table 1) (McIntyre, 2005; McIntyre, Glanville and Williams, 2006). We also noted that the youngest children had more

**Table 1.** Milk consumption in ounces of family members from week 1 (when the household had the most money for food) to week 4 (end of the month)

Time Interval	Average Number of Ounces of Milk Consumed per Time Interval			
	Mothers (n = 76)	Children 9–14 yrs (n = 40)	Children 4–8 yrs (n = 88)	Children 1–3 yrs (n = 44)
Time 1*	6.8	12.5	11.8	16.5
Time 2	5.2	9.9	10.6	14.2
Time 3	5.7	10.3	11.2	14.2
Time 4	5.8	10.5	11.1	13.4

\*Families were interviewed once each week over a month. Time 1 corresponds to the time point when families indicated they had the most money to spend on food,  $p < 0.05$ . This may or may not have been the first interview. Modified from McIntyre, Glanville, and Williams, 2006.

consistent and higher consumption of milk than older children and all had higher consumption than their mothers. At present levels of milk intake, low-income mothers, and particularly their older children, demonstrated inadequate intakes of calcium and vitamin D, the most important milk-borne micronutrients (see Table 2).

Women see limited opportunities to increase milk consumption within their families—it is “not an equal thing.”

“You know, it’s with anything like with Medicare and education, you know stuff like that you have to look at really equal opportunities and I mean milk is no different now because it is not an equal thing for everyone because although it is at a set price it keeps going up, those who are able to afford it can continue and when they run out they get more but those who can’t it’s really budgeting and thinking ok ‘you can have it’ or ‘hold off for a day or two until I get some more’ you know. That’s not fair—who is ultimately suffering is the children and now I think adults too though I don’t think they are so concerned but I know a lot of single mums who do what I do. We are not concerned about ourselves, it’s more our kids.”

To women who cannot afford to buy milk when they know it is an important part of providing a healthy diet to their children, milk is more than a food. We reflected that milk is a metaphor for their lives. A metaphor is a way that a concept can be conveyed powerfully, emotively, experientially, and in few words by another concept or symbol (Shen, 1998; Ehrenfeld, 2003). Milk is a way that women convey “my life struggles.”

**Table 2.** Percent of family members not getting adequate intake of calcium and vitamin D according to Dietary Reference Intake standards

Nutrient	Percent not Getting Adequate Intake of Selected Milk Micronutrient (%)			
	Mothers (n = 76)	Children 9–14 yrs (n = 40)	Children 4–8 yrs (n = 88)	Children 1–3 yrs (n = 44)
Calcium	96.1	92.5	34.1	0
Vitamin D	92.2	65.0	62.5	38

Modified from McIntyre, Glanville and Williams, 2006.

This article explores the symbolic meaning of milk to low-income lone mothers in Atlantic Canada. To do this we re-analyzed transcripts from focus groups and individual interviews from two studies: one that explored food provisioning experiences, and one that examined the challenges of these women in acquiring milk for their families and what this meant to them.

## METHODOLOGY

The methods and sample for the first study have been well-described in previous publications (McIntyre et al., 2002; McIntyre et al., 2003). Briefly, the objective of the study was to document the occurrence of food insecurity and nutritional inadequacy among low-income lone mothers in relation to their children. Food insecurity is defined as the lack of access to adequate, nutritious food through socially acceptable means (McIntyre et al., 2003), and low-income was defined as living below Statistics Canada's (1998) poverty line. Women were eligible if they met the definition of low-income and lived alone with two or more children 14 years of age or younger in one of the four Atlantic Provinces (Nova Scotia, Newfoundland and Labrador, New Brunswick, and Prince Edward Island). Low-income women provided information on dietary intake (24-hour dietary recall), household food insecurity, and on their experiences providing food to their families. Data were collected in 1999 and 2000. Twenty-four of the 141 women enrolled in the study were purposively recruited to participate in a face-to-face interview on their food provisioning experiences. The interview was recorded and transcribed verbatim. Mothers were selected to represent diverse educational and ethnic backgrounds, income and food insecurity levels, housing situations, provinces, and community sizes.

The second study included two waves of data collection. In 2004, lone mothers with children under 14 years of age who consumed milk as part of the family diet were recruited throughout the province of Nova Scotia, primarily through parent resource centers, to participate in four face-to-face semi-structured and five focus group interviews (34 participants). Women were invited to discuss challenges in getting milk for their families and what this meant to them, and were asked to provide suggestions on what could be done to improve their access to milk. In 2006, we conducted six additional focus group interviews (33 participants) with a

mix of the original respondents and new participants to comment on the promising strategies that had emerged from the earlier round of discussions, and from a comprehensive review of milk access policies and programs such as school milk programs. All sessions were recorded and transcribed verbatim.

We examined the raw transcript data to identify statements that described milk in ways that suggested emotion or a powerful experience. We found 84 useful symbolism statements and text excerpts to analyze. These statements were then re-screened for those that contained metaphorical properties such as conceptualization, analogy, rhetoric, transformation, suggestiveness, and figurativeness.<sup>3</sup> We used these statements to create themes that together create an integrated interpretation of our construct of milk as metaphor.

## RESULTS

Milk as a metaphor construct was built along three themes—milk as an elite commodity, milk as vital to health, and milk as a root cause of stress. Three quotes illustrate these concepts, respectively.

“Milk is, in our house . . . it is a necessity but it’s also a luxury.”

“My teeth are just crumbling into dust you know.”

“This is a 10, it’s a constant, constant, and for me too it’s a constant reminder that you know, in your face that things are [tough] . . . So those are the things that you are constantly trying to deal with. Like is there enough milk for cereal and that kind of a thing, it’s like a kick in the gut each time.”

When the speaker in the quote cited earlier indicates that milk is “not an equal thing,” she provides a good example of characterizing milk as an

<sup>3</sup>For the purposes of our analyses, we briefly define these terms as follows: conceptualization—an association that has underlying meaning both in language and in thought; analogy—an expression that transfers information from one subject to another through inference; rhetoric—persuasive use of language; transformation—a phrase that has both a surface meaning and a deeper meaning; suggestiveness—comments that lead the reader to personalize thoughts and feelings conveyed; and figurativeness—not literal, similar to figures of speech.

*elite commodity*. Other respondents felt there was a more sinister backdrop to their difficulty accessing milk. We called this the milk conspiracy.

“Milk is a necessity and they can’t put tax on milk, so they up the price on milk trying to gain back.”

“Have you ever noticed that around the end of the month, around the 20th and the end that things like Kraft Dinner and stuff are really cheap. Fruit, milk, all the other good stuff is at an all-time high.”

“Interviewer: The milk that the dairy farmers produce and then they don’t . . . They aren’t able to put it into circulation because it is above and beyond their quota. And then they . . .

Respondent 1: They dump it!

R2: You didn’t know that?

R1: That is wasteful.

R2: Yes.

R3: They should find something to do with that milk.

R1: I know. There are people out there starving, and they are dumping it.”

“Like it’s ridiculous that Nova Scotia has like such expensive milk in the whole . . . We have the most expensive milk and the highest unemployment rate. What is wrong with that? Seriously that is a big issue. The fact that the province is making the least amount of money but charging the most amount for the biggest necessities.”

One suggestion the mothers had to improve their access to milk was to have a social agency allocate milk coupons or tickets to low-income families so that children could redeem them at school for milk, rather than have the children pay directly for the milk. When we probed women on extending milk access to youth in high schools through milk tickets, they suggested that the preciousness of milk would mean that a free milk program would never be abused. In fact, they felt that milk tickets would be used and not sold for cash.

“Interviewer: But if it were available and people just had access to it, would that be . . . Do you think it would be abused by teens?

R1: Any program in some way, somehow is going to be abused. Right? But I mean it’s how many families can you help and how many are going to abuse it? And at the end of the day, is it worth it?

R2: [It depends on] the availability of it. Well, every level of school. I can't see it being abused. I mean there are ones that don't like milk and the ones that like it . . . They will give to their friends. At least someone is going to be drinking the milk.

R1: Yes, exactly. That is what I mean."

"Technically – nobody would want to sell [milk] coupons as much as we would like to have the milk." The respondents were adamant about how *vital to their health* milk was and to the health of their children. They graphically described the adverse health consequences they were facing because of their lack of milk consumption.

"No milk means bones and teeth are crumbling."

"But even with taking calcium tablets, and prenatal tablets, I still wasn't getting enough milk because I started getting milk deficiency, my teeth were decaying and I wasn't very healthy, my doctor started to get after me—'You're not healthy, you're teeth are falling apart, the baby is sucking all of the calcium out of you', so even though I was putting the tablets in, it wasn't enough calcium, the baby was taking all the calcium into her bones and mine were getting brittle and falling apart, that's what happens when you don't have enough."

"We're not healthy, no, because we can't drink milk, we're not healthy. So to think that when we get old our bones will have that osteoporosis or whatever, it's not just looking at the kids that don't got milk, neither does the parents."

"I think everyone, especially us parents should be drinking milk because as they say as you get older your bones get weaker and osteoporosis is going to set in and I am sure that that is going to happen to me like I am going to be brittle by the time I am 50!"

We also found that milk was a *root cause of stress*. There is first the heart-wrenching stress of children's want.

"It's really hard when you're sitting there and she's crying and you are saying 'No child, no'. You're giving her water, you're giving her juice, you're giving her pop or anything else but she wants that milk and she knows she wants that milk—she'll put up a stink—she really will."

"I remember—That was one of the biggest things—how to decide—knowing that you have only one bag of milk left—who it was

going to go to and I feel right bad and you go from the youngest to the oldest - That's what you do you go from the baby to the middle child then if there was any left to the oldest."

"It's true and so sadly, you know, even the Hot Lunch Program people can't afford milk and hot lunch if you have two or three kids in the school. It ends up being \$30 to \$40 a month for hot lunch and the little guys who are sitting there who don't get to have it, it is really sad."

Milk means facing the stress of making other difficult choices. The trade-offs are between milk and both small and big needs.

"It's not just that it's the money, you have to pay your bills, you gotta sacrifice something. You know what I mean? It's either water or milk so pick your choice."

"For me it's a money issue, I know my children need it [milk]. I know that it is important, but if the money is not there, I can't clap my hands and make it appear. Rent still needs to be paid things like that, and I mean if I have to make a choice between do I have milk or do I have a roof over my head, we are going to have a roof over our head right so, hopefully it won't be that extreme but there are times when it is. You have to make choices."

"That's like with me I sacrifice something to give something but my bills get paid first so if my kids go without milk then they go without milk but the bills got to be paid in order for the fridge to keep running to put the milk in it."

"A lot of times if you want to buy milk you have to . . . you know you go . . . I'm not gonna shave my legs this month, I'm gonna leave those razors sitting there, so that I can have milk."

The stress has mental health effects.

". . . yeah, if we don't have any milk in the house, it depresses me, not because I can't drink it—I mean it's nothing nutritional wise with me, I just get depressed because well just knowing that it's not there for the kids."

". . . I woke up Sunday morning and there was absolutely no milk and that just put me in . . . I didn't do anything all day nothing. I didn't do anything and I didn't have any money. It made me really

upset just to know that they didn't have any milk and I didn't know what I was going to do."

Milk conjures up memories of respondents' own childhood poverty stresses.

"I remember Mom saying to me—"You can only put less than a cup on your cereal in the morning because it is so expensive, we can't afford a lot of milk'."

"When I grew up, Mom had four girls and there was always a baby so the milk was for the baby. If there was a little extra, we could have some. But it was never 'You can have a glass of milk'—it was—'You can have cereal today because there is enough milk'."

"Or you could have had my mother—pour the cereal in the bowl, put the powdered milk on the cereal, and run it under the tap—"And here is your breakfast'."

Milk deprivation brings milk rationing stress.

"But we as mothers, we plan breakfast, you get up in the morning and you think about how much milk there is and you think 'ummmmm, not today'. They may get half a glass and not a full glass."

"I would love for my kids to have milk every day, but where I am very careful with it, they have it for their cereal in the morning and a glass for their supper and that is it, they don't get to drink it other than that."

". . . Now I portion it, I say 'ok you can have it on your cereal, and you can have it at supper time but you can't have it if you just want a quick drink because it needs to last'."

"Like when I was pregnant with him, it was a tossup, because they [other children] wanted my milk, and I'm saying 'no, you guys', we can't afford everything—we can't all be drinking milk at the same time. I'll drink it this week. You guys can have it next week."

Finally, milk symbolizes the stress of degradation for those who desperately seek milk.

"When you don't have any money then you can't afford to have pride you know [and] mine goes out the window when I need milk."

“I felt the same way when I went to the food bank. Are like, you are here looking for food and milk? And then they give you the card [voucher for milk] and I happen to go to the Superstore and they say ‘the food bank??’. I say, ‘my kid needs the milk’.”

“I mean if I’m getting free milk then I’m doing whatever I have to do. It doesn’t bother me a bit.”

“The way I see it there should be a way through [ ] Centre or something that, in some way they’d have the funding—the government funding to help women out who just can’t get by—that can’t get the milk, who can’t be healthy, I mean there’s gotta be something—I mean everybody has bad days and everybody has you know hard times so instead of kicking you when you’re down, how come they just can’t help?”

## DISCUSSION

Atlantic Canada is the poorest region in the country, and the rates of food insecurity amongst lone parent female-headed households are the highest in Canada (Che and Chen, 2001; Ledrou and Gervais, 2005). The lone-mother participants represented the largely anglophone white, Acadian French, aboriginal and indigenous Black populations of Nova Scotia and Atlantic Canada. Mothers were primarily income-assistance recipients although some (13.5% in the first study) were low wage earners. They had varying educational levels and differing levels of participation in community food assistance programs (McIntyre et al., 2002). Since participants were largely recruited through community-based family resource centers, they were probably not the most food insecure, isolated, nor disadvantaged women in their communities. To inform our interpretation of the experiences of participants, we used multiple methods of data collection over time. Thus, we feel that our findings hold true for a large segment of low-income lone mothers in the region.

We did not set out to conduct an ethnographic study on milk in the tradition of the anthropological studies, such as Mintz and Du Bois (2002), and our analysis is far less sophisticated than Walker’s (1999) international symposium dedicated entirely to milk. Yet, in examining the voices of these low-income lone mothers talking about milk, we have gained an appreciation of the use of food in the critical inquiry of how economically disadvantaged women in Canada experience and conceptualize

their physical (health), social, and cultural universe (Long, 2001). We have also discovered that milk can serve as a window into a specific culture, particularly because it is so woven into the everyday lives of the women we interviewed (Long, 2001).

Milk may be too simple a commodity to be a true foodway if foodways are defined as an extended network of activities surrounding the procurement, preservation, preparation, presentation, performance, and consumption of food and which incorporates the beliefs, aesthetics, and economics involved in food behaviors (Yoder, 1972, cited in Long, 2001). Instead, a milk foodway could serve as a way of illustrating how low-income lone mothers embody their cultural system. It could also offer a way to conceptualize milk as a dynamic network of processes interwoven into many aspects of women's lives.

The milk metaphor may be unique to low-income women—it is unlikely that their characterizations of milk would be understood by mainstream society. Focus group participants spoke passionately about milk for up to two hours. We found no other food to have this emotive impact—certainly not fruits and vegetables that are also expensive and lacking in our participants' diets (McIntyre et al., 2003).

Aguirre (2003), in her fascinating account of the Argentinian milk culture, describes how milk and milk product consumption is now segmented by social class from its former traditional consumption by children. With the creation of a market for flavored and processed dairy products such as yogurt that appeal to the rich, milk products have come to reflect social fragmentation in an increasingly poor country. The poor are left to drink powdered (supplied free by the state) and fluid milk (cheapest of the milk products), which is becoming more unaffordable for the poor. This is consistent with our finding that milk is viewed as an elite commodity among low-income lone mothers.

Milk, the commodity, rather than that which represents mother's enduring love (Mock, 1996), has been written about before in the metaphor and symbolic literature. Shen (1998) examined the sentence: "*The boy swallowed milk and kisses in his warm bed.*" He identified *milk*, as the literal noun with respect to things to be swallowed and *kisses* as the metaphorical noun. In our studies, milk had dual meaning as both literal and metaphorical noun.

Rosin (1996) cites milk in an article about the psychology of food and eating. He begins his argument that humans begin their food experience trajectory with one food—milk. Milk, as the first food, initially

functions as a source of nutrition and sensory pleasure. Later, he goes on to say, food becomes a social marker, an aesthetic experience, a source of meaning and metaphor, and, often, a moral entity. He never returns to milk, unfortunately, in his discussion. We would suggest that milk for our study participants continues to have a distinct quality beyond infancy as a social marker, an aesthetic experience, a source of meaning and metaphor.

Mehta (2005), in her reflection on culinary diasporas, refers only to coconut milk. Her paper examines identity and the language of food among French-speaking exiles and immigrants from the Caribbean, Africa, and Asia living in Guadeloupe. She finds that the mediating discourse of food becomes a metaphor for diasporic continuity and cultural retention. In our study, engaging women to discuss milk brought them together in a shared cultural environment where all knew the multiple meanings of milk. As almost a collective chant, they meant more than a culinary message when they agreed that milk is needed for everything.

R1: You use milk to make mashed potatoes. You use milk to make Kraft Dinner.

R2: You use milk for everything.

R3: You use milk to make \_.

R2: You need milk for everything . . . Cereal.

Food imagery in contemporary women's writing is far more common than in men's writing (Blodgett, 2004). Blodgett (2004) proposes that this may be because women use food imagery for multiple purposes including a way of speaking about personal and social behaviors and psychological problems, and to discuss poverty and domesticity. Being food preparers and providers may be a universal issue and/or story for women. We would suggest that one universal story for our women experiencing food insecurity is that of milk and the struggles it embodies for them.

Consumers identify milk as a healthy food (Moskowitz, German, and Saguy, 2005). In fact, milk marketers promote milk as a super food (<http://www.gotmilk.com/news/news046.html>) where superfoods are defined as natural foods with intrinsic components that are believed to have beneficial health effects (Lunn, 2006). Dupuis (2002) provides a historical view on the rise of milk consumption in the United States over the past 150 years. Milk's characterization as a wholesome and perfect food, she states, makes it "more than food, it is an embodiment of the politics

of American identity over the last 150 years” (p. 8). Wiley has advanced this analysis on the perceived healthfulness of milk (Wiley 2004; 2005) and in an article in this issue she provides a comprehensive overview of the globalization of milk from a biocultural perspective (Wiley, 2007). Wiley suggests that milk is taking on positive health meanings in new geographic markets, despite the fact that consumers of non-European extraction may be genetically programmed for lactose intolerance after childhood. Milk’s actual nutritional value to new market populations is equivocal depending upon the baseline nutrition of particularly children, and Wiley notes correctly that anticipated impact on chronic disease among adults is unknown. In Canada, where exposure to sunlight is limited between October and April, the unique nutritional contribution of milk is rooted in the addition of vitamin D rather than the intrinsic nutritional properties of the food.

This pervasive view of milk as vital to health is strongly held in our population of women whose health feels threatened by its lack. Women have internalized the milk-as-superfood message, and their inability to provide milk for families makes them feel inadequate as food providers. Milk intolerance is not an expressed concern in this group of largely European-descent participants. While milk consumption is not a panacea for all nutritional deficits among the study population, the inadequacies in calcium and vitamin D intake that we observed (Table 2) would be largely eliminated with one to two additional glasses of milk per day added to their regular diets. Therefore, women’s concern about a lack of access to milk as a risk to their family’s health has merit.

Our analysis of lone mother’s characterization of milk as a metaphor of an elite commodity, vital for health and a source of stress, has served as more than an exercise in cultural linguistics or nutritional anthropology. Our findings on milk access in this population are perhaps best summarized with a single quote: “Milk is, in our house . . . it is a necessity but it’s also a luxury.” We have informed a number of target audiences about “milk as metaphor” for low-income lone mothers. These messages have strongly resonated with both the women themselves when we returned research findings to them, and with broad stakeholders, including members of the dairy industry, who understand the public health nutritional gains that would result from improved access to milk for low-income women and their children (McIntyre, Glanville, and Williams, 2006). While we do not expect to reproduce the impact of the “food deserts” metaphor that mobilized Britain in terms of improving retail access to

healthy foods for inner city poor (Wrigley, Warm, and Margetts, 2003), we recognize the power of metaphor to stimulate the imagination. Perhaps because of the dissemination of our message and the powerful imagery that it evokes, we are hearing a new term: “milk security,” the metaphor perhaps of the advocacy class who have added it to the “food security” nomenclature. Finally, had we not listened critically to what women were saying to us when they talked about milk, we would have missed its special meaning to them and the opportunity to support them in achieving “milk security.” We would also have missed the opportunity to share our insights with the community for which Christine Wilson is regarded as its founding mother.

### ACKNOWLEDGEMENTS

We thank the women who participated in our studies for sharing their experiences and insights. We also thank Bonnie Anderson and Trudy Reid, study coordinators, and Jutta Dayle and Tanya Palmer for assisting with data analysis.

### REFERENCES

- Aguirre, P. (2003). The culture of milk in Argentina. *Anthropology of Food*, 2, 1–12.
- Blodgett, H. (2004). Mimesis and metaphor: Food imagery in international twentieth-century women’s writing. *Papers on Language and Literature*, Summer, 260–295.
- Che, J., and J. Chen (2001). Food insecurity in Canadian households. *Health Reports*, 12(4), 11–22.
- DuPuis, E. M. (2002). *Nature’s Perfect Food: How Milk Became America’s Drink*. New York: New York University Press.
- Ehrenfeld, J. (2003). Putting a spotlight on metaphors and analogies in industrial ecology. *Journal of Industrial Ecology*, 7, 1–4.
- Glanville, N. T., and L. McIntyre (2006). Diet quality of Atlantic families headed by single mothers. *Canadian Journal of Dietetic Practice and Research*, 67, 28–35.
- Health and Welfare Canada and Ontario Ministry of Health. (1993). *Canada’s Food Guide to Healthy Eating*. Toronto, ON: Queen’s Printer for Ontario.
- Institute of Medicine (1997). *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride*. Washington, DC: National Academy Press.

- Kennedy, V. (2000). Metaphors in the news—Introduction. *Metaphor and Symbol*, 15, 209–211.
- Lunn, J. (2006). Superfoods. *Nutrition Bulletin*, 31(3), 171–172.
- Ledrou, I., and J. Gervais (2005). Food insecurity. *Health Reports*, 16(3), 47–51.
- Long, L. M. (2001). Nourishing the academic imagination: The use of food in teaching concepts of culture. *Food and Foodways*, 9, 235–262.
- McIntyre, L. (2005). The importance of milk to the socioeconomically deprived (Invited presentation). International Dairy Federation World Dairy Summit. Vancouver, September 22. Available at <http://www.idf2005.com> (Accessed October 18, 2006).
- McIntyre, L., N. T. Glanville, S. Officer, B. Anderson, K. D. Raine, and J. B. Dayle (2002). Food insecurity of low-income lone mothers and their children in Atlantic Canada. *Canadian Journal of Public Health*, 93, 411–415.
- McIntyre, L., N. T. Glanville, K. D. Raine, J. B. Dayle, B. Anderson, and N. Battaglia (2003). Do low-income lone mothers compromise their nutrition to feed their children? *Canadian Medical Association Journal*, 168, 686–691.
- McIntyre, L., T. Glanville, and P. Williams (11 April 2006). *Exploring Milky Ways, Policy Dialogue*. Halifax, Nova Scotia: Authors.
- McIntyre, L., S. Officer, and L. M. Robinson (2003). Feeling poor: The felt experience of low-income lone mothers. *Affilia*, 18(3), 316–331.
- Mehta, B. J. (2005). Culinary diasporas: Identity and the language of food in Gisèle Pineau's "Un papillon dans la cité" and "L'exil selon Julia." *International Journal of Francophone Studies*, 8, 23–51.
- Mintz, S. W., and C. M. Du Bois (2002). The anthropology of food and eating. *Annual Review of Anthropology*, 31, 99–119.
- Mock, M. (1996). Spitting out the seed: Ownership of mother, child, breasts, milk, and voice in Toni Morrison's *Beloved*. *College Literature*, 23, 117–127.
- Moskowitz, H. R., J. B. German, and I. S. Saguy (2005). Unveiling health attitudes and creating good-for-you foods: The genomics metaphor, consumer innovative web-based technologies. *Critical Reviews in Food Science and Nutrition*, 45, 165–191.
- National Council of Welfare (2004). *Welfare Incomes 2003*. Ottawa: Minister of Public Works and Government Services Canada.
- Rozin, P. (1996). Towards a psychology of food and eating: From motivation to module to model to marker, morality, meaning, and metaphor. *Current Directions in Psychological Science*, 5, 8–24.
- Shen, Y. (1998). Zeugma: Prototypes, categories, and metaphors. *Metaphor and Symbol*, 13, 31–47.
- Statistics Canada (1998). *Incomes in Canada*. (Catalogue No. 75-202-XIE).
- Wiley, A. S. (2004) "Drink milk for fitness:" the cultural politics of human biological variation and milk consumption in the United States. *American Anthropologist*, 106(3), 506–517.

- Wiley, A. S. (2005) Does milk make children grow? Relationships between milk consumption and height in NHANES 1999–2002. *American Journal of Human Biology*, 17(4), 425–441.
- Wiley, A. S. (2007) The globalization of cow's milk production and consumption: Biocultural perspectives. *Ecology of Food and Nutrition*, 46(3), 281–311.
- Wrigley, N., D. Warm, and B. Margetts (2003). Deprivation, diet, and food-retail access: Findings from the Leeds 'food deserts' study. *Environment and Planning A*, 35, 151–188.
- Yoder, D. (1972). Folk cookery. In R. M. Dorson (ed.), *Folklore and Folklife*. Chicago: University of Chicago Press, pp. 325–50, cited in Long, L. M. (2001). Nourishing the academic imagination: The use of food in teaching concepts of culture. *Food and Foodways*, 9, 235–262.

