UNIVERSITY OF TORONTO AT SCARBOROUGH

Food Security in East Scarborough: Recommendations on Potential Initiatives to Promote Community Food Security

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Introduction

The Toronto Community Foundation (TCF, 2009) recently released a report about Toronto's Vital Signs, which evaluates quality of life in the city based on characteristics such as income, housing, health and wellness. The report provides insight into positive and negative aspects of living in Toronto. According to the report, the average cost of nutritious food for a family of four in the last two years has risen by 9.4 percent (TCF, 2009, p.4). In the *Who's Hungry Report: Profile of Hunger in the GTA*, Daily Bread Food Bank (2009) states that the total number of client visits to food banks in the GTA, from April 2008 to March 2009, was 1,030,568. This amounts to another increase for the ninth straight year, and a nine percent increase from the previous year (Daily Bread Food Bank, 2009).

Given these statistics it can be argued that food security is now a problem in Toronto neighbourhoods. This research specifically focuses on improving food security through reducing dependency on food banks by way of initiatives, which can be put into practice in Toronto's disadvantaged neighbourhoods. Throughout the research process, food security identifies with different scales of intervention and prevention. However, this report focuses on the Ontario Public Health Association's perspective on food security and food insecurity, which states that individuals have food security when they have access to enough food that is safe, enjoyable to eat, culturally appropriate, and healthy (in Ontario Healthy Communities Coalition, 1997, p.2). Individuals must also be able to get this food in ways that do not compromise their dignity or the dignity of their family (Ontario Healthy Communities Coalition, 1997, p.2). This definition reflects the scale of research this report is most interested in as it involves local food availability, food access and food use, which are the three pillars of food security according to the World Health Organization (WHO, 2009). In sum the scope of this report is primarily based on disadvantaged neighbourhoods and the experiences of their residents with regards to food insecurity.

Background on Toronto's Priority Neighbourhoods

The United Way of Greater Toronto conducted research on the growing socio-spatial polarisation within the GTA. They produced a report called *Strong Neighbourhoods: A Call To Action* in 2005, which recognized nine priority neighbourhoods in the GTA (United Way of Greater Toronto, 2005). These are considered a priority because they face a number of challenges such as lack of sufficient services, high unemployment, relative health, education levels and housing costs as a proportion of income (United Way of Greater Toronto, 2005). After these nine neighbourhoods were recognized, four more neighbourhoods were added in 2007 (Toronto City Summit Alliance, 2007). For service provision the task force measured the proximity of services and facilities to residents that required them most, for example, the distance of new immigrants to local immigrant settlement services was measured and was considered insufficient when the average population in need was more than twenty percent (United Way of Greater Toronto, 2005, p.19).

Of the thirteen recognized priority neighbourhoods in the GTA, six of them are located in the old city of Scarborough (See Map 1). Three particular neighbourhoods in East Scarborough were selected by Lori Metcalfe, Coordinator of Food and Knowledge Project for West Hill Community Services, in order to examine their levels of food security. One of the neighbourhoods, Scarborough Village, is bordered by Scarborough Golf Club Road to the east, Bellamy Road to the west, the Canadian National Railway (CNR) line to the north, and Lake Ontario to the south. The priority neighbourhood of Eglinton East is bounded by Bellamy Road to the east, Midland Avenue to the west, Stansbury Crescent, Citadel Drive and West Highland Creek to the north, and Eglinton Avenue, Brimley Road and CNR line to the south. Finally, the priority neighbourhood of Kingston-Galloway/Orton Park is located south of Morningside Park, west of Manse Road and Morningside Avenue, and north of the CNR tracks. Continuing, given the number of low income residents in these areas access to affordable, nutritious foods is very difficult, leaving many residents vulnerable to food insecurity (Agriculture and Agri-Food Canada, 2008).

Community Food Security

As mentioned previously, food security is the main goal of this report. However, the extent of the research is limited to community food security as defined by Kameshwari Pothukuchi. According to this author there are three characteristics of community food security. Firstly community food security shares goals with progressive planning regarding equity, health and sustainability (Pothukuchi, 2004, p. 357). Second, it is a holistic approach that connects people and natural resources in their environment (Pothukuchi, 2004, p. 357). Lastly, it holds that communities have the ability to solve their food insecurity problems (Pothukuchi, 2004, p. 357). Hamm and Bellows (2003) effectively define community food security as "a situation in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes self reliance and social justice" (p.37).

Also, Ryerson University's Centre for Studies in Food Security identifies five essential components of food security: availability, accessibility, adequacy, acceptability and agency. Availability means that all individuals in a community should have constant access to adequate amounts of food (Ryerson University, 2009). Accessibility means that everyone in the community should have continuous physical and economic access to food (Ryerson University, 2009). Food security is adequate when healthy food is produced in a sustainable environment (Ryerson University, 2009). In addition food has to be produced and acquired in acceptable ways that promote human dignity or human rights as well as cultural acceptance (Ryerson University, 2009). Finally, agency in food security must also be supported using a comprehensive approach through policies and processes (Ryerson University, 2009).

Continuing, since community members and community organisations can address food security issues in different ways, their solutions are likely to be more applicable to their environment than federal and provincial government initiatives. Community-led initiatives are especially useful for priority neighbourhoods because they tend to take into consideration the ethnic and cultural diversity of the area, which could lead to unique interventions and ideas for coping with food insecurity. The initiatives in the documentation section of this report

demonstrate the importance of community involvement in food security. Each initiative included in this report has been evaluated according to its feasibility, ease of implementation, challenges, comprehensiveness, holistic nature and educational components. It is the opinion of this report that initiatives led by community residents are superior to those run without community involvement for the simple reason that community members are more in tune with the needs of their neighbourhood in order to ensure that food security is attained.

Community food security initiatives are the most suitable models to improve food insecurity in priority neighbourhoods. Residents can become more active and engaged with local issues that affect their lives. Consulting and involving residents with food insecurity planning through community-led initiatives creates community and builds food security capacity. Therefore the goal of this research is to suggest food security models that decrease reliance on food banks and which address the needs of all community members.

Research Methods

Information for this report was gathered using a variety of research methods. First of all, a preliminary list of possible food security initiatives were found by doing an advanced Internet search for existing programs that have already been implemented in cities throughout North America. This list was narrowed down to eleven possible initiatives and grouped into six categories. From there, each group member selected the initiatives that they were interested in doing further research on – some intricate programs required two or more individuals to share the workload. Having a list of possible initiatives in mind, we decided it was essential to interview individuals who had firsthand knowledge about the challenges associated with implementing certain projects. Interview candidates were found using the snowball method, as will be explained.

Members of the group attended the *Cities Alive! Emerging Trends Series: Sustainable Urban Agriculture* conference on Tuesday, October 20, 2009 at the Sheraton Centre (123 Queen Street West, Toronto) in order to gather more information on innovative projects in the field of

green infrastructure and urban agriculture. A presentation by FoodShare's executive director, Debbie Field, on the organisation's green roof for food production captured the attention of all group members who approached Ms. Field after her lecture to learn more. Ms. Field graciously helped us get into contact with Ayal Dinner, a FoodShare Community Food Animator, with whom members of the group arranged a meeting. Mr. Dinner took these individuals on a tour of the FoodShare office located at 90 Croatia Street, Toronto, before sitting down for an interview where they discussed FoodShare's Good Food Boxes, community markets, community kitchens and community gardens.

Information about the Living Food Box program was collected via an interview with a FoodShare food activist who runs the project and initiated a school garden at Jackman Avenue Public School in Toronto, Zora Ignjatovic. The group first met Ms. Ignjatovic at a conference on urban agriculture, and later scheduled an interview with her. All of the group members contributed to the interview process by developing questions beforehand. Unfortunately, due to illness within the group, only one group member was able to interview Ms. Ignjatovic, assisted by a friend. Notes were taken on a laptop and later transcribed and edited by the interviewer and sent to the rest of the group. The interview took place in a public place and lasted about one hour and twenty minutes. Ms. Ignjatovic was very enthusiastic and was able to answer all of the interview questions.

An interview with University of Toronto Professor Michael Bunce was acquired with the help of our course instructor Professor Susannah Bunce. Professor M. Bunce is a well-informed member of the East Scarborough community and we felt his contributions would be an asset to our research given his knowledge on existing local food security initiatives from the perspective of the local producer.

FoodShare's learning centre toolbox also provided invaluable information on everything from the Good Food Box program, rooftop gardening, community kitchens, to community gardens. For example, getting started manuals for food security initiatives, particularly *How does our garden grow? A guide to community garden success* as well as *The Good Food Box guide: How to start a program in your community*, proved to be especially useful. The

community garden manual was lent to us in hardcopy by Professor Michael Bunce, while the latter manual was available for download on the website.

Other useful material included case studies and academic journal articles on popular and well-established food security programs that had been researched and written about by scholars. For newer initiatives, advanced Internet searches and promotional pamphlets relating to the program were the primary source of information. The film *Seeds in the City: The Greening of Havana* also provided exceptional insight into how the city of Havana, Cuba was able to join the green revolution in the face of widespread food insecurity in the 1990s by turning to urban agriculture. Finally, policy documents were helpful for addressing what the city, province, and other organisations like Toronto Community Housing stand on the issue of food insecurity and what they were doing to combat the problem.

Challenges to the Research Process

The group ran into a number of hurdles that needed to be overcome throughout the course of this research project. The lack of overall policies and initiatives at the national and provincial scale made academic policy research difficult. Food security was placed in a greater framework rather than concrete initiatives such as urban agricultural production or food affordability goals. Due to the fact that many of the initiatives discussed in this report are current and ongoing, many lacked sufficient academic research or case studies based on them. While issues such as urban agriculture and urban gardening have been looked at in depth academically, other social aspects such as Food Skills for Families or FoodShare's Baby Basics Workshop lack adequate support.

In addition, on a more organisational level, there were challenges in conducting interviews and having people respond to us. As well, the time constraints of the course put pressure on the group's ability to meet as a team at all times, however each group member made every effort to attend as many meetings as possible. As well, delegation was required and much work was individualised due to illness (specifically the H1N1 influenza virus), other

academic responsibilities, and other externalities such as employment or family responsibilities. Despite these internal group challenges, our meetings were always productive and enjoyable.

Food Security Policy Literature Review

In our review of food policy, we found that there is no official policy adopted at either the federal or provincial levels of government in Canada. The federal government has a framework that supports food security by multilateral agreements (Agriculture and Agri-Food Canada, 2006). For instance, at the 1996 World Food Summit, Canada agreed "to reduce the number of undernourished people by half no later than 2015" (Agriculture and Agri-Food Canada, p. 4). In the report prepared by Agriculture and Agri-Food Canada only initiatives are stated within the scope of further research on food insecurity, food safety, reduction of poverty, and updated health standards (Agriculture and Agri-Food Canada, 2006). Unfortunately to date there has not been a comprehensive domestic food policy developed by either the province of Ontario or the federal government.

As a result of the lack of leadership on food security policy from both the provincial and federal governments, the Toronto Food Policy Council (TFPC) was developed in 1991 (TFPC, n.d). The City of Toronto has been successful in the development of policies and programs in support of food security. The TFPC aims to promote food security policies and programs that enable residents to access healthy and nutritious food (TFPC, n.d). They act as an advisory board on any issue pertaining to food security. One of its accomplishments was the creation of Toronto's Food Charter (Please refer to Appendix A). The Food charter supports the creation of urban agriculture initiatives, such as the creation of community gardens, while also setting forward a mission which declares that all citizens have the right to access affordable and nutritious food regardless of income (City of Toronto, 2001). They are working towards policy implementation related to food issues, with hope of creating awareness in order to obtain future support from the senior levels of government.

TFPC works closely with communities and advocacy groups that share the concern of

addressing issues related to food insecurity. One of TFPC's most successful initiatives was the creation for the Good Food Box program in partnership with FoodShare, a non-profit community organisation, in 1992. Through our research we also found that in 2002, Food Share built its own list of policy recommendations in hopes of obtaining greater food security by 2020. Their list includes a total of twenty-eight recommendations made to the federal government of Canada. FoodShare's recommendations are mainly targeted at the government whose responsibility it is to ensure that polices are put forward to promote sustainable food systems that will counter food insecurity (FoodShare, n.d.vi, no page number). For example, one of the recommendations makes the connection between food and income, encouraging the federal government to establish minimum income standards in forms of a guaranteed annual income that enables citizens to have the necessary income to purchase healthy nutritious food (FoodShare, n.d.vi, no page number). FoodShare also puts forward recommendations that connect "Food and Community-Based Food Programs" advocating the need of federal funding for non-profit food agencies in order to enhance the success of grassroots food security projects.

To summarise, it seems clear that where national and provincial food security policies are lacking, the municipal level ends up picking up the slack. This is an unsustainable practice that needs to be dealt with soon. It is undeniable that well-organised food security policy is needed and should work together to promote food security at all three scales.

Potential Food Security Initiatives

Out of the vast number of possible food security initiatives that are currently exist, this report choose a variety of topics from across the spectrum. Some are considered relatively easy to initiate while others take a strong committee and extensive social and economic capital. The eleven initiatives that were researched over the last three months were categorised into three distinct groups. Many of the initiatives fit into more than one of the categories; however, for organisational purposes they have been slotted into specific groups at the discretion of the

authors. The categories are education, urban agriculture and food accessibility. The education category consists of Food Skills for Families, baby food workshops, healthy food in schools, the Living Food Box, and FoodShare's Good Food Boxes. The urban agriculture section consists of community gardens, balcony gardening, and roof top gardening. Lastly, the food accessibility category consists of community markets, community kitchens and the Quest Outreach Program.

I. Education

When it comes to food security, education on healthy eating and teaching people how to access nutritious foods are important.

1. Food Skills for Families

Teaching parents how to prepare wholesome meals for their families – on a budget – is just one way to encourage healthy eating in food insecure communities. As well, cooking classes for entire families allows both parents and children to take part in hands on cooking lessons together. Food Skills for Families is an initiative where families in any neighbourhood can develop healthier cooking skills and habits through interactive workshops. Many individuals might agree that providing healthy and delicious foods for their family is not always easy (British Columbia's Healthy Living Alliance, n.d.). Furthermore, another challenge is that families or individuals might have insufficient earnings or may lack simple information about how to begin eating and cooking healthy meals (British Columbia's Healthy Living Alliance, 2009). With these obstacles it creates the need to include families in food security planning for neighbourhoods. Food Skills for Families is beneficial for priority neighbourhoods since it is developed for cooking groups that aid Aboriginal, Punjabi, new immigrant and low-income communities (Fresh Choice Kitchens, 2009). Therefore this initiative can successfully incorporate ethnic and cultural diversity that can be a part of the population in any given neighbourhoods.

In compliance with Fresh Choice Kitchens, Food Skills for Families searches for cooking groups to register for six free cooking lessons that operate out of a local kitchen in the

community. According to the Fresh Choice Kitchens website (2009), “the six hands-on kitchen sessions cover healthy food choices, safe food handling and storage, meal planning, healthy snacks, nutrition education and a shopping tour”. To implement this initiative, the neighbourhood will only need to provide a fully equipped kitchen, which needs to be available for the six cooking sessions. For that reason, with the current use of community kitchens in disadvantaged neighbourhoods, Food Skills for Families can be implemented. Other required components for this initiative are the support of a trained facilitator with cooking and nutrition expertise, the food to be cooked and the workbooks reflecting recipes for specific groups (Fresh Choice Kitchens, 2009). One great way to ensure a constant presence of facilitators is through developing a network with local cooking schools or nearby nutritionists. As well when residents become participants then it becomes possible for them to also contribute to the workbooks. Lastly, Food Skills for Families is also culturally inclusive as it provides residents with the opportunity to contribute their own cultural recipes to the workbook and to the rest of the group.

Without a doubt implementing and delivering this initiative requires financial support. However, the various communities in British Columbia who are a part of Food Skills for Families are lucky enough to participate for free. This initiative is financially supported through the Canadian Diabetes Association by the British Columbia Healthy Living Alliance (Fresh Choice Kitchens, 2009). Unfortunately, the province of Ontario does not have such an emphasis on the need to fight community-wide food insecurity in its policies. The province needs to put food security on the agenda, then, hopefully, the Canadian Diabetes Association may provide financing for this very useful initiative. In the meantime, temporary funding can be granted by local non-governmental organisations.

Food Skills for Families is highly recommended for priority neighbourhoods because of the success this initiative has already had throughout different communities in British Columbia. As stated by Fresh Choice Kitchens (2009), this initiative has now undergone three phases since its implementation in 2008. Given the popular delivery of this program in British Columbia, it provides an insight into how other communities can create and improve their own

food security. Food Skills for Families does not only provide an educational component to teach families about healthy eating and cooking, but it encourages residents to become more involved in community development. Through these six free cooking sessions, families help to build a neighbourhood as a result of learning different cultural dishes. Furthermore this type of initiative provides the support required to ensure residents can have access to healthy educational recipes, which, in the long run, contributes to improving food security. Overall, Food Skills for Families is beneficial because it emphasizes food security, wholesome eating, and healthy living.

Useful/Relevant Sources

For more information about previous and current communities using Food Skills for Families, ways for implementing Food Skills for Families please visit the following two websites:
British Columbia's Healthy Living Alliance - http://www.bchealthyliving.ca/node/103
Fresh Choice Kitchens - http://www.communitykitchens.ca/main/?en&FSFF

2. FoodShare's Baby Food Basics Workshops

Food workshops are another beneficial way to educate a neighbourhood on healthy eating and living. More specifically, FoodShare's Baby Food Basics Workshops are helpful because it allows new parents to become aware of healthy baby eating habits and educates them about baby nutrition. FoodShare expresses that between a parent and a child there is a division of duties, meaning the parent is responsible for what the child eats and the child is responsible for how much she or he eats (FoodShare, n.d.iii). Through these workshops, the parent completes his or her task when the provisions has been made and given to their child properly (FoodShare, n.d.iii). However, young kids are always aware of the feelings of their guardians and can perceive the pressure and uneasiness, which can influence their personal outlook about food consumption (FoodShare, n.d.iii). Consequently a relationship between a parent and a child can be positively developed when parents know how to choose and prepare appropriate food based on awareness of the types of food and nutrition requirements children need and are capable of digesting at different stages in their development (FoodShare, n.d.iii). With FoodShare's Baby Food Basics Workshops new parents are therefore able to make their

own baby food that matches their child's preferences while also ensuring that the food is healthy.

According to FoodShare (n.d.ii), producing personal baby food is simple, inexpensive and more beneficial than store-bought baby food because the parent is aware of the content of the baby food. Through this workshop, neighbourhoods or communities invite FoodShare's trained peer leaders to give the baby food workshop training (FoodShare, n.d.ii). As claimed by FoodShare (n.d.ii), these specific workshops will teach parents a variety of useful tips and skills. For example, the workshops will teach a new parent how to use cooking utensils to produce baby provisions (FoodShare, n.d.ii). It informs parents about when they should begin feeding their baby solid foods (FoodShare, n.d.ii). It advises parents on how to adapt the food their family eats to meet the dietary needs of the baby, for example my serving the baby mashed green peas or carrots while the rest of the family enjoys it steamed (FoodShare, n.d.ii). Lastly, these workshops teach parents how to properly store and handle baby food (FoodShare, n.d.ii).

FoodShare's Baby Food Basics Workshops address the needs of new parents in a community. This type of workshop is great to have in disadvantaged neighbourhoods since cooking classes provide hands on experience while at the same time educating residents about a particular lesson on food. One striking challenge of this program is after new parents gain the knowledge to make their own personal supply of baby food, purchasing the actual food, especially fresh vegetables, to make their own supply is an obstacle. However, despite this challenge, new parents can purchase supplies for baby food at community markets and they can grow their own vegetables in their balcony container gardens, both of which are also mentioned in this report. To implement this type of initiative in priority neighbourhoods will therefore entail the need for an actual physical location to host these workshops. In terms of location, a good idea would be to look into getting permission to local community kitchens and/or local community centres.

Useful/Relevant Sources

For additional information on Baby Food Basics Workshops, please see Appendix B.
FoodShare – Healthy Babies Eat Home Cooked Food - http://www.foodshare.net/train03.htm
FoodShare – Make Your Own Baby Food - http://www.foodshare.net/toolbox_baby01.htm

3. Healthy Food in Schools: "Shape it up"

The need for healthy and nutritious food is just one aspect of food security. Students are often exposed to unhealthy food choices as a result of the foods that are available and served to them at school. Health Canada in relation with the Public Health Agency of Canada noted these troublesome findings,

> The proportion of obese children has nearly tripled in the last 25 years. The increases were seen for both boys and girls and across all age groups except pre-schoolers. As well, more than half of the Canadian children and youth are not active enough for optimal growth and development" (Health Canada, 2006, p.1).

In addition, because more children today are facing obesity, there are more health risks affecting their growth. Health Canada identifies an individual as overweight when their body mass index exceeds 25, and obese when their body mass index exceeds 30 (Health Canada, 2006). The health risks of obesity include hypertension, coronary heart disease, type II diabetes, stroke, gallbladder disease, osteoarthritis, sleep apnea, some types of cancer, and mental health problems like depression (Health Canada, 2006). The nutritional value of the food that children have access to in schools has been questioned as a contributing factor to obesity, as has the quality of the nutritional education children are given in their schools and communities. School staff have criticized easy access to vending machines and lack of funding for school food programs, since they believe the availability of junk food increases students' calorie intake and encourages unhealthy eating habits (Goh et al., 2009). As such, it is important that schools provide access to nutritious food or education about healthy eating in order to prevent unhealthy food choices and childhood obesity.

As health becomes a concern in schools, a community-led initiative which can improve this situation is "Shape It Up", an American program that attempts to educate children about healthy food choices and nutrition. The initiative begins as a sixty minute interactive workshop incorporating six segments that relate to each learning objective (see Appendix C). The goals of

the program include promoting healthy eating and exercise. The workshop is presented to groups of approximately one hundred students at a time in school auditoriums and cafeterias (Jan et al., 2009). This program involves a lot of visual aids to gain audience attention. For instance, a presenter can use a pipe coated with vegetable shortening to demonstrate the effects of saturated fat on arteries (Jan et al., 2009). Although the original program used pharmacy graduate students as presenters, it can still be used as a model for local volunteers after completing a training session. For example, University of Toronto students could be convinced to participate in the program. This may prove to be an obstacle in the program's implementation, since residents will have to be trained, but if parents and teachers are educated they can encourage healthy food choices in their local schools. This program was first delivered to 89,736 students in 257 New Jersey elementary schools (Jan et al., 2009). However, it should be noted that in New Jersey there was no monetary costs because of the community-level partnership between schools (Jan et al., 2009). After the workshops were over, students completed questionnaires to measure demographics and knowledge gained (Figure 1, Questionnaire). The program had positive results insofar as students surveyed after the program was completed displayed increased knowledge about nutrition and healthier eating habits (Jan et al., 2009), indicating that the program truly has positive educational benefits. The costs associated with employing such a project will depend on how broadly it is implemented, as well as the cost of materials and training for the program.

It is certainly an educational model that could improve the eating habits and overall health of children. It is holistic in the sense that it provides a “Shape It Up” booklet children can take home and share with their families. The booklet's design reflects the learning objectives for each workshop and includes a website link for parents or guardians to visit for further information (Jan et al., 2009, Appendix C & D). This is a holistic program because it educates parents and children about healthy eating inside and outside of school. Even if the “Shape It Up” program does not directly provide food for children and their families, it still builds knowledge about the importance of food security in priority neighbourhoods.

4. The Living Food Box Program

The Living Food Box program is an example of a food box program that provides materials which enable people to grow their own produce. It is a local initiative within the Greater Toronto Area that allows children to grow food in their classrooms, allowing them to learn how to grow their own food while also providing them with access to fresh, locally grown produce. The food boxes can be made using reusable materials like garbage containers, and can be self-watering if a pump is used to pump ground water into them (Interview, Zora Ignjatovic, November 13, 2009). This program is very affordable to implement, costing only $45 per box (Interview, Zora Ignjatovic, November 13, 2009). It can also provide diverse food options such as tropical produce which can be grown in the boxes (Interview, Zora Ignjatovic, November 13, 2009).

However, like many food security initiatives, it requires support from community residents in order to work. Many parents, teachers, and students who have participated in the initiative have enjoyed its benefits, with some teachers reporting that they feel it made their students calmer (Interview, Zora Ignjatovic, November 13, 2009). Although the boxes are inexpensive, support from schools, teachers, and parents may be necessary to encourage their use in schools. Additionally, the boxes would require some upkeep, as with other gardens. Zora Ignjatovic, who runs the Living Food Box program in Toronto, says that the food boxes are fun for children, and can help to build a sense of community among students (Interview, Zora Ignjatovic, November 13, 2009). This is consistent with the results of a recent review of the academic literature on school gardens, which found that students' pride in their gardens and schools increased after participating in school garden projects, and that school gardens promoted community-building and teamwork (Blair, 2009). School and youth gardening familiarises young gardeners with local sustainable food systems by allowing children to eat what they produce, learn how to compost, and connect with adult growers and market gardeners (Blair, 2009). In addition, the food boxes can also benefit adults, particularly seniors, recent immigrants, and people with illnesses or disabilities who are not able to participate in a conventional community gardens (Interview, Zora Ignjatovic, November 13, 2009), and as such

they could be used to address gaps in community food security that may currently be excluding people with different needs. It has been used successfully with hospital patients and seniors (Interview, Zora Ignjatovic, November 13, 2009), making it a very accessible option. Since the boxes come with educational materials, they can be used to teach children and adults about growing their own food as well as identifying edible plants (Interview, Zora Ignjatovic, November 13, 2009). Overall, the program appears to be a practical, low-cost option for increasing food security and encouraging healthy and varied diets in children and vulnerable populations.

5. FoodShare's Good Food Box

The Good Food Box is a program operated by FoodShare, a non-profit organization in Toronto. The program began in 1994, and aims "to improve access and affordability of fresh produce" (Biberstein & Daalderop, 2008, pg. 17). In Toronto, FoodShare delivers 4,000 boxes on a monthly basis (Scharf, n.d). Reports have shown that those who participate in the program have overcome previous food access barriers, and led them to have healthy diets (FoodShare,n.d.iv). The Good Food Box is similar to a community bulk buying model. Products are purchased in bulk from local farmers, or directly from the Ontario Food Terminal at a lower cost, and then packaged by the Good Food Box program volunteers, making it "a successful community-based and market-driven food distribution alternative" (Scharf, n.d). The Good Food Box provides the produce staples, and the opportunity to try new seasonal vegetables or fruit, while saving money. This is a great alternative for persons of lower income, because they are able to obtain higher quality food at a lower price point. The box contains a variety of produce, and depending on the size of the box can range from $12 to $32 in cost.

Figure 1: Packing Good Food Boxes
(Source: FoodShare website, n.d.iv)

A volunteer or organization within the community normally administers the program, and serves as a central hub for the collection of funds and location where the boxes are delivered by FoodShare and then distributed to the residents that have ordered a box (Interview, Ayal Dinner, November 16, 2009). The boxes are pre-paid in advance, and are delivered to the hub every two weeks. In order for the program to be successful there must be enough residents within the community interested in buying the Good Food Box on an ongoing basis. Having residents commit to buying a box could be challenging, since it is a lower income area the price may not be feasible on a bi-weekly basis (Interview, Ayal Dinner, November 16, 2009). Another challenge is that because the boxes are standardised, there is little personal choice, and everyone receives the same amount and type of produce. However, the upside is that individuals receive higher quality food, at a lower cost (Interview, Ayal Dinner, November 16, 2009).

For more information please visit FoodShare's Good Food Box website:
http://www.foodshare.net/goodfoodbox01.htm

II. Urban Agriculture

Where does your food come from? Those living in the inner city might likely respond by saying their food comes from the supermarket, since this is where we go as city-dwellers on a weekly basis to buy what we eat. The fact is, our food comes from many different places all over the world, and travels great distances in order to get to our supermarkets and, finally, our tables. With rising oil prices and transportation costs, the price of food is also increasing. It is no wonder many families in Toronto are finding the cost of food unaffordable (Toronto Community Foundation (TCF), 2009). This, consequently, limits their access to nutritious food, and forces many to opt for cheaper alternatives or rely on food banks. In many cases, the cheaper options are not healthy or nutritious. This is why people living in the city are increasingly becoming food insecure. A practical alternative to creating affordable, nutritious food and building food security is urban agriculture. Urban agriculture which enables the production of food to be in close proximity to the communities where people live. This also allows individuals to develop a direct connection with the production process for the food they eat, and helps communities to work together towards a common goal, while reducing food costs. Inner city food production has been shown to have the ability to feed people living within the city.

Urban agriculture, over recent years, has been successful in providing a form of food access that is not only sustainable, but also affordable. Urban agriculture can be obtained in a variety ways. Some examples include the creation of community gardens, farmers markets, planting of fruit trees, food-producing green roofs, and balcony container gardening (Mendes, Balmer, Kaethler, & Rhoads, 2008). Urban agriculture has been successful in providing food security for cities that would otherwise be struggling with limited access to food. A study found that there was a direct link associated with improved food security, and quality of dietary intake with increased urban agriculture (Maxwell, Levin, & Csete, 1998). The documentary *Seeds in the City: The Greening of Havana* (Phinney & Hunt, 2003) presented the positive impact that urban agriculture had in Havana, Cuba. It demonstrated how a city can become self-sustaining with local food production. Since the majority of Cuba's food was being imported from Eastern

European countries, after the collapse of the Soviet Union in the 1990's Cuba experienced a food crisis. During this time Cuba was also experiencing gas shortages, making it difficult to transport food to urban areas within the country (Moskow, 1999). As a result, people living in the urban areas of Cuba were highly affected by the food shortage. In Havana, people were forced to start growing their own food on balconies, alleyways, backyards, and building rooftops in order to put food on their table. Havana is a great example of how urban agriculture can feed its citizens while also creating food security (Moskow, 1999). Unlike Havana, the causes of food insecurity in the high priority neighbourhoods of Toronto are not related to the lack of food available, but rather the uneven distribution due to the increasing gaps between those who can afford healthy nutritious food and those without the income to do so. As seen in the case of Havana, the urban agriculture movement is strongly linked with increasing food security. Priority neighbourhoods can also build food security through similar grassroots urban agriculture initiatives. For instance, balcony containers, rooftop gardening, community gardens, and resident-organised farmers markets are all excellent options. By growing their own produce, residents are able to supplement their diet with healthy, culturally acceptable and affordable foods.

1. Community Gardens

Simply put, community gardens are any single piece of land used by members of a community and is communally shared. Individuals are allocated their own plot of land where they can grow whichever plants they would like. Community gardens attempt to address food insecurity by improving access to produce that is not only locally grown, but also affordable (Berman, 1997). By growing one's own food, they are limiting the chain of supply, thereby reducing dependence on supermarkets. Secondly, community gardens act as a venue for the creation of educational activities (Berman, 1997; Ontario Healthy Communities Coalition, 1997). For instance, spring plant sales linked to balcony gardening initiatives can be held at community garden locations. Also, community gardens can act as a place where educational workshops can be conducted, such as on container gardening, food heritage, canning and preserving of

produce. A third benefit of community gardens is the fostering of social capital through a "range of social processes, including social connections, reciprocity, mutual trust, collective decision-making, civic engagement and community building, all important processes associated with improving individual health and strengthening neighbourhoods" (Teig et al., 2007, p.1121). A fourth benefit of community gardens is that it allows for access to culturally appropriate food (Berman, 1997). For instance, foods such as hairy gourd and long bean, which are not readily available in supermarkets, can be grown by members of the community (Baker, 2004). Fifth, by community members growing their own food, they are less likely to eat low quality, heavily processed food or to consume large amounts of fast food (Berman, 1997). Finally, community gardens can act as a revenue generating stream by members selling excess produce at local community markets (Berman, 1997). Excess foods can also be donated to local community kitchens, food banks, or other emergency food service agencies (Berman, 1997).

Practical challenges to the implementation of community gardens are vandalism, small animals, vermin, and logistical problems such as lack of tools, compost, and horticultural experience (Ontario Healthy Communities Coalition, 1997). Broader challenges revolve around red tape (the bureaucracy involved in setting up a community garden such as gaining access to usable, fertile land either on private or public property), self-sufficiency (the garden's ability to fund itself), and lack of community involvement. All of these hindrances, however, can easily be rectified through proper awareness of available resources. For instance, according to one of FoodShare's Community Food Animators Ayal Dinner, FoodShare provides tools for local community gardens in need (Interview, Ayal Dinner, November 16, 2009). Community gardens are one of the most time and resource intensive initiatives suggested. They require a strong and stable food security committee for the project to be initiated, maintained, and to thrive. The tangible benefits of community gardens, however, make it a worthwhile endeavour for any community. For a map of community gardens in Toronto please see Map 2.

Case Study 1: Frances Beavis Community Garden

The Frances Beavis Community Garden is located in the ethno-culturally diverse neighbourhood of South Riverdale in the city of Toronto. It was designed to serve the senior Chinese population by providing a space for the planting of Asian vegetables not readily available in local supermarkets (Baker, 2004). The garden was initiated in 1997 between local environmental non-governmental organisations and residents of a seniors building (Baker, 2004). The garden generate five times the national standard average yield, proving that small plots of land can provide adequate amounts of produce within a city (Baker, 2004). Also, the garden provides a space for Chinese immigrants to practice skills they developed while working on farms in rural China, giving them a connection to their cultural heritage. Frances Beavis Community Garden is an excellent example of how community gardens can increase food security through a local, resident-led, culturally specific, healthy, and affordable food production program.

Case Study 2: East York Community Garden

The East York Community Garden is located at 9 Haldon Avenue, within the City of Toronto. The project was initiated by the local community members and City Councillor Janet Davis. In conjunction with these initiators, other sponsors have donated their resources to the program, including Evergreen, Home Depot's Team Depot (who provided and built raised beds), Rona Home and Garden, as well as many other local businesses and associations (East York Community Garden, n.d.). The garden consists of fifty-nine active plots and six raised beds with plenty of extra space for future expansion (East York Community Garden, n.d.). The garden acts as a place where people can come together and grow their own fresh produce, while excess yields are donated to local food banks. As well, the Plant A Row, Grow A Row Programme gives extra produce to the local seniors residents as a gesture of goodwill for the use of their land (East York Community Garden, n.d.). The garden also works in coordination with the Diabetes Education Network, which promotes healthy active lifestyles and encourages access to fresh, healthy vegetables to several plotholders.

Useful/Relevant Sources:

Berman, L. (1997). How does our garden grow? A guide to community garden success. Toronto: FoodShare Metro Toronto.
East York Community Garden, http://www.eycg.ca/ourgarden.html
FoodShare, http://www.foodshare.net/toolbox_month01.htm
Garden Ontario, http://www.gardenontario.org/
Home Depot Team Depot, http://www.homedepot.ca/communityaffairs/content/en_CA/CATeamDepot.html
Ontario Healthy Communities Coalition. (1997, January). *Healthy Food, Healthy Communities*. Toronto: Ontario Healthy Communities Coalition
Toronto Community Garden Network, http://www.tcgn.ca/
Trillium Foundation, http://www.trilliumfoundation.org/cms/en/index.aspx

2. Balcony Container Gardening

As noted previously, some of the barriers to community gardens include gaining access to plots of land, particularly on private property or city regulated land. In places where community gardens are not entirely feasible, a balcony is the best alternative. Balcony gardening is a great way to promote local food production in priority neighbourhoods, while also empowering residents, building community capacity and beautifying their spaces. It is especially appropriate for this community since many of the residents live in high-rise apartment buildings with balconies. For these residents, living in an apartment should not restrict them from growing their own produce, as there are many different types of foods that can be grown within a container and offer the same opportunity for food production. Container gardening can also be particularly beneficial for residents that are looking to stretch their budgets, while providing access to healthy food alternatives. For instance, residents can grow chard, turnips, short-rooted carrots, eggplant, peppers, and bush cucumbers in containers six to eight inches in size. In containers 10 to 12 inches in size, they can grow cauliflower, broccoli, tomatoes, and long- rooted carrots (Toronto Balconies Bloom, 2008; please refer to Appendix E for additional recommended vegetables that can be grown within containers). Balcony container gardening is feasible for many residents as it is inexpensive, and requires few resources. Residents can use any type of container, made of plastic, steel, wood, or recycled products.

Despite the fact that balcony gardening occurs within ones private space, it still has the ability to contribute to community development, while also contributing to food security. In an interview with FoodShare's Community Food Animator Ayal Dinner, he suggested that if balcony gardening is promoted as a communal project that allows for residents to work and learn together in planting and maintaining their gardens, it has the potential to share the same benefits that community gardens currently have (Interview, Ayal Dinner, November 16, 2009). There could be collective educational seminars on a monthly basis on how to grow certain vegetables or herbs or workshops on how to cook the food that is grown. As well, the project opens up the possibility for residents to share their gardening expertise, tools and supplies.

Finally, if implemented with resident engagement in mind, balcony container gardening can help to create social glue and self-reliance while also building a sense of community (Interview, Ayal Dinner, November 16, 2009; Rubin & Rubin, 2001).

Case Study 3: St. James Town Container Garden

St. James Town is a low-income community located in downtown Toronto. The residents of this community live in multiple high-rise buildings. In 2003, as part of a community garden project, residents in this community began to grow food in containers on their balconies (Toronto Balconies Bloom, 2008). The residents have been successful in growing food while using recycled containers and inexpensive supplies, and at the same time also building awareness that food can be grown anywhere.

Figure 2: Container gardening in St. James Town
(Source: Toronto Balconies Bloom, 2008)

3. Rooftop Gardening

Rooftop gardening refers to a rooftop that is suitable in structure and accessibility for food production (Germain, Gregoire, Hautecoeur, Ayalon, & Bergeron, 2008). Rooftops are an undeveloped resource for food production in the city and have environmental benefits. Green roofs are considered sustainable building design. A recent study prepared by several professors and students from Ryerson University for the City of Toronto found both environmental and economic benefits to green roofs. Some environmental benefits include reducing stormwater runoff, easing the urban heat island effect, and creating more green spaces (Banting et al., 2005). For the city, this could potentially mean a savings of $12 million by reducing the energy required for cooling, equivalent to roughly 2.37 kWh/m^2 per year (Banting et al., 2005). The design of a green roof also has positive impacts on the building itself. The energy savings is one of the main benefits, as there is better solar reflectivity, evapotranspiration and insulation (Banting et al., 2005). Rooftop gardening will help illustrate a healthier and more livable green urban setting that will enhance the community's current landscape.

Rooftop gardening, like balcony gardening, is an alternative to community gardens which require community members to obtain sizeable plots of land which are not always readily available. Rooftop gardens have all the same benefits of community gardens, while also overcoming the challenges of vandalism, and small animals, which are both major challenges community gardens face. However, there are a number of challenges to consider when considering rooftop gardening. Not all buildings have a loading capacity that can support the weight of the garden and the people that care for the garden (Germain, Gregoire, Hautecoeur, Ayalon, & Bergeron, 2008). Determining whether a roof has a structural capacity would be an expensive task, and may not be feasible for community residents in low-income neighbourhoods to do without supplementary financial support.

Case Study 4: 401 Richmond

An excellent example of the potential rooftop gardening offers for the purpose of food production is the rooftop garden located at 401 Richmond Street in the downtown area of the City of Toronto. The tenants of the building are made up of a variety of artists, filmmakers, architects, and charitable organizations, which have formed a vibrant workplace community (401 Richmond Website, n.d.i). The building's property manger created it in 1995 for the use of the tenants. Today, the rooftop garden provides a space for the planting of tropical plants, annual flowers, trees, organic vegetables and herbs (401 Richmond Website, n.d.ii). The vegetables grown on the rooftop are even integrated into the menu of the café located onsite, and are also used by its tenants (401 Richmond Website, n.d.ii). The 401 Richmond garden is an excellent example of how a roof can provide a space for tenants to gather, while also facilitating the production of locally-grown food.

Figure 3: Views of the Rooftop Garden at 401 Richmond Street (Source: 401 Richmond Website, n.d.ii)

III. Food Accessibility

In addition to educational initiatives and urban agricultural initiatives, food access initiatives are essential. These provide fresh, affordable, culturally appropriate, sustainable healthy food to local communities

1. Community Kitchens

Community or collective kitchens are "community-based cooking programs in which small groups of people cook large quantities of food" by pooling resources and labour (Engler-Stringer & Berenbaum, 2005, p.246). A recent literature review on collective kitchens in Canada found that although not much research has been done on these kitchens, the existing research shows that collective kitchens increase food security by providing culturally acceptable food of good quality in a way that maintains participants' personal dignity (Engler-Stringer & Berenbaum, 2005). These initiatives also provide social support for participants and are seen as less stigmatising than food banks (Engler-Stringer & Berenbaum, 2005). Additionally, community kitchens may not actually increase people's food resources unless they produce large quantities of food (Engler-Stringer & Berenbaum, 2005). However, community kitchens promote food security in other ways. For example, they are useful in creating friendships and community resource sharing, increasing knowledge about nutrition and cooking, and increasing understanding of food security (Engler-Stringer & Berenbaum, 2005). The knowledge and resources community kitchens offer can enhance individual care, support-group growth, and community management (Engler-Stringer & Berenbaum, 2005), which would be beneficial for community residents.

Community kitchens may be difficult to implement without funding for kitchen appliances and equipment or the donation of time in commercial kitchens to community residents' organisations. However, encouragingly, there are currently several community kitchen initiatives in the Greater Toronto Area that could be used as models for a community-led initiative, many of which are associated with FoodShare. Community kitchens can be both holistic and educational if they allow anyone to cook in their facilities for a small fee, provide

access to fresh, multicultural food options, and provide healthy recipes and cooking classes. The Lakeshore Village Neighbourhood Association's community kitchen initiative, Cooking Together, is a useful model for other community-led food security initiatives. It is funded by the United Way and Trillium grants, which have enabled the neighbourhood association to operate two community kitchens (FoodShare, n.d.v). The initiative also includes a youth cooking group at Lakeshore Collegiate which teaches students to cook while also providing them with meals for $3 (FoodShare, n.d.v), creating a low-cost educational experience that increases food security by providing the group with cooking skills and affordable food. Cooking Together's kitchens allow residents to socialise, learn healthy recipes, and cook for free if they bring food from home (FoodShare, n.d.v), increasing their social capital and pooling their knowledge. In addition, the kitchens introduce residents to diverse food options so that they can enjoy a varied and healthy diet (FoodShare, n.d.v). A similar program could be implemented in Scarborough using commercial kitchen facilities and volunteers from the community and local schools.

2. Quest Food Exchange

The Quest Food Exchange program is a food exchange based in British Columbia that collects surplus food from the food industry and uses it to cook and provide meals and food hampers to individuals and communities in need (Quest Food Exchange, n.d.i). Quest saved $7.12 million worth of food from food suppliers in 2007-2008 (Quest Food Exchange, n.d.iv). It is a useful model as a food exchange initiative because it prepares food in addition to collecting it, unlike conventional food banks and exchanges. In addition, it links to other agencies in order to provide access to low-cost grocery stores run by the exchange, and provides those agencies with food so that they can create their own meal programs (Quest Food Exchange, n.d.i). Their volunteers are also provided with food vouchers entitling them to food hampers if they are referred to Quest by a social service agency, which provides an incentive for people to volunteer their time (Guerin & Herbert, 2009; Quest Food Exchange, n.d.ii).

Although Quest Food Exchange is currently limited to parts of British Columbia, a similar initiative could be pursued by community members or residents' associations in Toronto. Although it would require substantial ties to suppliers to secure donations for a food exchange, as well as generous donations of time and monetary support from volunteers, it is feasible. This is an expensive initiative, with a $7 million annual budget and hard costs of $600,000 a year, but it generates revenue by requiring agencies it provides with food to donate one third of the cost back to Quest (Guerin & Herbert, 2009). The initiative also receives funding through donations and the sale of compost, which would be a practical revenue stream for similar projects on a smaller scale (Guerin & Herbert, 2009). Quest has been successful thanks to policies in British Columbia like the Food Donor Encouragement Act, which prevents food donors from being held liable for damages caused by donated food (British Columbia Food Donor Encouragement Act, 1997), indicating that political support may be necessary at the municipal or provincial level for a similar program to work in Toronto. Additionally, Quest benefited from strong leadership, a large network of volunteers connected to them through the agencies they work with, and relationships with food suppliers which may be difficult to duplicate (Guerin & Herbert, 2009). However, using community partnerships with food suppliers and community kitchens to prepare food, a food exchange similar to Quest's could be implemented with enough support from community members, community or commercial kitchens, and food suppliers.

While the Quest Food Exchange's model does not address the needs of the entire community, it could work to provide meals to disadvantaged or homeless populations while decreasing dependence on food banks. As well, an educational component may also be possible if willing community residents and volunteers from local high schools or college institutions were taught how to prepare nutritious meals for disadvantaged community members as part of a school program. As well, the food exchange model could certainly be used to teach people to preserve perishable foods, since the organisation's volunteers prepare, preserve, and assemble food for other agencies to serve to clients (Quest Food Exchange, n.d.iii). A similar food exchange program could be established using this model from British Columbia, but the costs

and support necessary may prove to be significant drawbacks. Nevertheless, the aforementioned potential benefits that a food exchange offers makes it a highly recommended initiative to implement only when communities have greater social, economic, and cultural capital at its dispense.

For more information please visit the Quest Food Exchange website at:
http://www.questoutreach.org/

3. Community Markets

Community markets act as a place where people can come together to sell or purchase local produce or other wares such as used treasures, books, culturally specific goods, Tupperware, and other homemade handicrafts. Community markets aid in food security by providing local, affordable produce to people who would not otherwise have access to such necessities. They also provide a venue for other food security initiatives to take place, such as seed programs, education workshops, and gardening tips. They act as a place where individuals can come together to build social networks, fostering the creation of social capital. Community markets also provide an opportunity for the provision of culturally specific foods that may not otherwise be available in supermarkets. For example, residents can grow niche foods in gardens which can then be sold at the community market for profit. In addition, community markets can be initiated when there are enough people interested in visiting, vending and volunteering at the market, and when a convenient, accessible location is available (Ontario Healthy Communities Coalition, 1997). It would be a good idea to contact local organisations in charge of community-led food markets in order to acquire food to be sold at the market as well as other resources they may provide. For example, in the City of Toronto, FoodShare's Good Food Market delivers high-quality fresh produce purchased from local farmers and the Ontario Food Terminal to be sold on the day of the market (FoodShare, n.d.i).

Once the location and initial support has been created, there are other challenges that need to be addressed. Some examples can include a lack of community support and reduced

attendance; suboptimal weather; and the need for a strong and devoted community market committee. These challenges make community markets one of the most socially and economically capital intensive endeavours for a food security committee to take on, however, it can be overcome through good marketing and advertisement, maintaining the ongoing support of community organisations, and with the aid of a dedicated pool of volunteers. Finally, for these reasons, community markets are an essential tool in the promotion of food security in low-income neighbourhoods.

Case Study 5: The East Scarborough Festival Market

In its third year of operation, the East Scarborough Festival Market is one of FoodShare's Good Food Markets. It runs every Thursday from June until September from 2 to 6PM, and is located along Lawrence Avenue East on a driveway belonging to the St. Margaret in the Pines Church and the grassy area of St. Margaret Park. It provides fresh produce, some of it locally grown, to residents in a neighbourhood known for having minimal access to such goods. It also provides a location for the sale of plants and vegetable seedlings to local residence so that they can grow their own produce. Community markets act as community capacity building exercises, where connections and experiences can be drawn upon to solve other community issues. As well, the market behaves as an outlet where the funds and resources can be raised to support other food security initiatives. Last year, funds were raised at the market for the creation of a gazebo. In subsequent years, funds raised could be used to finance community food security projects (e.g. community gardens, community kitchens, food boxes, and so on). Finally, according to FoodShare (n.d.i), a survey conducted in 2008 on visitors to the Good Food Markets throughout Toronto, learned that fifty-two percent of adults and children were eating more fruits and vegetables, thirty-seven

Useful/Relevant Sources:

City of Toronto Parks and Recreation, www.toronto.ca/parks/programs/community.htm
Evergreen, www.evergreen.ca
FoodShare, http://www.foodshare.net/animators02.htm
Good Food Markets, http://www.foodshare.net/animators02.htm
The Stop, http://www.thestop.org/
The Storefront, http://www.thestorefront.org/
Ontario Healthy Communities Coalition. (1997, January). *Healthy Food, Healthy Communities*. Toronto: Ontario Healthy Communities Coalition

Recommendations

1. Start A Food Security Committee

The first recommendation would be the creation of a food committee. Committees are essential because they provide an entity of individuals who are responsible and accountable for food security initiatives within the community. This is important because a lack of accountability leads to a lack of progress. Committees are also essential in providing a structure for food initiatives to take place. They act to focus individuals on specific topics rather than allowing them to be sidetracked by other issues such as crime, housing costs or transit provision. Individuals in the committee do not have to be passionate or educated on food security. It is more important that they are dedicated and passionate in improving their community as a whole. People can be educated on aspects on food security with the help of Food Thoughtful.

2. Educate Your Committee

Food Thoughtful is used as an educational tool to teach and bring awareness to communities about food security and food policy. Created by Nova Scotia's Nutrition Council and the Atlantic Health Promotion Research Centre, this program uses a video and workbook that is divided into eight sections to teach people the basics of food security and the various steps to be taken to prevent food insecurity and improve community food security (Nova Scotia Nutrition Council & the Atlantic Health Promotion Research Centre, 2005b). This educational tool from Food Thoughtful provides a starting point to a committee to understand food related issues in priority neighbourhoods. Food Thoughtful brings awareness of the food problems residents face in these disadvantaged neighbourhoods. This educational tool is a holistic approach to food security because it allows residents to come together and communicate their own thoughts and needs about food security based on exercises and activities in the workbook. This program is therefore an educational tool for residents to encourage community participation in awareness building.

The workbook “Thought About Food?” is “inspired to provide tools and information to inspire communities to come together and act to make food security a reality for everyone” (Nova Scotia Nutrition Council & the Atlantic Health Promotion Research Centre, 2005b, no page number). Furthermore this workbook was developed with the aim of answering four specific questions about food security. These questions are:

1) How much does a basic nutritious diet cost?
2) What is life like for people who don’t have enough nutritious food?
3) What is being done to deal with food insecurity and to build long-term solutions?
4) What more can we do to improve food security?”

(Nova Scotia Nutrition Council & the Atlantic Health Promotion Research Centre, 2005d, no page number).

The overall purpose and aim of Food Thoughtful is to offer neighbourhoods across Canada tools and the ability to teach communities about food security and to create effective ways to challenge both food policies and systems (Nova Scotia Nutrition Council & the Atlantic Health Promotion Research Centre, 2005c). According to the Food Thoughtful, the video and workbook can apply to any community who wants to learn more about food security and or a community that needs to begin to exchange views about food security in their community (Nova Scotia Nutrition Council & the Atlantic Health Promotion Research Centre, 2005c). With the recommendation to create a food committee in disadvantaged neighbourhoods, the committee itself can allow residential participation and input with the simple way of a community meeting discussing food security. Through Food Thoughtful, residents have an opportunity to initiate the beginning stages towards food security building and capacity building in their neighbourhoods.

For more information about Food Thoughtful and their video and workbook please visit:
Food Thoughtful: Thought About Food? http://www.foodthoughtful.ca/index.htm

3. Community Food Assessment

Next we recommend the creation of a food assessment for the local community. Food assessments examine a broad range of food-related concerns through a participatory and collaborative process designed to improve the community's local food system (Friendly, 2008). It was found that food security assessments include six basic components:

1) A profile of demographic and social economic conditions within that community;
2) A profile of food resources within the community;
3) An assessment of individual household food security;
4) An assessment of the accessibility of food resources;
5) An assessment of the affordability of food resources;
6) An assessment of local food production

(Cohen, 2002, p.29)

It is obvious that research on the social and economic characteristics of the area will broaden the contextual understanding of the community. Profiles of food resources will demonstrate the overall availability of food within the neighbourhood. Assessment of individual household food security is based on personal eating habits, healthy food awareness and ability to make culturally appropriate food choices. For example, individuals or families living in emergency housing, such as motels, may not have access to adequate cooking appliance preventing them from cooking healthy meals (Interview, Professor Michael Bunce, November 19th, 2009). Assessment of the accessibility of food resources refers to the physical accessibility to obtain food, for example, the number of grocery stores and fruit and vegetable stands located nearby (Creatore et. al, 2007). On Bloor Street West, the number of grocery stores per ten thousand people is in between thirteen to twenty-six, while in the priority neighbourhood of Kingston-Galloway/Orton Park the number of grocery stores per ten thousand people is zero to three (Creatore et al, 2007; See Map 3). Assessment of affordability of food resources is analyzed through household food costs as a proportion of family income. Finally assessment of local food production analyzes the creation of food within the community. It involves a variety of urban agricultural production activities such as community gardens, balcony and roof top food creation and urban agricultural farms.

4. Implementation of Initiative and Evaluation

Once these steps have been completed, an analysis of the strengths and the opportunities within the neighbourhood can make evident which food security initiatives should be pursued. After a food security initiative has been decided on it is important to periodically evaluate initiatives to measure their efficacy and whether they are achieving their food security goals and bench marks set out by the food security committee. For example, in Kingston-Galloway/Orton Park a food security assessment can analyze current food initiatives such as the community market. The strength of the community market in Kingston-Galloway/Orton Park can act as a venue for educational initiatives. For instance a balcony food creation initiative can be promoted at the community market through a summer plant sale in coordination with balcony horticultural workshops at the market. People can learn how to grow their own container plants such as herbs, tomatoes, peppers and cucumbers and purchase seeds, seedlings or potted plants at the market to be grown at home. The importance of the evaluation process is to see if the ideas the food security committee set in motion are actually benefiting individuals in the community. However, if the project is unsuccessful after numerous tries and even after changes have been made to the implementation (i.e. more advertising, more convenient location, etc.), it would be the responsibility of the committee to either scrap the project or go back to the drawing board to make improvements.

Conclusions

As an *emergency* food provider, food banks are a good resource. However, as a long-term solution to food insecurity, food banks are not the answer. This report looked at different food security models for the purpose of increasing food security in local priority neighbourhoods. It was found that community-led initiatives are essential to the development of community food security and can aid in the creation of social capital. This was demonstrated by the various cases studies investigated in this report. Initiatives based on education, urban

agriculture and increasing food access, all provide a path to community food security. At the national scale, Canada lacks strong policy for ensuring food security. However, this should not discourage local neighbourhoods and communities from taking matters into their own hands in the form of community-led initiatives.

Further research on community-led initiatives can be conducted on a number of fronts. The influence of national and provincial policies, or lack thereof, on community-led initiatives could be examined. Research can also be conducted on alternative initiatives that maybe useful for other communities such as co-ops, bulk buying programs and the organisation of food trusts. Finally, research on evaluating how these initiatives affect local food security over time would be pertinent to studies on community food security.

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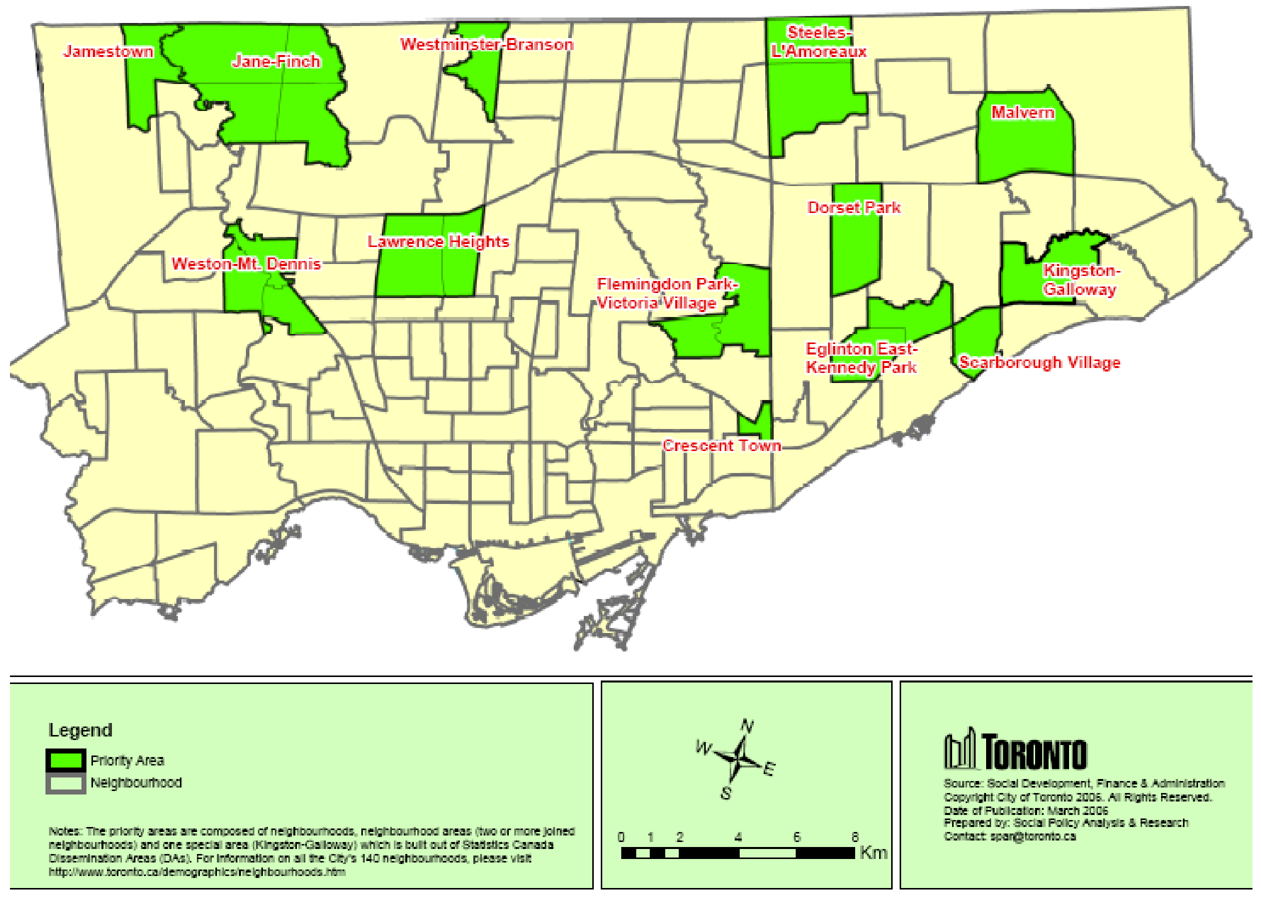
Map 1

The City of Toronto's Thirteen Priority Neighbourhoods

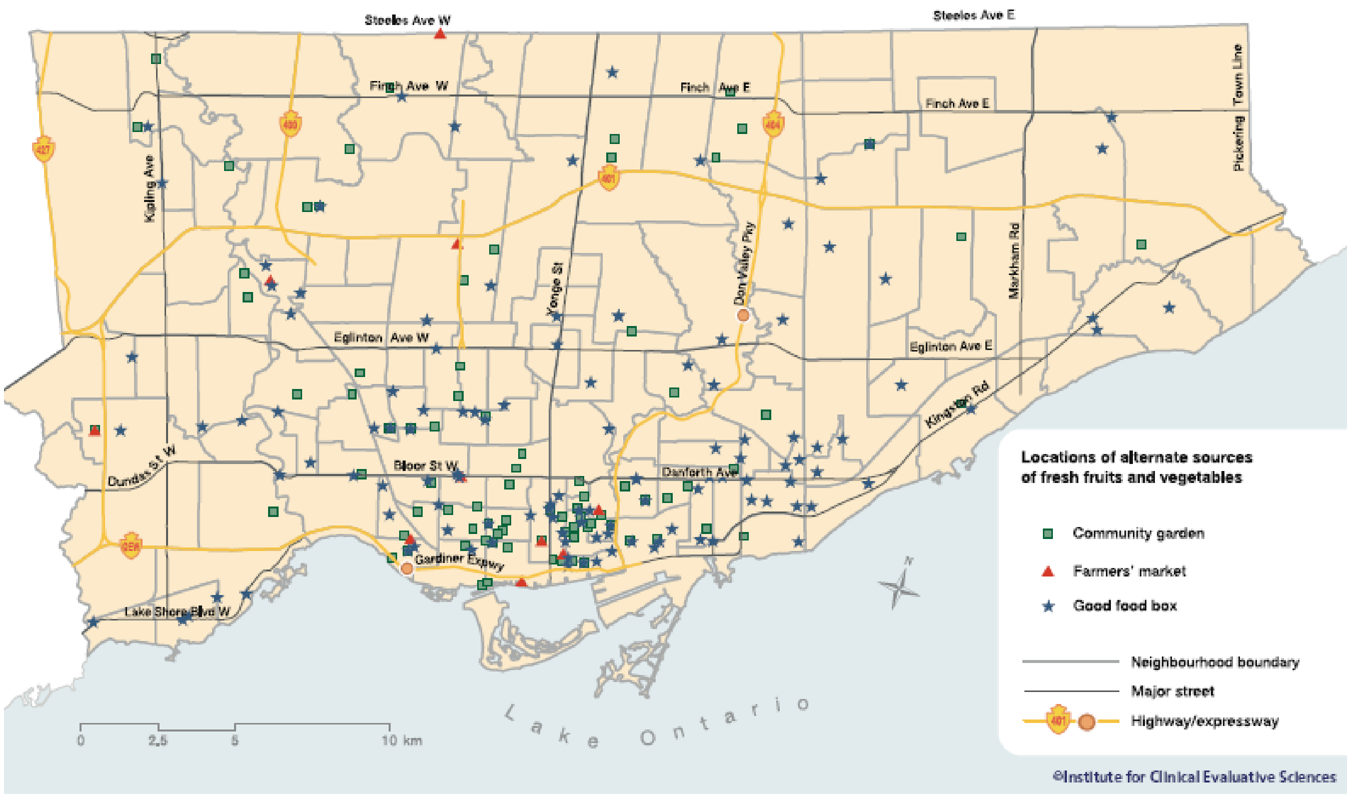


Source:

City of Toronto. (2006). City of Toronto Priority Areas Map. Retrieved November 26, 2009, from http://www.toronto.ca/community_safety/pdf/City_of_Toronto_Priority_Areas_map.pdf

Map 2

Locations of alternate sources of fresh fruits and vegetables, in Toronto, 2005

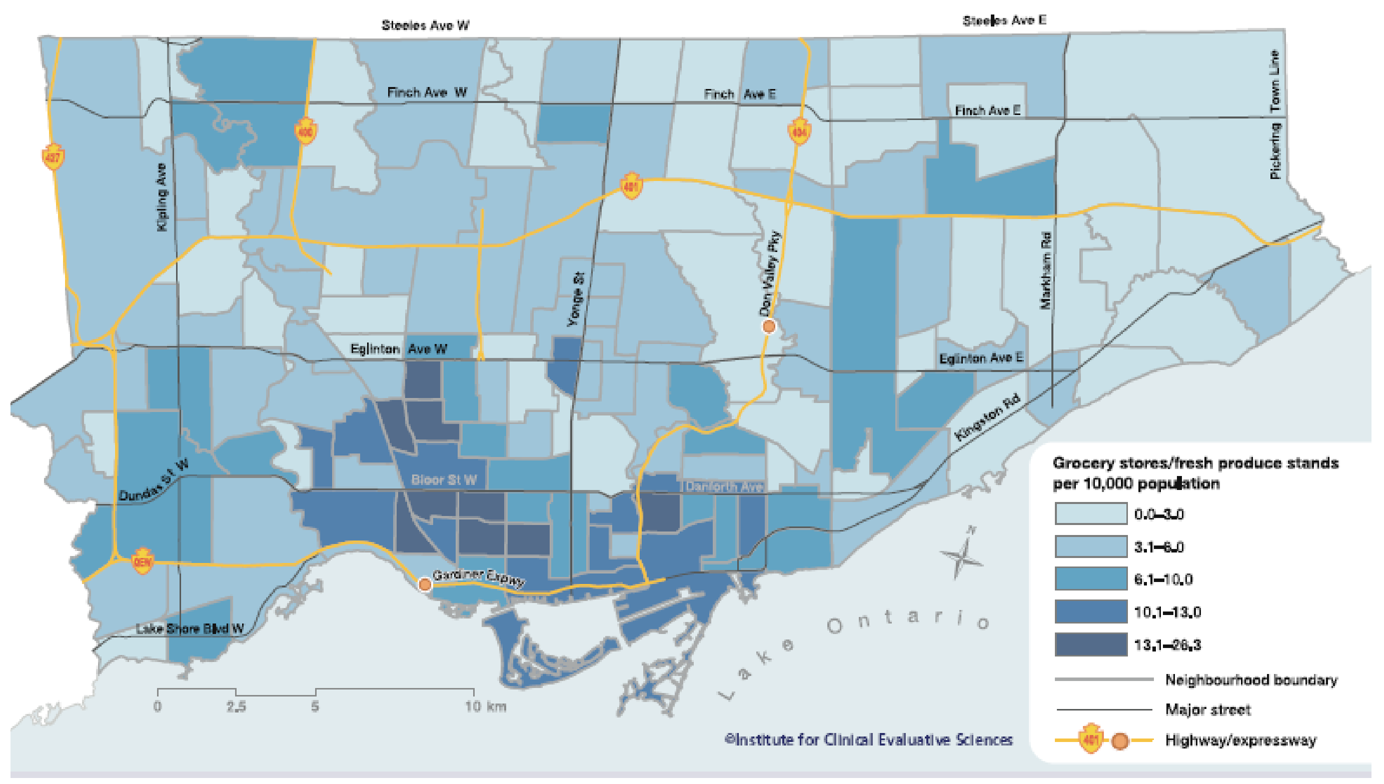


Source:

Creatore, M.I, Ross, K., Gozdyra, P., Glazier, R.H., Tynan, A-M., & Booth, G.L. (2007). Chapter 8: Healthy food and diabetes. In R. Glazier & G. Booth, *Neighbourhood environments and resources for healthy living - A focus on diabetes in Toronto* (pp.185-195). Toronto: Institute for Clinical Evaluative Sciences (ICES), pp.191.

Map 3

Number of grocery stores/fruit and vegetable stands per 10,000 population [2001], by neighbourhood, in Toronto, 2004



Source:

Creatore, M.I, Ross, K., Gozdyra, P., Glazier, R.H., Tynan, A-M., & Booth, G.L. (2007). Chapter 8: Healthy food and diabetes. In R. Glazier & G. Booth, *Neighbourhood environments and resources for healthy living - A focus on diabetes in Toronto* (pp.185-195). Toronto: Institute for Clinical Evaluative Sciences (ICES), pp.194.

Appendix A

Toronto's Food Charter (2001)

Toronto's Food Charter

In 1976, Canada signed the United Nations Covenant on Social, Economic and Cultural Rights, which includes "the fundamental right of everyone to be free from hunger." The City of Toronto supports our national commitment to food security, and the following beliefs:

Every Toronto resident should have access to an adequate supply of nutritious, affordable and culturally-appropriate food.

Food security contributes to the health and well-being of residents while reducing their need for medical care.

Food is central to Toronto's economy, and the commitment to food security can strengthen the food sector's growth and development.

Food brings people together in celebrations of community and diversity and is an important part of the city's culture.

Therefore, to promote food security, Toronto City Council will:

- champion the right of all residents to adequate amounts of safe, nutritious, culturally-acceptable food without the need to resort to emergency food providers
- advocate for income, employment, housing, and transportation policies that support secure and dignified access to the food people need
- support events highlighting the city's diverse and multicultural food traditions
- promote food safety programs and services
- sponsor nutrition programs and services that promote healthy growth and help prevent diet-related diseases
- ensure convenient access to an affordable range of healthy foods in city facilities
- adopt food purchasing practices that serve as a model of health, social and environmental responsibility
- partner with community, cooperative, business and government organizations to increase the availability of healthy foods
- encourage community gardens that increase food self-reliance, improve fitness, contribute to a cleaner environment, and enhance community development
- protect local agricultural lands and support urban agriculture
- encourage the recycling of organic materials that nurture soil fertility
- foster a civic culture that inspires all Toronto residents and all city departments to support food programs that provide cultural, social, economic and health benefits
- work with community agencies, residents' groups, businesses and other levels of government to achieve these goals.

Source:

City of Toronto. (2001). *Toronto's Food Charter*. Toronto: Prepared by the Food and Hunger Action Committee.

Appendix B

FoodShare Baby Food Basics Workshops information pamphlet

Why make your own baby food?

- Simple, fresh, home-made food is great for you and your baby
- Your baby's food will be fresher, less expensive and more varied than store-bought baby food
- Making your baby's food will help you to explore your child's tastes and preferences and to develop a confident feeding relationship

About FoodShare

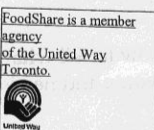
FoodShare Toronto is a non-profit organization working with communities to improve access to healthy and affordable food. Through community-based programs, training and education, FoodShare works towards a food system that fosters health, is equitable and sustainable. Our programs – such as urban community gardening, student nutrition and food education, cooking classes, Good Food Markets - fresh produce stands in priority neighbourhoods, the FoodLink hotline, produce distribution to schools, social agencies – ensure "good, healthy food for all".

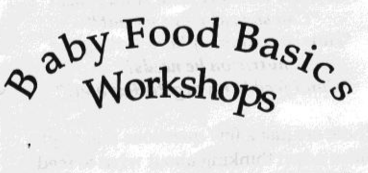
For all inquiries relating to baby food basics workshops and resources please contact Toni Panzuto:

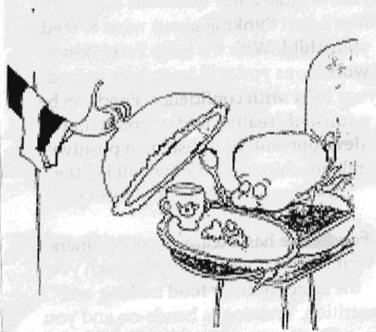
toni@foodshare.net
416.363.6441 ext. 253

90 Croatia St., Toronto, ON, M6H 1K9
phone: (416) 363-6441
fax: (416) 363-0474
www.foodshare,net

FoodShare is a member agency of the United Way Toronto.







Learn to make your own **fresh, healthy, and affordable baby food!**

" When can we start with solid foods?"
"Can she eat what we eat?"
"How do I know if he is getting the nutrition he needs?"
"Can I feed her a vegetarian diet?"

These are just a few questions that might arise when thinking about what to feed your child. With the Baby Food Basics workshops you will learn how to feed your baby with confidence. Food can be a fun and creative part of your child's development. Establishing a positive relationship to food now will lay the basis for lifelong healthy eating.

FoodShare has a team of peer trainers who will visit your group to teach you the basics of baby food making and nutrition. Training is hands-on and you will even get a chance to taste the difference between homemade and store-bought baby food.

You can hold your session at a local community or parent-child resource centre. Peer trainers offer workshops in various languages, **please call 416.363.6441 ext. 253 to find out more.**

Baby Food Basics will teach you:

- how to use simple equipment to make baby food
- how and when to introduce solid foods
- the basics of baby nutrition
- the difference between homemade and store-bought baby food
- how to adapt the food your family is eating to your baby's needs
- how to handle and store food safely
- how to tell what your baby wants and needs

Resources

Baby Food Grinders
There are many tools you can use to make baby food – from a fork to a blender. The Happy Baby Food grinder used in the workshops is available from FoodShare for $17 each.

ABC's of Baby Food Manual
The ABC's of Baby Food is a resource for trainers offering their own workshops. It is available for $25 (including delivery) from FoodShare.

Train-the-trainer workshops
Train-the-trainer workshops are offered periodically to people who have some knowledge of nutrition or have taken FoodShare's Baby Food Basics and who are interested in training others.
At the end of the workshop you will be able to feel confident about teaching basic baby nutrition and baby food making skills. We will also cover adult education strategies, culturally-appropriate and vegetarian baby foods.

Appendix C

Shape It Up workshop segments, related key learning objectives, behavioural objectives, methods and materials

TABLE 1 Shape It Up Workshop Segments, Related Key Learning Objectives, Behavioral Objectives, Methods and Materials

Workshop Segment Title	Key Learning Objectives	Key Behavioral Objectives	Methods/Materials
Portion sizes	Become more aware of portion sizes. Identify healthful portion sizes of common foods.	Select and consume healthful portion sizes, about the size of a tennis ball and often smaller than those served at restaurants and in homes.	Modeling, audience participation. Tennis balls, large sports balls.
Food pyramid	Recognize the main food groups. Understand the concept of a balanced diet.	Eat a balanced diet rich in grains, fruits and vegetables.	Interactive discussion, demonstrations, hands-on learning materials, audience participation. Food Pyramid chart, paper plates, plastic foods.
Fun with fruit	List the health benefits of eating a variety of fruits.	Increase fruit consumption.	Charting, interactive discussion, audience participation. Benefits of fruit chart, fresh fruits.
Soda versus water	Realize how much sugar is in soda. Understand the importance of water/hydration for health. Identify the positive health effects of drinking water and eating foods with high water content (fruits, vegetables).	Limit soda intake. Increase water intake.	Demonstration, interactive discussion, audience participation. Water, scoop, sugar, can of soda.
Exercise and heart health	Link aerobic exercise with heart health. View the heart as a muscle that needs exercise to stay healthy. Identify ways to get aerobic exercise: walking, biking, etc.	Increase aerobic exercise.	Modeling, group exercise, audience participation. Heart rate chart.
Healthy arteries	Understand the concept of clogged arteries. Realize that eating fatty foods can clog arteries. Identify common fatty foods: pizza, french fries, chicken nuggets, etc. Link healthy arteries with eating healthful foods and exercise.	Eat less fatty foods. Eat more "heart healthy" foods. Do more exercise.	Demonstration, audience participation. Clear plastic tube, colored water, white vegetable shortening, bucket.

Source:

Jan, S. et al. (2009). Shape It Up: A School-Based Education Program to Promote Healthy Eating and Exercise Developed by a Health Plan in Collaboration With a College of Pharmacy. *Journal of Managed Care Pharmacy*, *15*(5), pp.407.

Appendix D

Shape It Up Questionnaire

FIGURE 1 Shape It Up Questionnaire

9 CORE ATTITUDINAL AND KNOWLEDGE ITEMS (BOTH SURVEYS)

Draw a circle around the one face that best shows your feelings.

1. How do you feel about eating fruit?

0 1 2 3 4 5

2. How do you feel about eating vegetables?

0 1 2 3 4 5

3. How do you feel about doing exercise?

0 1 2 3 4 5

Check just one answer for each question.

4. The fat in food can clog the blood flow in your arteries.
   ❑ True ❑ False ❑ Don't Know
5. A healthy serving size of food is the size of a tennis ball.
   ❑ True ❑ False ❑ Don't Know
6. A can of regular soda has 1 teaspoon of sugar.
   ❑ True ❑ False ❑ Don't Know
7. Exercise makes your heart strong.
   ❑ True ❑ False ❑ Don't Know
8. Milk and water are better for you than soda.
   ❑ True ❑ False ❑ Don't Know
9. How many servings of fruits and vegetables should you eat a day?
   ❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5 or more ❑ Don't Know

5 BEHAVIORAL ITEMS (PRE-INTERVENTION SURVEY ONLY)

10. How many days a week do you **exercise** (play sports, dance, swim, ride your bike, take a walk)?
    ❑ none
    ❑ 1 day per week
    ❑ 2 days per week
    ❑ 3 days per week
    ❑ 4 days per week
    ❑ 5 or more days per week
11. On most days, how many **sodas** (cans, bottles or cups) do you drink?
    ❑ none
    ❑ 1 soda a day
    ❑ 2 sodas a day
    ❑ 3 sodas a day
    ❑ 4 or more sodas a day
12. On most days, how many hours do you **watch TV, videos or DVDs?**
    ❑ none
    ❑ 1 hour a day
    ❑ 2 hours a day
    ❑ 3 hours a day
    ❑ 4 or more hours a day
13. On most days, how many hours do you **play video games or computer games?**
    ❑ none
    ❑ 1 hour a day
    ❑ 2 hours a day
    ❑ 3 hours a day
    ❑ 4 or more hours a day
14. Do you **eat breakfast** every day?
    ❑ Yes ❑ No

2 DEMOGRAPHIC ITEMS (BOTH SURVEYS)

15. Are you a boy or a girl?
    ❑ boy ❑ girl
16. What grade are you in?
    ❑ 2nd grade ❑ 3rd grade ❑ 4th grade
    ❑ 5th grade ❑ 6th grade

2 OPINION ITEMS (POST-INTERVENTION SURVEY ONLY)

Draw a circle around the one face that best shows your feelings.

12. How do you feel about the "Shape It Up" assembly?

0 1 2 3 4 5

13. What are some of the things you learned from "Shape It Up"?

____
____
____
____
____

Please check to be sure you answered all the questions.

Thank You!

Source:

Jan, S. et al. (2009). Shape It Up: A School-Based Education Program to Promote Healthy Eating and Exercise Developed by a Health Plan in Collaboration With a College of Pharmacy. *Journal of Managed Care Pharmacy*, *15*(5), pp.408.

Appendix E

Recommended vegetable varieties for containers

Vegetable	Container Size	Recommended Varieties
Beans, snap	3 to 5 gallons	Derby, Bush Blue Lake, Green Crop, Tender Crop, Royal Burgundy
Beets	2 to 3 gallons	Asgrow Wonder, Detroit Red, Little Egypt, Early Red Ball, Early Wonder, Boltardy, Burpee Golden
Broccoli	1 plant per 5 gallons	Green Comet, Green Duke, DeCicco, Spartan, Italian, Green Sprouting
Brussels Sprouts	1 plant per 5 gallons	Jade Cross, Long Island Improved
Cabbage	1 plant per 5 gallons	Dwarf Modern, Red Ace, Early Jersey Wakefield, Little Leaguer, Earliana, Copenhagen Market, Ruby Ball Hybrid, Red Head Hybrid, Round Dutch, Chinese: Michihli, Bok Choy
Carrots	3 gallons (12 inch deep)	Short & Sweet, Danvers Half Long, Tiny Sweet, Baby Finger Nantes, Goldenhart, Little Finger, Royal or Red Cored Chantenay, Ox Hart, Baby Finger Thumbelina, Lady Fingers
Cucumbers	3 to 5 galllons	Patio Pik, Spacemaster, Pot Luck, Bush Whopper, Bush Champion, Burpee Hybrid, Salad Bush, Parks Burpless Bush, Burpless Early, PikFanfare, Salad Bush
Eggplant	5 gallons	Slim jim, Ichiban, Black Beauty, Modern Midget, Mission Bell, Small Ruffles Red, Thai Green, Bambino, Ghost Buster
Kale, Turnip, or Mustard Greens	3 to 5 gallons	Dwarf Scotch, Shogoin, Pupletop, Red Giant Mustard
Lettuce/Salad Greens	1 to 3 gallons	Salad Bowl, Ruby, Grand Rapids, Oak Leaf, Buttercrunch, Dark Green Boston, Little Gem, Bibb Salad Bowl, Red Sails, Bibb, Blackseeded Simpson, Arugula, Radicchio, Mesculun Mix
Onions, Green	1 to 3 gallons	Evergreen White Sweet Spanish, Yellow Sweet Spanish
Pepper	3 to 5 gallons	Sweet Banana, Yolo Wonder, Long Red Cayenne, Bell Boy, Keystone Resistant, California Wonder, New Ace, Red Cherry, Jalapeno, Thai Hots
Radishes	1 gallon	Cherry Belle, Easter Egglcicle, Champion, Scarlet Globe
Squash, summer	5 gallons	Scallopini, Baby Crookneck, Creamy, Golden Nugget, Gold Rush, Zucchini, Dixie, Sundrops, Elite
Swiss Chard	3 gallons	Bright Lights, Rhubarb
Tomatoes	5 gallons/bushel basket	Tiny Tim, Small Fry, Sweet 100, Patio, Burpee's Pixie, Toy Boy, Ealy Girl, better Boy VFN, Pixie, Red Robin, Sugar Lump, Tumbli' Tom Sweet Chelsea, Husky Cherry

Source:

FoodShare. (n.d.). Learning Centre Toolbox: Container gardening: Choose the right plants. Retrieved November 25, 2009, from http://www.foodshare.net/toolbox_urbanag08.htm