csa

COLLEGE **STUDENT** ALLIANCE

STUDYING WHILE STARVING:

ADDRESSING FOOD INSECURITY IN ONTARIO COLLEGES

TABLE OF CONTENTS

COLLEGE **STUDENT** ALLIANCE

STUDYING WHILE STARVING:
ADDRESSING FOOD INSECURITY IN ONTARIO COLLEGES

INTRODUCTION

A post-secondary education (PSE) is an instrumental component in achieving financial stability. Employment opportunities in Ontario often request a tertiary degree as a basic requirement. As a result, more than half of Canadians aged 25 – 64 are recipients of a post-secondary education; 22.4% with a college diploma[1]. Higher education can provide increased social and economic mobility; however, its attainment requires financial sacrifice.

In Ontario colleges, average tuition fee increases for local students is limited to a 3% increase per year for general programs[2]. In comparison, international student tuition fees are not as restricted; fees can increase to a maximum of 20% year-over-year[3]. In 2016, the average cost of undergraduate tuition for international students increased by 8%[4]. Unlike domestic students, international students' tuition fees are not partially subsidized through provincial and federal grants. In addition to tuition fees being almost four times the rate of domestic fees, international students must also pay for mandatory services, like health insurance. Alongside program and course requirements, academic and living expenses are strenuous for student wallets.

Students have been consistently advocating for improvements in health services and college resources, including nutritious and affordable on-campus foods. Nutritionists advocate for healthy diets consisting of at least five servings of fruits and vegetables daily to assist with the prevention of cardiovascular disease and to support immune functions[5]. In the American College Health Association (ACHA) survey of Ontario post-secondary students, only 8.6% of students ate the recommended servings of fruits or vegetables, while 5.6% reported not eating fruits or vegetables at all[6]. More concerning is the fact that these dismal results demonstrate a decrease in consumption from 2013, where nearly 12% of students reported meeting nutritionists' standards[7].

Mental health in PSE is also problematic. Post-secondary students are increasingly reporting challenges with mental and emotional health, as well as inadequate resources to assist them. Students are waiting unreasonable times to receive counselling services, increasing their mental and emotional burden and creating a repetitious cycle of waiting for a crisis situation before receiving help. Despite these demands, colleges, like other post-secondary institutions, are faced with the inability to supply and service all students due to lack of financial resources. The result of this is abetting the decline of student health.

---

1 Statistics Canada. (2017).

2 Queen's Printer for Ontario. (2015).

3 (MTCU, 2013).

4 Statistics Canada. (2017). Table 477-0077

5 Pérez, C. (2002).

6 American College Health Association; 2016.

7 American College Health Association; 2013.

College institutions in Ontario, inclusive of almost half of the post-secondary population, are funded categorically less than universities. According to the Financial Accountability Office of Ontario, nearly 59% of Ontario's PSE funding was distributed to universities, while colleges were provided with 25%[8]. Institutions are relying on international student fees and private donors as revenue sources. If insufficient, institutions face alternative measures to ensure necessary academic resources are provided, often to the disadvantage of other required student resources.

Colleges and student associations realize the necessity of student supports on campus and are providing food banks, emergency training programs, and additional student aid. Unfortunately, these services are struggling to meet student demands. Food banks are continuously used by international and domestic students, many of which access the service multiple times a year. College breakfast programs, open to the general student population, can experience upwards of a thousand students in one month[9]. The data on emergency food services does not accurately conceptualize how many students are sleeping, studying, and trying to learn while hungry. The shame of needing assistance is at times more pervasive than the ability to ask for help.

Food insecurity, defined as the absence of nutritious, culturally reflective, accessible and sufficient food[10], creates magnified consequences for those that experience it. Inattentiveness is just one of the short-term effects; long term, students face substantial cognitive, physical and mental harm that can persist in duration and severity[11,12].

Food insecurity is reflective of social, regional and financial inefficiencies that are often already impacting marginalized households. Populations susceptible to being food insecure can be found in Ontario and subsequently Ontario's colleges. It is estimated that 39% of post-secondary students experience food insecurity[13]. With exponential cost increases to housing and childcare, independent students and students with dependents often choose between a place to stay and a meal to eat.

Provincial assistance has been provided to alleviate the effects of poverty. Ontario passed Bill 148, Fair Workplaces, Better Jobs Act, 2017, to increase minimum wage to $14 an hour, with a subsequent $1 increase the following year to improve living conditions[14]. Changes to the Ontario Student Assistance Plan (OSAP) have reduced repayment amounts for over 200,000 students by covering tuition expenses. Despite these measures, many systemic issues creating poverty persists. Institutions, student associations and student resources are limited. Colleges need more help.

Responding to the levels of food insecurity present in post-secondary institutions, student associations affiliated with College Student Alliance identified food security as one of the main concerns on Ontario college campuses. Recommendations on the federal, provincial and regional level have been identified to assist post-secondary students in achieving a stable state of food security.

8 FAO. (2016).

9 Based on College Foodbank and Services data provided by CSA membership.

10 (Canada, 1998).

11 (Davidson, 2015).

12 (Tarasuk, et al., 2015).

13 (Silverthorn, 2016).

14 (Queen's Printer for Ontario, A plan for fair workplaces and better jobs (Bill 148), 2017).

WHAT IS FOOD SECURITY?

Food security is defined as a state in which all people have continuous physical, social and economic "access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.[15]" Food insecurity operates as a continuum ranging from mild to severe, occurring on an infrequent or frequent basis.

The severity of food insecurity is attributed to the continuance of inadequate or unhealthy food intake. The Food Insecurity Experience Scale (FIES) measures food insecurity through an individual's responses to eight questions[16], placing respondents into categories ranging from food uncertainty to actual hunger[17].

Figure 1: Levels of Food Insecurity

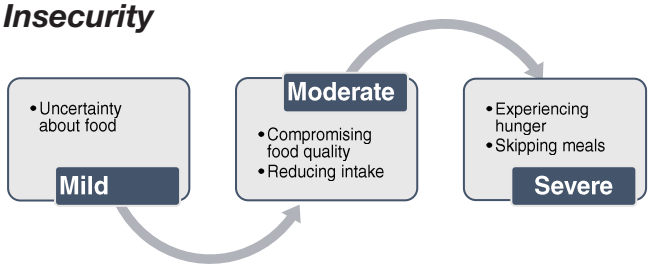
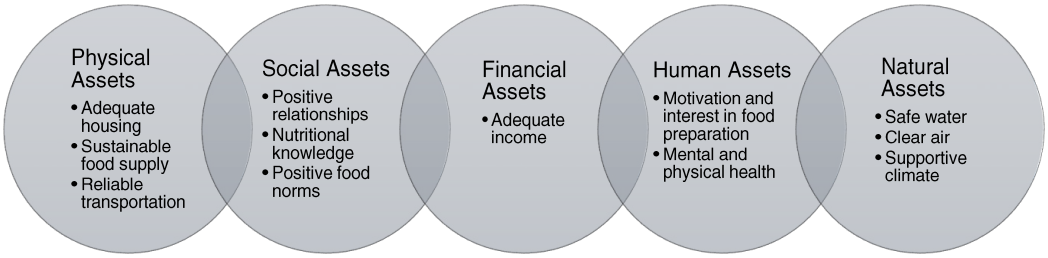


Figure 1 based on FIES continuum from the Food and Agriculture Organizations website

Food insecurity is not an autonomous occurrence; its development is often a repercussion of social, economic and regional inadequacies plaguing already marginalized households. Biased perceptions lead many to incorrectly believe that food security is not a Canadian problem. On the contrary, over 4 million Canadians struggle to secure healthy food on a consistent basis[18]. Across the provinces, food insecurity rates effect anywhere from 11% to 47%[19] of provincial populations. For food security to be achievable, an equilibrium of assets needs to be accessible for Canadian households. Adequate housing and transportation, community supports, sufficient income, motivation and good health all assist in the achievement of a food secure household.

Figure 2: Prerequisites for Food and Nutritional Security[20,21]



[15] World Food Summit, 1996 – retrieved from (FAO, Policy Brief: Food Security, 2006).

[16] (FAO, Food Security Statistics, n.d.).

[17] IBID.

[18] (PROOF, Household Food Insecurity in Canada, n.d.).

[19] Proof Household Food Insecurity in Canada (PROOF, Household Food Insecurity in Canada, n.d.).

[20] (Yeudall, 2015).

[21] (Queens Printer for Ontario, Building Ontario's First Food Security Strategy, 2017).

Food sovereignty, defined as "the right of local peoples to control their food systems, including markets, ecological resources, food cultures, and production modes"[22], acts adjacently to food security. Unlike food security, food sovereignty includes notions of cultural and individual empowerment and challenges political proponents of food preparation, research, production and ownership. Its emphasis on a local ecological paradigm allows for autonomy not necessarily reflected in food security. The grassroots movement is especially important for populations in which the acceptance of cultural practices or processes are limited[23]. Advocates of food sovereignty question the widespread corporatization and imposed abidance of a globalized food system, and instead call for a transformative approach "that devolves more responsibility and decision-making power to farmers, Indigenous peoples, food workers, consumers and citizens for the production of social and ecological knowledge," (Pimbert, 2006, p. 1). Considering Ontario's diverse urban and rural landscapes, both food security and food sovereignty contribute necessary value in the procurement of a food secure population.

THE EFFECTS OF FOOD INSECURITY

Health implications of nutritional deficits can be dire. Bouts of hunger can trigger stress, exhaustion and lack of concentration[24]. Children experiencing food insecurity face compromised hormonal, cognitive, and social development that may continue through adolescence[25]. Hunger can also impede academic progress; poor fine motor skills, poor language comprehension and hyperactivity are found to be consequences children from food insecure households experience more frequently than food secure children[26]. For these children, academic milestones may be delayed - gone unnoticed, these effects may be incorrectly perceived as an underachieving student.

Long-term implications of nutritional deprivation are exhaustive and increase in severity. Youth and adults struggling with food insecurity over a prolonged period are at a higher risk of suffering from obesity, tooth decay, high blood pressure, high cholesterol, heart disease and stroke, type-2 diabetes, osteoporosis, and some cancers[27]. For those with compromised immune systems, food insecurity can complicate the management of illnesses. Increased hunger are side-effects of some types of medication. More concerning is the fact that prolonged food insecurity reduces immune capability[28]: "poorly nourished people are usually less resistant to infections, and they tend to heal more slowly, have more diseases and longer hospital stays," (Che, J & Chen J , p. 11). In addition to the primary health effects, food insecurity can increase hospital expenditures to almost double that of food secure populations[29].

[22] (Hannah Wittman Annette Aurélie Desmarais, 2012).

[23] (Wittman, 2011).

[24] (Jyoti, Frongillo, & Jones, 2005).

[25] (Ke & Ford-Jones, 2015).

[26] IBID.

[27] (PROOF, The Impact of Food Insecurity ono Health, 2016).

[28] (Cox J, Hamelin AM, McLinden T, Moodie EE, Anema A,, 2016).

[29] (Tarasuk, et al., 2015).

Food Insecurity and Mental Health

Food insecurity is both the result of and influence over other illnesses. Childhood food insecurity is associated with depression and suicidal ideation during adolescence and adulthood later in life[30]. In a Canadian study, the severity of food insecurity had negative implications on mental health and mood disorders[31]. Much like the physical effects of food insecurity, the relationship between food insecurity and mental illness is cyclical; lack of nutrients can destabilize moods, cognitive function, and mental and physical health[32]. Some forms of mental illness, like depression and anxiety, make it difficult to obtain healthy food on a consistent basis. Inability to access healthy food establishes more stress, increasing susceptibility of mental health issues and producing a pattern of despair.

Post-secondary is an integral time to assist with the management of mental and emotional challenges. About 75% of mental health symptoms materialize prior to age 25: "Roughly half of all lifetime mental disorders in most studies start by the mid-teens and three-fourths by the mid-20s. Later onsets are mostly secondary conditions," (Kessler, R. C., Amminger, G. P., Aguilar-Gaxiola, , 2007, p. 1). By the time students enter post-secondary, the effects may be magnified for those not provided with appropriate interventions. Coupled with a state of food insecurity, post-secondary students are at-risk of poor physical and mental health with prolonged exposure to food insecurity. Early resolutions can alleviate the effects of these concerns before becoming undefeatable obstacles. Focusing on food security and health previous to and during post-secondary education can steer health efforts from symptom maintenance to preventative care.

PROVINCIALLY-FUNDED FOOD SECURITY PROGRAMS

In 2017, the federal government began consultations for a national food policy, in hopes to "set a long-term vision for the health, environmental, social and economic goals related to food, while identifying actions we can take in the short-term," (Government of Canada, A Food Policy for Canada, 2017). Federally, food security initiatives are managed by the Public Health Agency of Canada (PHAC). Nutrition North, a federal subsidy program to reduce the price of healthy food in northern communities, as well as the Healthy Weights Innovation Strategy are two federally-funded food security initiatives available across Canada[33]. In addition, food security data is collected and analyzed through Statistics Canada. Despite these resources, the amount of federal supports are incomparable to local and provincial initiatives established to assist Canadians achieve food security.

THE LOCAL POVERTY REDUCTION FUND

The *Poverty Reduction Strategy* was developed to monitor and reduce poverty levels in Ontario. Included is the Local Poverty Reduction Fund – a $50 million, 6-year initiative for community-led poverty reduction strategies. In 2017, a food security stream allocating a maximum of $5 million to food security related projects was provided. In October 2017, more than $4.5 million of food security funding was distributed (Queen's Printer for Ontario, Local Poverty Reduction Fund, 2017).

30 (Ke & Ford-Jones, 2015).

31 (Davidson, 2015).

32 (Davison KM, Ng E, Chandrasekera U, Seely C, Cairns, 2012).

33 (Government of Canada, Nutrition North Canada, 2017).

Provincial food security efforts have been implemented for decades. A year following the 2008 economic crisis, the Ontario government published Breaking the Cycle: Ontario's Poverty Reduction Strategy outlining set objectives, the most ambitious being the reduction of child poverty by 25% over 5 years (yet to be accomplished)[34]. Recent additions to this strategy include a food security stream to fund local food security initiatives and pilot-projects in Ontario. Farmers are also provided with tax incentives for food donations to eligible community food programs through Bill 36, Local Food Act, 2013[35].

Provincially-funded programs for school-aged children are the most prominent food security initiatives available. In these programs, the province distributes funds to local parties responsible for coordinating and managing supports within their respective regions. Examples include:

- The Northern Fruit and Vegetable Program that delivers locally-grown produce to primary and intermediate schools in the northern Ontario towns of Algoma, Porcupine, and Sudbury[36].

- The Student Nutrition Program (SNP) provides primary and secondary students across Ontario with a nutritious meal or snack at no cost. Additional fundraising efforts, volunteers, and increased funding has led to its substantial success. The SNP has grown exponentially since implementation, providing meals to more than 850,000 students each year with provincial funding totaling $32 million annually[37].

At the post-secondary level, funded food security programs are almost non-existent, entirely counterproductive of previous intervention efforts. The majority of graduating secondary students will attend post-secondary institutions at some point with renewed responsibility over their living conditions. With evidence to support compounding effects food insecurity has on health, resources to support food security for a population still undergoing cognitive development is necessary.

[34] (Queens Printer for Ontario, Breaking the Cycle: Ontario's Poverty Reduction Strategy, 2009).

[35] (Legislative Assembly of Ontario, 2013).

[36] (Queens Printer for Ontario, Building Ontario's First Food Security Strategy, 2017).

[37] Queens Printer for Ontario, Poverty Reduction Strategy Annual Report 2017.

FOOD INSECURITY IN POST-SECONDARY

Food insecurity can challenge educational pathways prior to enrolment in post-secondary education. Inattentiveness as a result of food insecurity can impact grades; low academic marks or early withdrawal from studies is an undesired outcome if food security remains unattainable. Generally, low-income, single-parent and racialized households all present greater associations with food insecurity[38]. In addition to these relationships, insufficient income, regional inequalities, cultural inconsideration, institutional obstacles and political inadequacies also contribute to making food security unachievable for Ontario college students.

Insufficient Funds

Household poverty and students' inability to secure food are not mutually exclusive. Across Ontario, approximately 12% of households are food insecure, demonstrating a lack of substantial progress since 2007[39]. Almost half of Ontario's college applicants are from households making less than $60,000 a year[40], despite the provincial median income being more than $74,287 in 2015[41]. Assisting with household expenditures, through OSAP or employment income, may be within student responsibility no matter their academic status. A consequence of empty wallets is the elimination of choice. Unhealthy foods, oftentimes filled with preservatives, salt, and saturated fat lasts longer than healthy but perishable items. When time and money is scarce, students rely on unhealthy meals to sustain themselves[42], compromising on health in exchange for housing and tuition, sometimes for their families in addition to themselves.

Table 1: Percentage of Food Insecure Households in Ontario

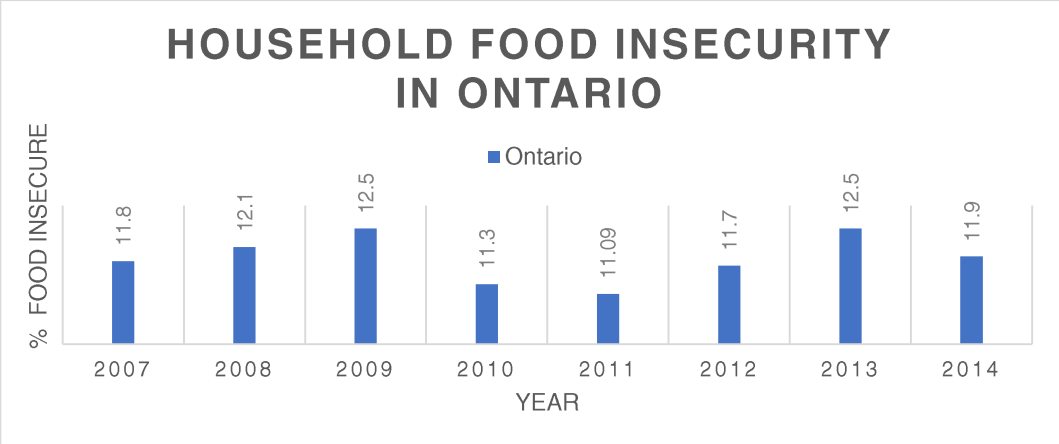


Table 1: Sourced from Tarasuk, V, Mitchell, A, Dachner, N. (2016). Household food insecurity in Canada, 2014.

[38] (Tarasuk, V., Mitchell, A., & Duchner, N., 2016).

[39] (Tarasuk, V., Mitchell, A., & Duchner, N., 2016).

[40] (Colleges Ontario, 2017).

[41] Based on 2015 data. (Statistics Canada, Household Income in Canada: Key Results from the 2016 Census, 2017).

[42] (Neyman, Silliman, & Rodas-Fortier, 2004).

Regional Inequalities

Even if poverty is not a persistent challenge, the campus or community a student lives in can influence their eating habits. Food deserts are defined as "neighborhoods where residents have little or no access to stores and restaurants that provide healthy and affordable foods," (Food Secure Canada, n.d.). Contrary to popular perception, food deserts are seldom barren wastelands – they often host convenient stores, fast-food restaurants and small markets with limited healthy food options. To access healthy food, students must have reliable transportation which is not always available or economical. To counteract this, some college student associations provide transportation to and from grocery stores so students without a vehicle can purchase food. Conestoga Students Inc. (CSI), with a population of over 12,000 students, provides a shuttle service to grocery stores for students. In addition to this, CSI highlights grocery store deals to the student population through social media. The grocery-shuttle program has become a staple for students that do not have reliable access to transportation, as well as international students getting accustomed to their campus and community.

Cost of nutritious food can differ between regions. Differences in food prices is observed through the Nutritious Food Basket(NFB) program, a provincially regulated monitoring tool implemented by local health authorities. Using nearby food markets as a resource, the NFB surveys the cost of over 60 nutritious foods each year to monitor the cost of healthy eating within each region and to inform appropriate strategies as required. In Toronto, the cost of nutritious groceries for a single person in 2017 was estimated to be $288.22 monthly[43]. In Thunder Bay, estimates were $290[44]. In Peterborough, where about one in six households experience food insecurity, healthy grocery purchases are approximately $301 monthly[45]. Regional differences in food prices are not considered when calculated grant distribution for living expenses. Students living in campuses with more expensive food prices may have to limit the quantity of food to remain within budget.

[43] (City of Toronto, 2017).

[44] (Unit, 2017).

[45] (Health, 2017).

Student and Cultural Inconsideration

More than 42,000 international students attended an Ontario college in 2016[46], despite paying some of the highest tuition fees in Canada. Though many international students attend school in the Greater Toronto Area, more international students are attending colleges in low-density areas as well. Sault College, containing a full-time funded population of nearly 2,200 students in 2015, experienced a 100% increase in international students between 2015 – 2017[47]. Sault College is not the only college with such increases. Partly due to marketing and partnerships, Ontario colleges welcomed a 24% increase in international students from 2015 - 2016 from various countries, including India, Nigeria and China.

Despite increased efforts to attract international students, escalating living expenses and tuition fees are unsustainable financial obstacles. International students must often decide between academic resources or living expenses to maintain their academic status and residency. To get by, some international students receive assistance from other international students. In the Canada's First National survey, **52% of international college students reported assisting other international students by lending food, money, or accommodations at least once**[48]. Social and cultural supports can become temporary solutions in delaying hunger when available. Unfortunately, this may come at the expense of other international students struggling to keep afloat.

Food is an extension of social and cultural identity; for students new to a different country or continent, traditional foods can hold a sense of comfort and familiarity. Ensuring a supportive network for international students is especially important for medium and low-density schools, as they may not have the same community supports available in larger campuses. As colleges continue to attract international students, they must ensure reflective foods and services are accommodating, accessible and properly communicated to students.

Through partnerships with local food services and markets, communities can ensure students are equipped with resources to continue their cultural and religious customs respectfully. For example, St. Francis Xavier University in Nova Scotia worked alongside their food provider to create an international menu, in addition to their previous efforts in inviting visiting international chefs to prepare meals [49]. Not only does this support international students with accessing traditional cuisine, it also creates a more welcoming environment. Just as post-secondary institutions establish partnerships to increase international student awareness of Ontario college campuses, measures have to be taken to ensure colleges and communities are aware, knowledgeable and accommodating of international students.

[46] (Colleges Ontario, 2017).

[47] (Sault College, 2017).

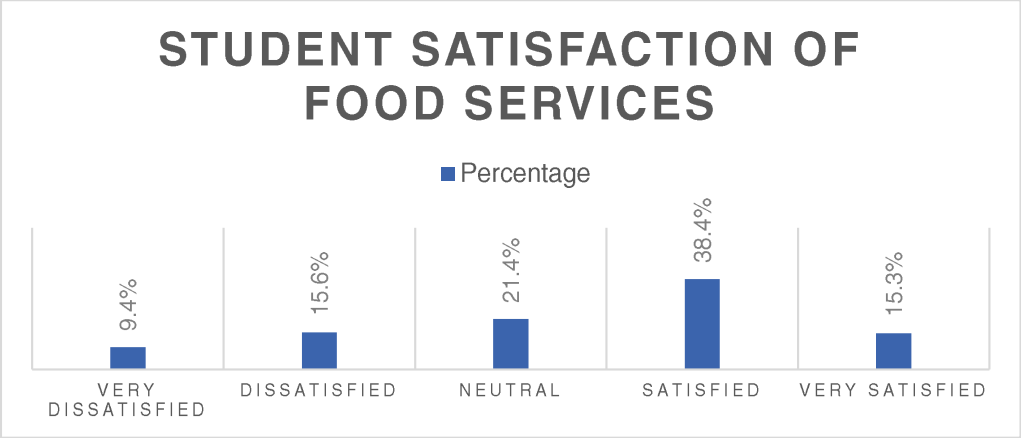
[48] (Prairie Research Associates (PRA) Inc, 2009, p. 51).

[49] (STFX GIVES INTERNATIONAL STUDENTS A TASTE OF HOME WITH NEW DINING MENUS, 2016).

Institutional obstacles

Across Ontario, post-secondary campuses are generally limited to a few food corporations. As a result, much of the campuses have similar set of restaurants and food services that students access. In the 2015/2016 Student Satisfaction and Engagement Survey (SSES), 91% of Ontario college students indicated that food services were important[50]. Though the majority of students reported satisfaction or high satisfaction with food services (54%), a quarter of Ontario college students reported being very dissatisfied or dissatisfied with food services.

Table 2: Ontario College Student Satisfaction of Food Services[51]



In Meal Exchange's survey of Ontario's university students, less than half of students (44%) agreed that on-campus food was fresh[52]. About a quarter of students felt that on-campus food assisted with the maintenance of a healthy diet[53]. This is problematic as it demonstrates that students may not be able to rely on post-secondary institutions to support a healthy lifestyle. One of the reasons food services were considered unsupportive of a healthy diet was due to the availability of food services[54]. In some campuses, service hours do not coincide with class times and close prior to classes finishing. This is especially prevalent in smaller campuses and during the summer semester, as hours are condensed due to smaller enrolment rates. Limited food options and restricted on-campus cafeteria hours exacerbates the issue by increasing students' reliance on fast food (or no food) alternatives. An accessible food service, equipped with healthy food options, variety, and suitable prices is a demand many institutions have yet to provide.

[50] Excludes student non-response or multiple responses.

[51] Based on the KPI SSES data for 2015/2016.

[52] (Maynard, M. Lahey, D, Abraham, A, 2018).

[53] (Maynard, M. Lahey, D, Abraham, A, 2018).

[54] IBID.

Political Inadequacies

Decades of federal complacency created insufferable challenges in Indigenous communities living on reserves. Almost 48% of Indigenous adults living on-reserve in Ontario suffer from food insecurity[55]. In some reserves, communities must boil water or rely on imported water due to the severity of biological and chemical contaminants. After several federal attempts to establish water facilities and billions spent on water treatment infrastructure, many reserves are still left with subpar facilities and inadequate drinking water. Indigenous and Northern Affairs Canada (INAC) in partnership with Indigenous communities, committed to rectifying the drinking water crisis by March 2021[56], which in some communities, has been ongoing for decades. As of Feb. 20, 2018, there were 50 water systems under a boil water advisory or a do not consume advisory[57]. Since the commitment was documented into the 2016 federal budget, 22 long term water systems in Ontario funded by the INAC are no longer under advisory[58].

DWA ON INDIGENOUS RESERVES IN ONTARIO

As of March 2018, the oldest drinking water advisory (DWA) - set at 1996 - is currently under construction. To be completed by December 2018, the Neskantaga Public Water System (#7137) effects a community of more than 300 people. (Canada I. a., 2018)

Access to clean drinking water is a basic need afforded to millions of post-secondary students across Canada. The inability to provide this to Indigenous communities living on reserves not only increases susceptibility to health issues, but also creates massive barriers to educational attainment and post-secondary success. For students across Canada to be successful, basic needs must be met.

[55] (Queens Printer for Ontario, Building Ontario's First Food Security Strategy, 2017).

[56] (Canada I. a., 2018).

[57] IBID.

[58] IBID.

FOOD SECURITY PROGRAMS ON CAMPUS

Emergency food provisions, such as food banks or food vouchers, are available in most Ontario colleges. Student associations support thousands of local students, international students and students with dependents by providing donated food and necessities. To reduce the fear of stigmatization, many campuses incorporate discrete distribution methods by delivering food to students' homes or putting food in lockers for pick up. Some students can also purchase fresh produce and groceries for a reduced fee through a membership with the Good Food Box. Breakfast and snack programs are also available in some college campuses. Similar to SNPs, students are provided with a healthy breakfast for free or at reduced cost without having to express need. Programs vary in the number of times they can be accessed (ranging from twice a week to a multiple times each month).

Student associations must fundraise or rely on membership funds, donations and sponsorships to ensure sufficient food for student populations. In some cases, fundraising can be incredibly successful. In 2018, Confederation College in Thunder Bay was awarded for raising over $59,000 for their college food bank, United Way's funded agencies and the Emergency Student Fund[59]. Through a number of innovative events and initiatives, students and employees contributed to ensuring emergency supports are available for students and the community. Every year, the College Student Alliance provides funding to membership associations as part of the Point Bank program sponsored by ACL Student Benefits. In exchange for participation in various activities and services, student associations receive funding for food banks, food cupboards or breakfast programs. In the 2016 – 2017 school year, CSA distributed $8,700 to support food security initiatives for participating student associations[60].

Though student associations in Ontario campuses strive to support students through fundraising and event initiatives, the availability of food reflects financial resources rather than students' needs. To ration resources, campuses often limit students access to food banks, instead providing community referrals should students exceed their weekly, monthly, or semester intake.

Despite its necessity on campus, emergency food provisions do not improve individual and community capacity, nor does it rectify social, economic and regional inefficiencies. Foodbanks are often last-resort solutions once food insecurity has reached peak severity, eliminating opportunities to improve conditions and adverse health effects during mild to moderate states. Institutional and multi-sector investment in food security programming, such as community kitchens, will allow student associations to provide unique services reflective of students and community needs.

Post-secondary institutions are uniquely positioned to address the obstacles of food insecurity for students. In one location, students can independently address their health, develop their academics, and pursue social transactions. Institutions can be conducive or a hindrance in facilitating a food secure population. The absence of community supports become apparent during college; without adequate measures, post-secondary institutions risk continuing a pervasive societal challenge.

[59] (News, 2018).

[60] (College Student Alliance, 2017).

RECOMMENDATIONS

For a reflective policy reform, the consideration of both food security and food sovereignty as necessary approaches to address asset deficiencies is required. The collaborative efforts from government sectors, community organizations, students and academic institutions can transform the state of food insecurity in Ontario college campuses. Within each sector, the following recommendations can assist in the development of financial, social, and regional stability to foster food security for students.

FEDERAL

Recommendation 1: The federal government should develop a national strategy to reduce food insecurity by at least 25%.

The levels of food insecurity as a nation dramatically differ across Canada, the worst being Nunavut, where nearly half the population is food insecure. Though there is a national strategy underway, there remains opportunities to outline explicit intent on reducing food security as a nation. Striving for a tangible reduction in food insecurity steers the conversation from goals to implementation and development. The participation of multiple sectors and stakeholders will be needed to create a functional strategy that addresses food security conducive to economical and agricultural success.

Recommendation 2: The federal government must mandate the regular collection of provincial food security data.

A national or provincial food security strategy unequipped with relevant and recent data risks being outdated and unreflective of population needs. Currently, provinces may opt-out of providing food security data every few years. As a result, Ontario omitted food security data in the latest Canadian Community Health Survey (CCHS), creating inconsistent terms for analysis for 2015 and 2016. Mandatory data collection will allow for policy makers, communities and stakeholders on the federal and provincial level to observe trends and monitor the success of program and policy implementation.

Recommendation 3: Indigenous communities and the federal government should continue to work in partnership to provide annual updates of short- and long-term drinking water advisory efforts on Indigenous land until all drinking water advisories are resolved.

Unclean drinking water affects Indigenous students with time and health sacrifices not required from post-secondary students settled elsewhere. Directly affected is the ability to practice and use land and water for religious and cultural practices. A partnership between Indigenous communities and the federal government to continuously monitor, report, and maintain water quality will support the accessibility of clean water. Partnerships must also extend beyond water policy. The federal government must recognize and remove political barriers preventing Indigenous communities from practicing food sovereignty freely.

PROVINCIAL

Recommendation 4: The province must increase funding to colleges to assist institutions with providing necessary student services.

The continuous demand for student health resources amid inadequate services and supports is a detriment to student health. The reliance on international students for revenue, without subsequent increases in international student health care, is unfair and disadvantageous to international students. Increased investment in the college sector, specifically to student services, can reduce the financial burden currently experienced by international students, as well as increase supports to students that are in desperate need of adequate health services.

Recommendation 5: The province must increase funding and resources for food security programs available for post-secondary institutions to supplement mental health and poverty reduction efforts.

The compounding effects food insecurity has on mental health can be especially problematic for students in post-secondary. Ensuring students are provided with healthy food can complement mental health supports. If applying the ratio of SNPs to programs in post-secondary institutions, a commitment of $10 million/year can further food security and mental health initiatives in post-secondary. Increased investment will equip students with the capacity to support their mental and physical well-being during and after college.

Recommendation 6: The provincial and municipal government should support local and individual food security initiatives using urban planning and policy as directives.

The conservation and protection of Ontario's ecosystem is vital in securing agricultural land, however, infrastructure and regional developments can be more inclusive of environmental and agricultural initiatives. Agricultural spaces in new designs and renovated developments can provide opportunities for local residents to enhance their ecological awareness and agriculture knowledge. Supporting agriculturally-inclusive design, space and development is instrumental in providing opportunities for community and individual autonomy in rural and urban locations.

REGIONAL/INSTITUTIONAL

Recommendation 7: Municipal and community investment in local food initiatives must increase to support community capacity.

Funding food preparation, agricultural businesses, and transportation resources can assist individuals in securing access to reasonably priced, reflective, and healthy food. Much of these resources are already in existence, however, accessibility can be maximized through better partnerships and funding. Government and local organizations can collaborate by further incentivizing food security efforts and increasing community resources, resulting in improved student capacity and stronger support systems to assist with student retention.

Recommendation 8: Municipalities, grocery stores and food institutions must work alongside colleges and student associations to prepare for incoming international students.

Communities and campuses must increase international food options. Efforts to service the needs of international students, such as including culturally- reflective foods, can assist with student retention and transitions into Ontario. Campus and community collaboration can provide local stores and food institutions with general insights of incoming international students before students' arrival. Not only will this assist local markets with purchasing, it will also assist communities and colleges in welcoming and accommodating the needs of international students.

Recommendation 9: Student associations must be stakeholders in the negotiations of food service agreements on campus.

Many post-secondary students do not believe that food services on campus are supportive of a healthy diet. Student associations need to be able to ensure that the services available on campuses are supportive of learning and student health. To advocate effectively, student associations should implement regular reviews of food services, using qualitative analysis, to ensure access and quality standards are satisfied. Understanding student dissatisfaction of on-campus food may provide insight on student expectations, challenges, and the accessibility of food services.

Recommendation 10: Students associations should work with administrators to maximize college space for the development of food security strategies on campus.

The development of school gardens and community kitchens can be done using the space already available on campuses. Student associations and administrators should collaborate in maximizing spaces to provide opportunities to build community capacity. For example, Ryerson University has a both ground level and roof top gardens producing over 10,000 pounds of food each year[61], some of which is used by campus food services. Not only does this assist with community and student capacity, it also reduces transportation costs for food items.

Recommendation 11: Food institutions on campus should donate a portion of healthy food back into campus, either in the form of compost or reduced cost/free food.

Students heavily rely on food institutions on campus for their daily nutritional needs, however, affordability remains a concern for low-income students. Ensuring that institutions are active participants in supporting the needs of college students can assist student associations with providing more emergency provisions, as well as reduce waste.

[61] (University, n.d.).

CONCLUSION

Pathways to education extend beyond enrolment. Ensuring students are provided the necessities to focus on academics, irrespective of socio-economic status, is a true indication of progress. Advocating for food security in post-secondary requires the investment, evaluation, and collaboration of government, community, academic and non-academic stakeholders. Considering the burden food insecurity puts on social and health infrastructure, public and private investment should seek to ensure Ontario's college students, whether in the classroom or in workforce, are equipped with the resources to create a resistant and healthy economy.

WORKS CITED

Anisef, P., Robson, K., Maier, R., Brown, R. S. (2017). Food Insecurity and Educational Outcomes: A Focus on TDSB Students. Higher Education Quality Council of Ontario.

Canada. (1998). Canada's Action Plan for Food Secuity (1998). Retrieved 01 01, 2018, from http://www.agr.gc.ca/

Canada, I. a. (2018, March 1). Ending long-term drinking water advisories in First Nation communities. Retrieved from Indigenous and Northern Affairs Canada: https://www.aadnc-aandc.gc.ca

Che, J & Chen J . (n.d.). Food insecurity in Canadian households. Health Report, 12(4).

City of Toronto. (2017). Cost of the Nutritious Food Basket. Toronto: City of Toronto.

College Student Alliance. (2017). CSA Annual Report 2016/2017. Toronto. Retrieved 04 14, 2018, from www.collegestudentalliance.ca

Colleges Ontario. (2017). Environmental Scan: Student and Graduate Profiles. Colleges Ontario. Retrieved November 1, 2017, from http://collegesontario.org/

Cox J, Hamelin AM, McLinden T, Moodie EE, Anema A,. (2016). Food Insecurity in HIV-Hepatitis C Virus Co-infected Individuals in Canada: The Importance of Co-morbidities. AIDS and Behavior, 1 - 11.

Davidson, K. (2015). Association of Moderate and Severe Food Insecurity with Suicidal Ideation in Adults: National Survey from three Canadian Provinces. Social Psychiatry and Psychiatric Epidemiology, 50(6), 963 - 972.

Davison KM, Ng E, Chandrasekera U, Seely C, Cairns. (2012). The Role of Nutrition in Mental Health Pomotion and Prevention. Dietitians of Canada. Retrieved February 1, 2018, from www.dietitians.ca/mentalhealth

FAO. (2006). Policy Brief: Food Security. Retrieved 01 01, 2018, from http://www.fao.org/

FAO. (2016). The Funding of Postsecondary Education in Ontario. Retrieved from Financial Accountability Office of Ontario: http://www.fao-on.org/en/Blog/Publications/Post_Secondary

FAO. (n.d.). Food Security Statistics. Retrieved from FAO: http://www.fao.org/economic/ess/ess-fs/en/

Food Secure Canada. (n.d.). "FOOD DESERTS" . Retrieved from Food Secure Canada: RESOURCES AND INFORMATION FROM THE CANADIAN ENVIRONMENTAL HEALTH ATLAS: https://foodsecurecanada.org/

Government of Canada. (2017). A Food Policy for Canada. Retrieved from Government of Canada: https://www.canada.ca/en/campaign/food-policy.html

Government of Canada. (2017). Nutrition North Canada. Retrieved from Government of Canada: http://www.nutritionnorthcanada.gc.ca

Hannah Wittman Annette Aurélie Desmarais. (2012, Sept 1). Movement growing to control our own food and agriculture. Retrieved from Canadian Centre for Policy Alternatives: https://www.policyalternatives.ca/

Health, P. P. (2017). Low Income and its Impact on Health in Peterborough County and City. Peterborough: Peterborough Public Health.

Jyoti, D., Frongillo, E., & Jones, S. (2005). Food Insecurity Affects School Children's Academic Performance. Journal of Nutrition.

Ke, J., & Ford-Jones, E. (2015). Food insecurity and hunger: A review of the effects on children's health and behaviour. Paediatrics Child Health.

Kessler, R. C., Amminger, G. P., Aguilar-Gaxiola, . (2007). Age of onset of mental disorders: A review of recent literature. Current Opinion in Psychiatry, 20(4). doi:http://doi.org/10.1097/YCO.0b013e32816ebc8c

Legislative Assembly of Ontario. (2013). Bill 36, Local Food Act, 2013. Retrieved from Legislative Assembly in Ontario: http://www.ontla.on.ca/web/bills/bills_detail.do?locale=en&BillID=2754

Maynard, M. Lahey, D, Abraham, A. (2018). Campus food report card: the state of food on Ontario university campuses. Toronto: Meal Exchange. Retrieved Jan 01, 2018, from https://www.mealexchange.com/reportcard/

News, C. (2018, 01 23). Confederation College celebrates $59K contribution to United Way. Retrieved 03 02, 2018, from CBC: http://www.cbc.ca/

Neyman, M., Silliman, K., & Rodas-Fortier, K. (2004). A Survey of Dietary and Exercise Habits and Perceived Barriers to Following a. Californian Journal of Health Promotion, 2(2), 10 - 19. Retrieved from http://www.cjhp.org/

Ontario, Q. P. (2009). Healthy eating for children. Retrieved from Ministry of Health and Long-Term Care: http://www.health.gov.on.ca

Ontario, Q. P. (2017). Poverty Reduction Strategy Annual Report. Retrieved Nov 1, 2017, from Province of Ontario: http://www.ontario.ca

Perez, C. (2002). Fruits and Vegetable Consumption. Statistics Canada, 13(3).

Pimbert, M. (2006). Transforming Knowledge and Ways of Knowing. Chapter 7. In Towards Food Sovereignty: Reclaiming Autonomous Food Systems. London: IIED. Retrieved 02 02, 2018, from http://pubs.iied.org/pdfs/G01098.pdf

Prairie Research Associates (PRA) Inc. (2009). Canada First:The 2009 Survey of International Students. Winnepeg: CANADIAN BUREAU FOR INTERNATIONAL EDUCATION.

PROOF. (2016). The Impact of Food Insecurity ono Health. PROOF. Retrieved 01 01, 2018, from http://proof.utoronto.ca/

PROOF. (n.d.). Household Food Insecurity in Canada. Retrieved from PROOF: http://proof.utoronto.ca/food-insecurity/

PROOF. (n.d.). The Impact of Food Insecurity on Health. PROOF.

Queens Printer for Ontario. (2009). Breaking the Cycle: Ontario's Poverty Reduction Strategy.

Queen's Printer for Ontario. (2015). Bulletin: Ontario Continues to Cap University and College Tuition Fees. Retrieved from Ontario: https://news.ontario.ca

Queen's Printer for Ontario. (2017). A plan for fair workplaces and better jobs (Bill 148). Retrieved from Ontario.ca: https://www.ontario.ca/

Queens Printer for Ontario. (2017). Building Ontario's First Food Security Strategy. Retrieved from Province of Ontario: https://www.ontario.ca/page/building-ontarios-first-food-security-strategy

Queen's Printer for Ontario. (2017, Nov 2). Eduation Facts 2015 - 2016. Retrieved from Ontario Ministry of Education website: http://www.edu.gov.on.ca/eng/educationFacts.html

Queen's Printer for Ontario. (2017). Local Poverty Reduction Fund. Queen's Printer for Ontario. Retrieved 01 01, 2018, from https://www.ontario.ca/page/local-poverty-reduction-fund

Sault College. (2017). Sault College Annual Report 2016 - 2017. Sault College. Retrieved 02 01, 2018, from https://www.saultcollege.ca/

Silverthorn, D. (2016). Hungry for Knowledge: Assessing the prevalence of student food insecurity on. Toronto: Meal Exchange.

Statistics Canada. (2017, 11 29). Education in Canada: Key results from the 2016 Census. Retrieved from Statistics Canada: https://www.statcan.gc.ca

Statistics Canada. (2017). Household Income in Canada: Key Results from the 2016 Census. Retrieved from Statistics Canada: http://www.statcan.gc.ca

Statistics Canada. (2017). Table 477-0077: Canadian and international tuition fees by level of study. Retrieved from Statistics Canada: http://www5.statcan.gc.ca/

STFX GIVES INTERNATIONAL STUDENTS A TASTE OF HOME WITH NEW DINING MENUS. (2016, 09 30). Retrieved from St. Francis Xavier: https://www.stfx.ca/about/news/new-international-dining-menus

Tarasuk, V., Cheng, J., de Oliveira, C., Dachner, N., Gunderson, C., & Kurdyak, P. (2015, Aug 10). Association between household food insecurity and annual health care costs. CMAJ. doi:https://doi.org/10.1503/cmaj.150234

Tarasuk, V., Mitchell, A., & Duchner, N. (2016). Household food insecurity in Canada,. PROOF Food Insecurity Policy Research. Retrieved November 1, 2017, from http://proof.utoronto.ca

Unit, T. B. (2017). The Cost of Eating Well. Thunder Bay: Thunder Bay District Health Unit.

University, R. (n.d.). About. Retrieved from Ryerson Urban Farm: https://ryersonurbanfarm.wordpress.com/

Wittman, H. (2011). Food Severeignty: A new ights Framework for Food and Nature? Environment an Society: Advances in Research 2. doi:10.3167/ares.2011.020106

Yeudall, S. a. (2015). Sustainable Livelihoods for Food and Nutrition Security in Canada: A conceptual Framework for Public Health Research, Policy and Practice. Journal of Hunger and Environmental Nutrition, 10(1).

American College Health Association. American College Health Association-National College Health Assessment II: Ontario Canada. Reference Group Executive Summary Spring 2016. Hanover, MD: American College Health Association; 2016.

American College Health Association. American College Health Association-National College Health Assessment II: Ontario Province Reference Group Executive Summary Spring 2013. Hanover, MD: American College Health Association; 2013.

APPENDIX: SUMMARY OF RECOMMENDATIONS

Federal Recommendations

Recommendation 1: The federal government should develop a national strategy to reduce food insecurity by at least 25%.

Recommendation 2: The federal government must mandate the regular collection of provincial food security data.

Recommendation 3: Indigenous communities and the federal government should continue to work in partnership to provide annual updates of short- and long-term drinking water advisory efforts on Indigenous land until all drinking water advisories are resolved.

Provincial Recommendations

Recommendation 4: The province must increase funding to colleges to assist institutions with providing necessary student services.

Recommendation 5: The province must increase funding and resources for food security programs available for post-secondary institutions to supplement mental health and poverty reduction efforts.

Recommendation 6: The provincial and municipal government should support local and individual food security initiatives using urban planning and policy as directives.

Municipal/Local Recommendations

Recommendation 7: Municipal and community investment in local food initiatives must increase to support community capacity.

Recommendation 8: Municipalities, grocery stores and food institutions must work alongside colleges and student associations to prepare for incoming international students.

Recommendation 9: Student associations must be stakeholders in the negotiations of food service agreements on campus.

Recommendation 10: Students associations should work with administrators to maximize college space for the development of food security strategies on campus.

Recommendation 11: Food institutions on campus should donate a portion of healthy food back into campus, either in the form of compost or reduced cost/free food.

For more information, please contact:

OLIVIA DAGBO

RESEARCH & POLICY ANALYST

(416) 340-1212
research@collegestudentalliance.ca