

A B S T R A C T

Over the past two decades, the demand for charitable food assistance has steadily grown, and a massive ad hoc system of food banks has become established in Canada. To assess the food insecurity and nutritional vulnerability of one subgroup of food bank users, interviews were conducted with a sample of 153 women in families using emergency food relief programs in Metropolitan Toronto. Ninety percent reported household incomes which were less than two-thirds of the 'poverty line', and 94% reported some degree of food insecurity over the previous 12 months. Seventy percent reported some level of absolute food deprivation, despite using food banks. The findings highlight the limited capacity of ad hoc, charitable food assistance programs to respond to problems of household food insecurity which arise in the context of severe and chronic poverty.

A B R É G É

Au cours des deux dernières décennies, la demande d'aide alimentaire auprès des organismes caritatifs n'a cessé d'augmenter et un important système de banques alimentaires s'est mis en place au Canada. Pour évaluer la précarité et la vulnérabilité alimentaires d'un sous-groupe d'utilisateurs des banques alimentaires, on a interviewé un échantillon de 153 femmes dans des familles faisant appel aux programmes d'aide alimentaire d'urgence dans la région métropolitaine de Toronto. Quarante-vingt dix pour cent d'entre elles ont déclaré disposer d'un revenu représentant moins de deux tiers du revenu correspondant au « seuil de pauvreté », et 94 % d'entre elles ont déclaré avoir craint manquer de nourriture au cours des 12 mois précédents. Soixante dix pour cent ont déclaré un certain manque absolu de nourriture malgré leur recours aux banques alimentaires. Les résultats soulignent les capacités limitées des programmes d'aide alimentaire caritatifs pour répondre aux problèmes d'insécurité alimentaire vécue dans les foyers souffrant de pauvreté extrême et chronique.

Household Food Insecurity and Hunger Among Families Using Food Banks

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The past two decades in Canada have been marked by high levels of poverty, unemployment, and underemployment,¹⁻³ and by fundamental changes in social policies and programs for people experiencing the hardships of poverty and unemployment.⁴ In the wake of these changes, communities have struggled to respond to growing problems of hunger and homelessness. One such response has been the establishment of food banks, ad hoc, voluntary organizations which collect and distribute donated foodstuffs to those 'in need'. The utilization of food banks has steadily increased since they began in the early 1980s, with 1.4 million people seeking assistance in 1989,⁵ and more than double that number being helped in 1997.⁶

Food bank utilization is generally thought to be indicative of household food insecurity* (popularly termed 'hunger') and to denote nutritional vulnerability,⁸ but little is known about the actual food intakes or nutritional well-being of those who use food banks. To begin to address these questions, a study of food insecurity and nutritional vulnerability among women in families using food banks was undertaken. The focus on women arose

because of research suggesting that women may compromise their own intakes to provide for their children in times of severe constraint.⁹⁻¹² In this paper, the families' living circumstances are described, household food insecurity is assessed, and its relation to food bank use is explored.

METHODS

Study participants were recruited from a stratified, random sample of 21 emergency food hamper programs in Metropolitan Toronto. A detailed description of the sampling and recruitment appears elsewhere.¹³ Women were deemed eligible if they were age 19-49, non-pregnant, had at least one child under the age of 15 in their household, had used a food bank at least one other time in the previous 12 months, and possessed sufficient English fluency to participate in oral interviews. Study recruitment occurred between May 1996 and April 1997. Participation was voluntary and confidential. A final sample of 153 women was achieved, reflecting a participation rate of 68%. Comparison of the demographic profile of study participants with that of women responding to Daily Bread Food Bank's 1997 client survey indicates that our sample was typical of the larger population of women seeking emergency food hampers in this region (personal communication, W. Husbands, 1997).

Three in-person interviews were conducted with each participant by the same interviewer who recruited her. The interviews were designed to be supportive, interactive, and nonhierarchical. They generally spanned the month following recruitment and typically occurred in the participants' homes. At each interview, a 24-hour dietary intake recall and question-

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* Food insecurity is defined here as "limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways."⁷

TABLE I
Sociodemographic Characteristics of Sample (n=153)

Characteristic	Number (% of sample)
Region of Birth	
Canada	57 (37.3)
Caribbean, West Indies	27 (17.6)
South/Latin America	19 (12.4)
Central Europe	14 (9.2)
Eastern Europe	12 (7.8)
Asia	11 (7.2)
Middle East, Africa, other	13 (8.5)
Level of Education	
No secondary school certificate	53 (34.6)
Secondary school certificate	37 (24.2)
Some college or university training	48 (31.4)
College or university training completed	15 (9.8)
Primary Source of Household Income	
Social assistance	107 (69.9)
Social assistance + employment	22 (14.4)
Employment	15 (9.8)
Employment Insurance	6 (3.9)
Other	3 (2.0)
Woman Living with a Partner?	
Yes	54 (35.3)
No	99 (64.7)
Number of Children in Household	
1	41 (26.8)
2	60 (39.2)
3	31 (20.3)
4	16 (10.5)
5 or more	5 (3.3)

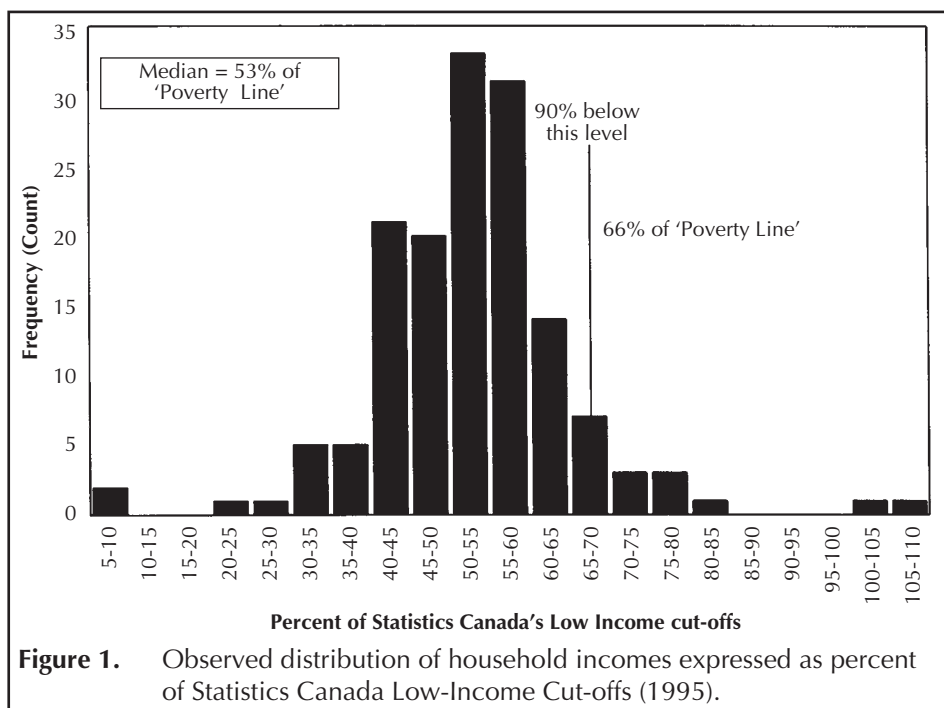
naire were completed. Data were collected on household demographics, food procurement and provisioning strategies, self-reported health, and health-related behaviours. Household food insecurity over the previous 12 months and previous 30 days was assessed at the third interview using the USDA Food Security Module^{14,15} with minimal modifications for use in a Canadian context. This instrument includes questions about perceived household food sufficiency, food resource scarcity, and hunger experience, assessing both the respondent's experiences of food deprivation and her perceptions of the level of deprivation experienced by other household members. Participants' experiences and perceptions of food assistance programs were explored through a series of open-ended questions.

Participants were asked about their household income and major expenditures in the one month preceding the first interview. While verification of employment incomes and housing costs was not feasible, comparison of a random sample of reported incomes for participants receiving social assistance and shelter allowances with current provincial benefit guidelines indicated good correspondence.

TABLE II
Household Food Security Status*

	% (number)	95% Confidence Intervals
Over Past 12 Months		
1. Food secure	6.5% (10)	2.6%, 10.4%
2. Food insecure with no hunger evident	23.5% (36)	16.8%, 30.2%
3. Food insecure with moderate hunger evident	43.1% (66)	35.3%, 50.9%
4. Food insecure with severe hunger evident	26.8% (41)	19.8%, 33.8%
Over Past 30 Days		
1. No food insecurity with hunger evident	43.1% (66)	35.3%, 50.9%
2. Food insecure with moderate hunger	35.3% (54)	27.7%, 42.9%
3. Food insecure with severe hunger evident	21.6% (33)	15.1%, 28.1%

* Classifications based on thresholds and definitions developed for use with the Food Security Module¹⁴



All statistical analyses were performed using SAS/PC Version 6.10 for Windows (SAS Institute, Cary, NC). Household food security status was determined from responses to the Food Security Module, with severity of insecurity defined in terms of the frequency and duration of food deprivation reported for adults and children over the time frame of interest.¹⁴ Six items from the Radimer/Cornell index¹⁶ included in this module were examined individually to explore specific psychological and qualitative dimensions of food insecurity. Analysis of variance (PROC GLM) and Chi-squared (PROC FREQ) tests were used to examine relationships between household food security status and demographic variables. Relationships between frequency and duration of food bank usage and indicators of household

food security were examined using Spearman correlations and Kruskal-Wallis (Chi-Square Approximation) tests. A content analysis of women's responses to open-ended questions about food bank use was conducted and their remarks summarized, using Ethnograph v4¹⁷ to facilitate the coding and sorting of comments into content-related categories.

RESULTS AND DISCUSSION

Description of sample

Participants ranged in age from 19 to 48 (mean age 33 years ± 7). A summary of their sociodemographic characteristics is presented in Table I. Sixty-three percent were born outside Canada, although only 20% had come to this country in the previous five years. Household size ranged

TABLE III
Relation Between Qualitative Dimensions of Household Food Insecurity and Food Bank Utilization over the Last 12 Months (n=153)

Qualitative Dimension of Food Insecurity*	Distribution of Responses, Number (%)		Use of Food Banks, Median (mean)		Kruskal-Wallis Test of Association†
"I worried about whether our food would run out before we got money to buy more."	Often	91 (61.4%)	11.5	(13.5)	Chi ² = 1.2375 p = 0.5386
	Sometimes	51 (33.3%)	12	(12.4)	
	Never	8 (5.2%)	13	(14.8)	
"The food we bought just didn't last and we didn't have money to get more."	Often	69 (45.1%)	12	(14.8)	Chi ² = 3.2654 p = 0.1954
	Sometimes	71 (46.4%)	10	(12.4)	
	Never	13 (8.5%)	7	(9.6)	
"I relied on only a few kinds of low-cost food to feed the children because we were running out of money to feed the children."	Often	85 (55.6%)	12	(14.0)	Chi ² = 2.5265 p = 0.2827
	Sometimes	52 (34.0%)	9	(12.2)	
	Never	16 (10.5%)	12	(12.2)	
"I couldn't afford to eat balanced meals."	Often	69 (45.1%)	12	(15.1)	Chi ² = 2.3986 p = 0.3014
	Sometimes	68 (44.4%)	10.5	(11.7)	
	Never	16 (10.5%)	10	(11.8)	
"I couldn't feed the children a balanced meal because I couldn't afford that."	Often	45 (29.4%)	12	(14.2)	Chi ² = 0.55813 p = 0.7565
	Sometimes	62 (40.5%)	11.5	(12.0)	
	Never	46 (30.1%)	12	(13.8)	
"The children were not eating enough because we just couldn't afford enough food."	Often	20 (13.1%)	15.5	(19.7)	Chi ² = 9.4237 p = 0.0090
	Sometimes	59 (38.6%)	8	(10.4)	
	Never	74 (48.4%)	12	(13.7)	

* These items were drawn from the Food Security Module.¹³ The participant was asked whether each statement was often, sometimes or never true for her over the last 12 months

† Chi-Square Approximation with 2 df

from 2 to 10, with a median of 3 persons. The majority of households were supported either in whole or in part by social assistance programs, a finding which is consistent with other examinations of food bank use in Canada.^{4,18} Although 18 women (12%) were employed outside the home, most worked in part-time and/or temporary service sector jobs. Only one woman had full-time work.

As a means to interpret household income relative to Canadian standards, reported income for the month was expressed as a percentage of the 1995 Statistics Canada Low-Income Cut-offs (LICOs) (Figure 1). These cut-offs, commonly referred to as 'poverty lines', define low-income in relation to average household expenditure patterns; LICOs are dollar values below which the average household spends 56% or more of their gross income on the basic necessities of food, shelter, and clothing, adjusted for degree of urbanization and household size.² Household incomes were, on average, 52.8% ± 0.13% of the 'poverty line'. Ninety percent of households had incomes which were less than two thirds of the 'poverty line'.

Only 26% of households in this sample lived in rent-geared-to-income housing; the mean rental charge among these households was \$338 ± 141 per month. The average monthly rent for those living in market rental accommodation was more than twice as high (\$713 ± 152), and rent charges averaged 65.5% of total income among these households (compared to 28.5% for households in rent-geared-to-income housing). At the time of Interview 1, 11 households in market rental accommodation and 3 in rent-geared-to-income housing had failed to make full rental payments for the month.

Food insecurity

Although the extent of reported food deprivation varied widely among households, 94% reported some degree of food insecurity over the previous 12 months, and 57% reported food insecurity with some hunger over the previous 30 days (Table II). Households classified as food insecure with moderate hunger are those which reported reduced food intake among adult members to an extent that implies adults had repeatedly experienced the physical sensation of hunger, but did not

report such reduced food intakes among the children.¹⁴ Households classified as food insecure with severe hunger are those reporting reduced food intake such that the children have experienced actual physical hunger and adults have repeatedly experienced more extensive reductions in food intake.¹⁴ The high prevalence of food-related anxiety and perceived compromise in dietary quality reported (Table III) highlights the chronically compromised nature of food supplies in the households studied. It should be noted that all of the food insecurity reported here occurred in the context of food bank usage; all of the households reporting moderate or severe hunger in the previous 30 days had received emergency food assistance during this time. Furthermore, using food banks was just one of the strategies women reported employing to augment scarce household resources in the context of food insecurity (manuscript in preparation).

No associations were observed between reported severity of food insecurity and any of the sociodemographic variables measured in this study, except for a weak association between number of children in the household and household food security

status over the previous 30 days (F-value 3.24, $p=0.0421$, 2 df). A post-hoc least squares means comparison revealed that women classified as food insecure with severe hunger tended to have more children than women in households where no hunger was evident. Perhaps because household incomes were so low generally, no association could be detected between relative poverty and severity of food insecurity within this sample.

Use of food banks

Food hamper programs in this region typically endeavour to supply three days' worth of food to clients, and most have policies in place to restrict assistance to once per month per family except with evidence of exceptional need. The average number of times families in this study had obtained assistance over the previous twelve months was 13 ± 11 (median 12, range 2 - 72 times). On average, they reported obtaining food assistance 1.28 ± 0.91 times per month in the last year (median once/month). Food bank utilization rates were not significantly correlated with household food security status, but the number of times a household sought food assistance was positively associated with expressed concerns about food sufficiency among children (Table III).

For most women, using a food bank was a relatively new phenomenon. The median time since first using a food bank was 2.2 years, and 28% of women had begun using a food bank in the previous 12 months. The longer it had been since a woman first sought food assistance, the more severe her reported household food insecurity over the previous 12 months (Spearman $r=0.20123$, $p=0.0126$), and the more frequently she had sought charitable food assistance during this period (Spearman $r=0.46361$, $p=0.0001$).

In recounting the circumstances of their first food bank visit, 43% of women simply said they found themselves without food and without money to buy more food, but others described specific events which had precipitated financial crises (Table IV). The vast majority (84%) of women described feeling shame, embarrassment, degradation, and humiliation at

TABLE IV
Circumstances Surrounding First Visit to a Food Bank (n=153)

Circumstance	Number (% of sample)
No money for food	66 (43.1)
Additional expenses associated with new baby or pregnancy	26 (17.0)
Additional expenses associated with Christmas	16 (10.5)
Job loss	15 (9.8)
Newly arrived in the city (and in some cases, the country)	15 (9.8)
Advised of opportunity to obtain food assistance by a friend	8 (5.2)
Recent separation from partner	5 (3.3)
Other reasons	2 (1.3)

this first visit. Since then, women's remarks implied that most had come to accept charitable food assistance as a necessary part of their food procurement strategies – an attitude also expressed by food bank users interviewed in a recent Montreal study.¹⁸ Nevertheless, the women's sensitivity to the social stigma of food bank use was apparent when they spoke about their children in relation to this system. Only 57% of women reported that their children were currently aware that they used food banks, and many of these said they would not take their children to a food bank if they could avoid it. Nineteen women (17%) said they were determined to never let their children know of their reliance on food banks. Among those whose children knew they used food banks, it was a source of embarrassment and even anger for some children, whereas others were reportedly sanguine about the necessity of such assistance. Still others were appreciative of the food (and 'treats') received from food banks.

IMPLICATIONS AND CONCLUSIONS

This study has revealed a disturbing picture of poverty, food scarcity and deprivation. The results confirm that food bank use is a marker of household food insecurity, which may in turn denote nutritional risk. In this study, women in households characterized by severe or moderate hunger over the previous 30 days had systematically lower energy and nutrient intakes than those not reporting hunger and appeared to be at risk of deficiency for several nutrients.¹³ While the short-term consumption of an inadequate diet is unlikely to have major health consequences, there is no indication that the situations documented

here are short-term or transient. Poverty among Canadian families is growing,² and reductions in welfare benefit levels have occurred in many jurisdictions.¹⁹ Furthermore, it must be recognized that food insecurity is just one dimension of the insecurity and deprivation experienced by families living in severe and chronic poverty.

To date, arguments that food banks are an inappropriate response to problems of hunger have centred on their relation to recent social policy reforms and on the social stigma associated with food bank use.^{3,4,20-23} The high levels of household food insecurity documented here raise an additional concern about the entrenchment of ad hoc, charitable food assistance programs as a response to 'hunger'. While charitable food assistance may have alleviated *some* of the absolute food deprivation in the households studied, it clearly did not *prevent* members from going hungry. Given the supply-driven (i.e., donor-driven) nature of this system and the fact that demand for food assistance has long surpassed supply, food banks cannot be expected to resolve the kinds of food problems described here. More effective responses, ideally addressing the severe and chronic poverty which underlines household food security and other manifestations of household economic insecurity, are urgently needed.

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REFERENCES

1. Economic Council of Canada. Good Jobs Bad Jobs: Employment in the Service Economy. Ottawa, ON: Minister of Supply and Services, 1990.
2. National Council of Welfare. Poverty Profile 1995. Ottawa: Minister of Supply and Services Canada, 1997.
3. Tarasuk V, Davis B. Responses to food insecurity in the changing Canadian welfare state. *J Nutr Educ* 1996;28(2):71-75.
4. Riches G. Hunger in Canada: Abandoning the right to food. In: Riches G (Ed), *First World Hunger, Food Security and Welfare Politics*. London: Macmillan Press Ltd, 1997.
5. Davidson B. March 1989 Hunger Count Report. Toronto, ON: Canadian Association of Food Banks, 1989.
6. Canadian Association of Food Banks. Hunger Count 1997. A Report on Emergency Food Assistance in Canada. Toronto, ON: Canadian Association of Food Banks, 1997.
7. Anderson SA. Core indicators of nutritional state for difficult-to-sample populations. *J Nutr* 1990;120(11S):1559-600.
8. Joint Steering Committee. Nutrition for Health: An Agenda for Action. Ottawa, ON; 1996.
9. Campbell CC, Desjardins E. A model and research approach for studying the management of limited food resources by low income families. *J Nutr Educ* 1989;21(4):162-71.
10. Fitchen JM. Hunger, malnutrition, and poverty in the contemporary United States: Some observations on their social and cultural context. *Food and Foodways* 1988;2(3):309-33.
11. National Council of Welfare. Women and Poverty Revisited. Ottawa, ON: Minister of Supply and Services Canada, 1990.
12. Tarasuk V, Maclean H. The food problems of low-income single mothers: An ethnographic study. *Can Home Econ J* 1990;40(2):76-82.
13. Tarasuk VS, Beaton GH. Women's dietary intakes in the context of household food insecurity. *J Nutr* 1999;129:672-79.
14. Hamilton W, Cook J, Thompson W, et al. Household Food Security in the United States in 1995. Summary Report of the Food Security Measurement Project. Alexandria, VA: United States Department of Agriculture, 1997.
15. Hamilton W, Cook J, Thompson W, et al. Household Food Security in the United States in 1995. Technical Report of the Food Security Measurement Project. Alexandria, VA: United States Department of Agriculture, 1997.
16. Kendall A, Olson CM, Frongillo EA. Validation of the Radimer/Cornell measures of hunger and food insecurity. *J Nutr* 1995;125:2793-801.
17. Seidel J, Friese S, Leonard DC. *The Ethnograph v4.0: A User's Guide*. Amherst, MA: Qualis Research Associates, 1995.
18. Jacobs Starkey L, Kuhnlein H, Gray-Donald K. Food bank users: Sociodemographic and nutritional characteristics. *CMAJ* 1998;158(9):1143-49.
19. National Council of Welfare. Welfare Incomes 1995. Ottawa, ON: Minister of Supply and Services Canada, 1997.
20. Hobbs K, MacEachern W, McIvor A, Turner S. Waste of a nation: Poor people speak out about charity. *Can Rev Soc Pol* 1993;31:94-104.
21. Poppendieck J. Dilemmas of emergency food: A guide for the perplexed. *Agriculture and Human Values* 1994;11(4):69-76.
22. Riches G. Food Banks and the Welfare Crisis. Ottawa, ON: Canadian Council on Social Development, 1986.
23. Tarasuk VS, Maclean H. The institutionalization of food banks in Canada: A public health concern. *Can J Public Health* 1990;81:331-32.

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