

## A Critical Look at Food Security in Social Work: Applying the Socio-ecological Lens

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### Abstract

One in six children under the age of 18 in Canada lives in a food insecure household. This is deeply concerning as the presence of food insecurity can disrupt developmental trajectories potentially impacting the lifespan of a child. However, when compared to other social problems such as housing or mental health, food security takes a backseat. Twenty-four years ago, a call to action was issued to social workers to make food security a priority within their practice. The literature demonstrates a slow but encouraging rise in the number of social workers heeding that call. This paper provides a critical analysis of 21 articles investigating social work and food security interventions. The articles were published in peer-reviewed, academic journals between 1993 and 2016. The socio-ecological model was used to guide the review of the articles to help extrapolate how social workers can address food security at the MIC, MES, EXO, MAC and CHR level of practice. Forty-four interventions were identified. Most of the interventions considered the EXO and MAC, highlighting the importance of building strong communities and implementing policies for “food justice”. The results also indicate that front-line social workers are well suited for food security interventions, but comprehensive research on how MIC, MES and CHR level strategies are best executed would help bring them to fruition. Furthermore, implementing food security into social work curriculum and becoming food conscious themselves was highly recommended.

**Keywords:** Food security (having access to sufficient, safe and nutritious food that meets dietary needs and food preferences for an active and healthy life); Intervention (providing programs and resource to individuals and families to help them achieve greater health and well-being); Socioecological model (An approach which considers the intersectionality between individual, family, groups, and community when assessing for intervention).

## Introduction

In 2014, a University of Toronto interdisciplinary research group monitoring food insecurity in Canada found twelve percent of households experienced a certain level of food insecurity over the past year, representing 3.2 million individuals [1]. Per their report, Household Food Insecurity in Canada, 2014 one in six children under the age of 18 in Canada lives in food insecure households [1]. Children in food insecure households have a higher risk for physical and behavioral deficiencies than children in households which are food secure. Household food insecurity (HFI) in Canada is a result of a lack of financial resources, and program and policy development. Finding workable solutions will help reduce social and health inequities perpetuated by food insecurity [2].

The socio-ecological model seeks to understand the intersectionality between multiple levels of society and is helpful when designing health interventions [3]. Bronfenbrenner's ecological model, introduced in the 1970s, conceptualizes the ecological environment as five nested structures: the microsystem (MIC); the mesosystem (MES); the exosystem (EXO); the macrosystem (MAC); and the chronosystem (CHR) [4]. The MIC encompasses the pattern of activities, roles, and interpersonal relations in the immediate familial environment; the core of the MES are the interactions between two or more microsystems in which the developing person actively participates; the EXO looks to 'the linkages and processes taking place between two or more settings, at least one of which does not contain the developing person, but in which events occur that indirectly influence processes' (e.g. communities and organizations); the MAC includes overarching pattern of MAC, MES, and EXO, culture and subculture, and the underpinning beliefs, knowledge, lifestyles, customs, opportunities, barriers, and material resources; and lastly, the CHR focusses on the impact of change over time (e.g., changes in life course due to family structure, employment, location, coping mechanisms, or disease) [4]. The

socio-ecological model has been used before in social work theory, research and intervention [5-7]. Two such previous discussions of social work and food security have also drawn on the socio-ecological perspective [8,9]. These articles, both of which are included in this analysis, focus on EXO and MAC in the context of community 'food justice' and promoting food justice as part of social work education.

### *Definition of Food Security and Household Food Insecurity*

We use the current definition which state "food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. HFI is the application of this concept to the family level, with individuals within households as the focus of concern"[10].

The physical, social and economic access to food security varies significantly between countries and between individuals living in those countries. The articles included in this review originated from western countries, therefore we employed a western definition of HFI to contextually reflect our findings. In Canada, HFI is defined as "the inadequate or insecure access to food due to financial constraints. HFI negatively impacts physical, mental, and social health, and costs our healthcare system considerably" [2]. This paper will use the terms "food security" and "food insecurity" to capture all situations, including HFI. We acknowledge that countries with low food security contain people with high food security, and countries with high food security contain people with low food security, and this points to a problem with distribution rather than a lack of food. However, the dynamics of inequality and inequity in global food distribution is beyond the scope of this discussion. The focus of this paper will be on food security in families with children and/or youth, and the role of social work.

Food security is necessary for healthy physical, mental and emotional development,

especially in children [11]. Food insecurity related physical complications include diarrhea and cough [12]; stunted growth, respiratory infections [13]; physical disabilities [14]; and anaemia [15]. Ironically, food insecurity has been found to be a factor in obesity [16]. Mental and emotional consequences include learning disabilities [14]; poor cognitive and emotional development [17]; poor academic and psychosocial development [18]; compromised language expression and understanding in children as young as 18 months [19]; repeating a grade and lower reading scores [18]; and problems with relationships, mood, and externalizing in grade five students [20].

Research has shown living in a food insecure home may be associated with disorganization and chaos [21,22]. Moreover, food insecurity is associated with maternal depression [23,24]; chronic illness; divorce [14]; and adult smokers in the family home [21]. Additionally, some parents may be aware of the impact that food insecurity has on their children, and become anxious and depressed as they desire to protect their children [18,25]. Food insecurity has been found to raise the level of stress in the home, and as stress increases so might the use of alcohol, cigarettes, and consumption of carbohydrates [26]. As individuals with food insecurity tend to require more medical intervention, the cost of health care also increases [27].

Social workers are well positioned to intervene in situations of food security, however, there are no guidelines stating what social workers could or should be doing. A cursory look at the social work literature reveals that food security is not as high on the priority list as other social problems, such as housing and mental health, and we feel this is a detriment to our profession and the individuals we are called to serve. This socio-ecological critique of the literature sheds light on what social workers can and must do.

## Objectives

The primary objectives of this paper are:

- 1) To critically analyze the social work

literature on multi-level food security intervention

- 2) To determine what social workers can and must do to enhance food security for families and communities

## Method

This critical analysis involved selecting articles that discussed food security and the role of social work. Eight electronic databases were searched using search terms “food security”, “food insecurity,” and “social work”. Medline, Psycinfo, Social Service Abstract, Social Work Abstracts, PubMed, and SocIndex, SCOPUS, and CINAHL were the databases selected, as they have been used in similar literature reviews [see 28, 29]. We expanded the search by using “social work” and “nutrition”, which generated a large number of abstracts, however only three abstracts fit the criteria. Google was also used with no additional results. Finally, bibliographies of selected articles were reviewed by hand to capture any suitable articles not picked up by the electronic searches.

The preliminary search of the literature yielded 35 abstracts from 1993 to 2016. To address the research question specifically, the yield was further refined to include only those articles that met the inclusion criteria. We selected twenty-one articles, 15 opinion-based and six research-based. These articles were then analyzed to determine whether the intervention strategies discussed were MIC, MES, EXO, MAC or CHR strategies, or some combination thereof. Interrater reliability was established by having both authors independently reviewing the articles for selection and thematic analysis [30]. The authors then applied the socio-ecological framework to classify MIC, MES, EXO, MAC and CHR interventions and found agreement 90 per cent of the time.

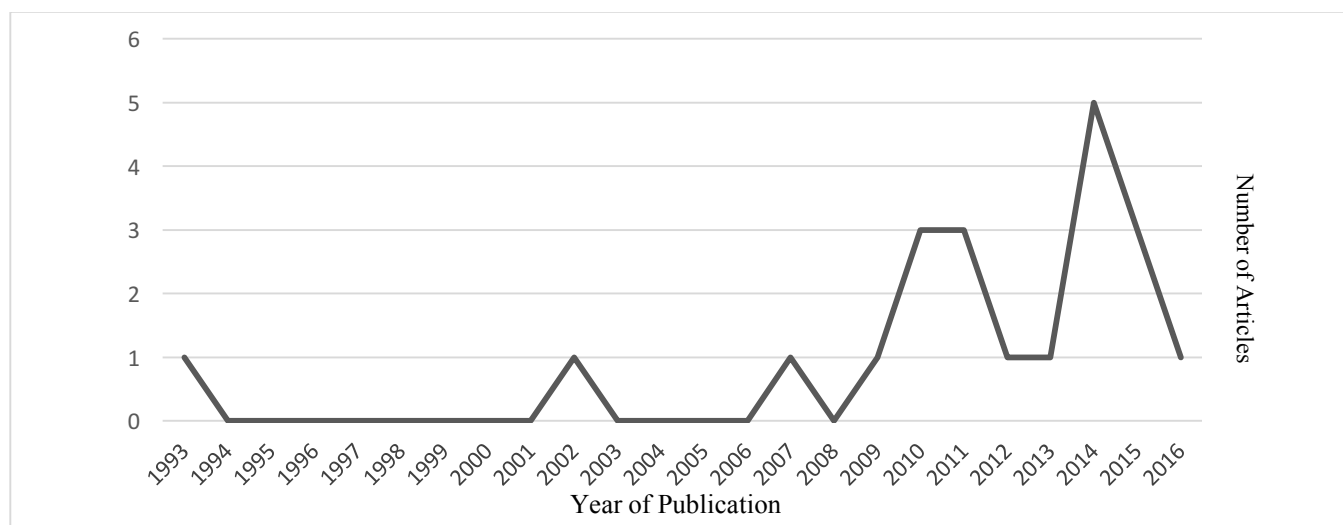
## Results

A shift in the number of publications over the past several years may signal an increase in awareness of food security among social workers or that food insecurity is growing (Fig. 1). Sixteen

articles were published in the U.S., two from Israel, and one each from Australia, Brazil, Canada, and New Zealand. Thus, mainly western social and political experiences are represented in this review. Forty-four social work interventions were identified in total (Table 1). Most articles included EXO and MAC interventions, 10 addressed MIC; six addressed MES; 14 addressed EXO; 19 addressed MAC; and three addressed CHR (Table 2).

*Microsystems*

MIC interventions include: conducting mental health assessments [31,32]; implementing family-based food assessments [32-36]; helping with meal plans and food budgets [37]; developing and distributing recipe books [31]; linking clients to services and programs [34,36,37]; assisting in filling out forms [33,36]; arranging transportation [33]; educating on nutrition and health [9,38] and empowering clients [9,32,37,39,40].



**Figure 1:** Number of articles published on food security and social work over the last 24 years.

**Table 1:** Typology matrix for mapping food-security intervention effort

System	Social Work Focus for Intervention
MIC	<ul style="list-style-type: none"> <li>• Mental health assessment</li> <li>• Family-based food assessments</li> <li>• Meal planning and budgeting</li> <li>• Developing and distributing recipe books</li> <li>• Linking clients to services and programs</li> <li>• Assistance in filling out forms</li> <li>• Educating on nutrition and health</li> <li>• Empowering efforts for self-reliance</li> <li>• Arranging transportation</li> </ul>
MES	<ul style="list-style-type: none"> <li>• Empowering relationships</li> <li>• Broadening social support</li> <li>• Community gardens and community kitchens</li> <li>• Food sharing networks</li> <li>• School-based food distribution programs</li> <li>• School-based lunch programs and peer support</li> </ul>

EXO	<ul style="list-style-type: none"> <li>• Enhance opportunities and reduce barriers to CFS</li> <li>• Food rescue and redistribution</li> <li>• Small-scale farm promotion (i.e., urban and vertical farms)</li> <li>• Facilitating relationships between community members and ethnically diverse groups</li> <li>• Creating new innovative programs</li> <li>• Coalitions between consumers and producers</li> <li>• Community food and needs assessment</li> <li>• Participatory action research (PAR)</li> <li>• Partner with local dieticians and horticulturalists</li> <li>• Enhance personal nutrition consciousness</li> <li>• Access to grocery stores and healthy food options</li> </ul>
MAC	<ul style="list-style-type: none"> <li>• Implement food security policies at all levels of government</li> <li>• National food security movements</li> <li>• Advocacy roles</li> <li>• Welfare reform</li> <li>• Living wage policy</li> <li>• Tax incentives for neighbourhood farms</li> <li>• Methods to reduce costs of healthy food</li> <li>• International and feminist social work</li> <li>• Sustainable agriculture and food systems</li> <li>• Human rights and social justice</li> <li>• Commodification of food in a culture of convenience</li> <li>• Awareness of the commoditization and marketing of low-nutrient food</li> <li>• Gender and cultural influences</li> <li>• Food security and nutrition embedded in social work education</li> <li>• Collaborate with other health care professionals (i.e., dieticians)</li> <li>• Bridging the work done by governments, NGOs, and institutions</li> </ul>
CHR	<ul style="list-style-type: none"> <li>• Investing in current nutrition programs for the future</li> <li>• Re-grounding family food practices with healthy habits</li> </ul>

**Table 2:** Final Articles Included in Critical Analysis

Authors and Date	Title	Intervention
Lombe, Nebbitt, Sinha, and Reynolds (2016)	Examining effects of food insecurity and food choices on health outcomes in households in poverty	MIC, EXO, MAC
Kaiser and Hermsen (2015)	Food acquisition strategies, food security, and health status among families with children using food pantries	MIC, EXO
Kaiser, Himmelheber, Miller, and Hayward (2015)	Cultivators of change: Food justice in social work education	MIC, MES, EXO, MAC
Kiehne and Mendoza (2015)	Migrant and seasonal farmworker food insecurity: Prevalence, impact, risk factors, and coping strategies	MES, EXO, MAC

Deepak (2014)	A postcolonial feminist social work perspective on global food insecurity	
Hirai (2014)	Food security and sustainability	MAC
Himmelheber (2014)	Examining the underlying values of food security programming: Implications for the social work profession	MIC, MES, EXO
Libal, Tomczak, Spath, and Harding (2014)	Hunger in a "land of plenty": A renewed call for social work action	EXO, MAC
Martinez and Kawam (2014)	A call to action for social workers: food insecurity and child health	MIC, MES, EXO, MAC, CHR
Besthorn (2013)	Vertical farming: social work and sustainable urban agriculture in an age of global food crises	EXO, MAC
Lessa and Rocha (2012)	Regrounding in infertile soil: Food insecurity in the lives of new immigrant women	EXO, MAC, CHR
Apaitia-Vague (2011)	Social work and food: A discussion	MIC, MES, EXO, MAC
Conway and Lassiter (2011)	Opportunity knocks: The intersection of community social work and food justice praxis	EXO, MAC
Kaiser (2011)	Food security: An ecological-social analysis to promote social development	MES, EXO, MAC
Juby and Meyer (2010)	Child nutrition policies and recommendations	MIC, MAC, CHR
Shor (2010a)	Interdisciplinary collaboration between social workers and dieticians in nutrition education programs for children-at-risk	EXO
Shor (2010b)	Children-at-risk from poor nutrition: Advancing the approach and practice of students of social work	MIC, MAC
Phillips (2009)	Food security and women's health: A feminist perspective for international social work	EXO, MAC
Jacobson (2007)	Food matters: Community food assessments as a tool for change	EXO, MAC
Biggerstaff, Morris, and Nichols-Casebolt (2002)	Living on the edge: An examination of people attending food pantries and soup kitchens	MIC, MES, EXO, MAC
Whitaker (1993)	A charity/justice partnership for U.S. food security	EXO, MAC

### *Mesosystems*

MES interventions include: empowering relationships [32]; broadening social support [8,32,41]; establishing community kitchens [8,37,40] and community gardens [8,37]; supporting food banks and soup kitchens [9,33,36,37,40]; promoting food sharing networks [31]; coordinating school-based food distribution programs [40]; and installing lunch programs and peer support at school [36,40].

### *Exosystems*

EXO interventions include ways to enhance opportunity and reduce barriers to community food security (CFS) [8,9,31-33,36-38,40-45].

Specific interventions include: small-scale farm promotion [8] including neighbourhood vertical farms [45] and urban farms [9]; facilitating relationships between community members and ethnically-diverse groups [31,45,47]; creating new, innovative programs [36,44]; building coalitions between producers and consumers [8,45,47] promoting food rescue and redistribution [37], conducting community food and needs assessments [40,41,45] and participatory action research (PAR) [40]; becoming more food conscious themselves [32,41], collaborating with other food professionals such as dieticians [46] and horticulturalists [9]; and securing access to

grocery stores and healthy food options  
[43-45]

### *Macrosystems*

MAC interventions include the development of food security policies [9,34,36,38-40,45,47,48]; national food security movements [49]; advocacy roles [33,38]; welfare reform [33]; living wage policy [40]; tax incentives for neighbourhood farms [45]; methods to supplement cost of healthy food [34]; international and feminist social work [39,42]; sustainable agriculture and food systems [8,39,43,45,47]; human rights [31,47,48]; social justice [48,49]; awareness of how low-nutrient food products are commoditized and marketed [43]; gender and cultural influences [31,38,39,42,44]; food security and nutrition embedded in social work education [9,35,41,48]; and bridging the work done by governments, NGOs, and institutions (i.e., places of worship and schools) [31].

### *Chronosystems: Interventions over time*

CHR interventions include: investing in sustainable food security programs [34,36] and re-grounding family food practices to help shape lifelong eating habits [44].

## **Discussion**

Twenty-one articles discussing food security and the role of social worker were analyzed for this review. Our findings suggest that social work, with its broad-based scope and focus on helping, is ideally suited for the promotion of food security. The socio-ecological model assists in contextualizing the different systems in which social workers can provide interventions. Gustafsson and Draper (2009) understood the importance of context in deciding what to eat:

*Our food choices are not the result of irrational prejudices and of ignorance. But structured by a series of influences many of which are social in nature. We should consider people's lives and behaviors in the social contexts in which they are embedded and*

*which influence them* [50].

MIC interventions focused on the inclusion of mental health and food assessments, provision of resources, and empowerment strategies. Findings suggest that social workers should not be hesitant to ask questions even when there are no obvious signs of deficiency [34] and determine whether food insecurity is the result of neglect or a lack of resources [32]. Factors that could lead to neglect, such as depression and social isolation, correlated with mothers who were food insecure [51]. Such situations should be approached with sensitivity, as parents may feel uneasy, thinking that food insecurity could be considered a sign of neglect [33]. Meal planning can be an effective strategy to reduce stress, moreover, a lack of family mealtime could indicate food insecurity [22]. Social workers should ask about family meals, and consider using assessment tools as part of the overall treatment plan. For example, the Socio-Economic Empowerment Assessment (SEEA), an ecological multi-systems perspective, can situate the family financial situation within their psychological, cultural, and life-experience contexts [51]. Another helpful tool is the Household Food Security Survey Model (HFSSM) that can be used with adults and a shorter version with children to determine the level of HFI [52]. Self-reliance is considered a more ethical and sustainable solution than emergency food provisions, and social workers can help guide their clients in practical ways of attaining this goal [37]. However, social workers need to be mindful of the structural barriers that continually challenge self-reliance, and that social workers can help by strengthening communities and advocating for government resources to enhance MIC and MES intervention. Emergency food services are vital for individuals, families, and communities when facing sudden economic or environmental hardship but should never be looked upon as long term solutions to systemic

problems.

MES interventions focused on the importance of healthy relationships and the availability of social food network's (i.e., community gardens, food exchanges, emergency provisions). Social networks can be a source of food (i.e., meal sharing) [32]. Low social cohesion, reduced trust between neighbours, and less interaction and support were linked to food insecurity [54]. Social workers can help enable their clients to create strong bonds between friends, neighbours, or co-workers. Schools can help social workers to stay informed [35], as a social worker may be referred to a student with behavioral challenges and find out they have not eaten [31]. In addition, by growing a garden at school, students can feel more connected to their food source [9].

EXO interventions revolved around building strong, self-sufficient communities with safe and accessible means of acquiring food. CFS is a situation in which "all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice" [55]. Social workers can help build CFS using their skills of advocacy and collaboration to encourage the availability and affordability of healthy food options. A lack of access to nutritious food has been found to increase the consumption of fast food [44,45]. Research has shown that in urban centers in Canada, some poorer neighbourhoods are referred to as "food swamps", characterized by high access to sources of minimally nutritious food coupled with low access to nutritionally dense food, an important consideration in policy and program planning [56].

MAC interventions emphasized human rights and social justice, and the establishment of food security policies on access, availability and marketing strategies. School-based lunch programs are instrumental in alleviating problems associated with food insecurity [34]. Canada has been criticized for being the only G8 country without a national food program [57].

Canada's neoliberal ideology may explain both the lack of school-lunch program and national food policy. In Brazil, social workers observed how their neoliberal government was ignoring food insecurity in parts of the country and successfully advocated for a Food Security and Nutritional Policy [47]. Michael McCain, president and CEO of Maple Leaf Food, is hoping the new federal government will develop a Canadian food strategy and states "the challenge of food insecurity is one of the great issues of our time" [58]. Nutrition professor Valerie Tarasuk also considers government intervention as the solution to food insecurity but claims "What's hard is breaking the sound barrier with governments" [59]. Government supported food policies centered around human rights and social justice could address the inequality and inequity of food distribution.

Concerns regarding how gender and ethnicity impact food security were also noted. Research shows that women are left with the burden of feeding older family members [42] and the first to go hungry in times of food insecurity [31,42]. New immigrant women in Toronto reported racism, discrimination, and bullying as impacting their food choices [44]. In addition, the mothers stated how their children felt pressure from classmates to eat western food (i.e., fast food) and they no longer felt safe to eat food from their culture [44]. As recommended by Apaitia-Vague (2011) [31], Lessa & Rocha (2013) [44], and Lombe et al. (2016) [38] social workers should be mindful of different racial and ethnic needs, and the challenges in locating culturally appropriate food.

Finally, schools of social work should investigate ways in which food security can be included in the curriculum. The American Council on Social Work Education (ACSW) suggests four ways food security can be added to the curriculum: 1) teach the importance of nutrition and the right to food security; 2) advocate for vulnerable groups that experience discrimination against their right to nutritious food; 3) intervene



in ways that enhance food security in vulnerable communities, like community gardens; and 4) build coalitions with key stakeholders locally, nationally, and internationally [60]. Social workers may fail to ask questions about food simply because they do not consider it part of an assessment. Educators of social work educators should consider including information on the importance of food security in their coursework. Research has shown that health professionals with a certain level of nutritional competency are better equipped to help children at risk of malnutrition [61].

CHR interventions consider the cyclical nature of food insecurity. Food insecurity can promote a cycle of poverty [43] which can last for multiple generations. Women who experienced poverty and food insecurity in childhood often grow up with unhealthy relationship with food leading to obesity, which is further complicated by stresses such lone parenting, social isolation, and chronic disease [62]. Adverse childhood experiences of the mother were positively associated with current food insecurity [51]. Exposure to adversity in childhood, like food insecurity, can lead to depression and emotional problems that directly affect education and employment outcomes [51]. Juby and Meyer (2010) state “a country that cares about its future generations will legislate adequate nutrition for all children” [34].

### *Limitations*

There are several limitations to this critical review. First, no external peer-reviews were conducted, which may call into question the interrater reliability [30]. Second, only five of the articles included results from a quantitative or qualitative research design. Sixteen of the articles were opinion based, written for and by social workers who favour the inclusion of food security in social work. The inclusion of disconfirming evidence enhances research validity [30] although we did not find any articles that disputed our findings. Third, most articles were

from the U.S., as such, some of the interventions prescribed may not be effective in other countries. For example, urban farms, community gardens and vertical farming that rely on warm weather may not be an effective food security strategies in places with a shorter growing season, like northern Canada. Fourth, we used the terms food security, food insecurity, household food security, HFI, food justice and nutrition interchangeably throughout our analysis, and this may not have been the intention of the original authors.

### **Conclusion**

In 1993, William Whitaker issued a call to action for social workers to include food security as part of their practice [49]. Whitaker recognized that social work had the capacity both in theory and practice to develop multi-level interventions to reduce food insecurity and the problems that result. Since that time there has been a slow but encouraging answer to that call seen especially in CFS and advancing food policy. More comprehensive research should focus on MIC, MES, and CHR assessment and intervention, detailing the ways in which front-line social workers can be helpful to families with children and/or youth facing food insecurity. Finally, the inclusion of food security in social work education can encourage new social workers to become food conscious themselves thus incorporating food security strategies into their personal and professional aspirations.

### **Significance and Application**

This review has significant implications for practice and social work education. Front-line social workers whose clients are families with children and/or youth should conduct food and mental health assessments using measurement tools, like the Socio-Economic Empowerment Assessment and The Household Food Security Survey Model, to identify patterns of food insecurity in the home. Social workers should increase their knowledge of food security and be willing to discuss menu planning and meal

preparation with their clients. Further support in filling out forms, accessing the resources and transportation to purchase food may also be required.

Social workers should be knowledgeable of the risk factors of food insecurity. People who lack both economic and social resources are particularly vulnerable. Social workers can help clients enhance their food security by helping to create relationships within the community and secure income sources. Community gardens and food sharing networks should be promoted over the use of food banks. Collaborating with schools can help identify and provide support to children who are food insecure. Social workers should become involved in the development of school-based meal programs and food distribution systems, research, community needs assessments, creating innovative programs and evaluation strategies, linking with dietitians and horticulturalists that can offer professional support in their initiatives, and developing a personal food consciousness.

Social workers should lend their voice to groups that support food security policies like school-lunch or national food programs. Food security is foremost a human right that needs to be considered in all areas of practice. In addition, social workers should familiarize themselves with the ways gender and ethnicity can impact issues of food security. Finally, current and future social workers should come to understand the importance of food security in our developmental trajectory, especially that of children. The potential benefits to both our profession and society are immeasurable.

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