



Original Research Article

Beyond health & nutrition: Imagining the school food environment through an integrated approach

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Abstract

In this paper we discuss one case study on school food environments in 50 elementary and high schools in a mid-sized city in Ontario, Canada. The school food environment is conceptualized broadly to capture the food cultures within schools including policies, programs, and food practices. The research used a structured questionnaire and qualitative open-ended questions with administrators about food access programs, priorities for the school food environment including school food philosophies, and their vision for a national school food program. Participant's priorities include: 1) food access; 2) health and nutrition; 3) education and food literacy; 4) the socio-cultural aspects of food; and 5) environment and sustainability. Most participants describe their food philosophies using health promotion discourses and construct food narrowly as either healthy and unhealthy, echoing provincial school food and nutrition policies and an instrumental approach. We suggest that administrator's framing of food through healthy food and nutritionism discourses reproduces wider societal views which medicalize food. We propose that overlapping socio-cultural and environmental priorities suggest that some administrators are also aware of emerging socio-ecological-nutrition frameworks and cultural food practices. We suggest there is a need to consider how an integrated approach to food would look within a future national school food program.

Keywords: School food environment; national school food program; nutritionism; integrated food pedagogies

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Introduction

Canada is currently the only G8 country without a national school food program (Colley et al., 2019; Hernandez et al. 2018). Currently, food provisioning is still largely seen as an individual or family responsibility rather than an integral part of public policy and the education system (Carbone et al., 2018). Different provinces, school boards, and schools have diverse approaches to the school food environment¹ relying on leaders within the schools (teachers, principals, etc.), charitable organizations, volunteers and in some cases, private enterprise to ensure food is available in schools (Carbone et al., 2018). Moreover, food is regulated in schools differently depending on provincial guidelines.

In Ontario, the School Food and Beverage Policy, or PPM150,² states, "the nutrition standards embody the principles of healthy eating outlined in Canada's Food Guide, and are intended to ensure that the food and beverages sold in schools contribute to student's healthy growth and development" (Ontario Ministry of Education 2010, section 5).³ This aligns with the three guiding principles found in the Ontario Student Nutrition Program Nutrition Guidelines (SNP Nutrition Guidelines) as follows, "1) that good nutrition is important for healthy growth and development in childhood and can reduce the risk of health problems in later years, 2) healthy children are better learners; and 3) schools can directly influence children's health" (Ontario Ministry of Children and Youth Services, 2016, p. 5). These school food policies and guidelines direct how food programs (breakfast, lunch, or snack) are administered in schools.

In focusing on health and nutrition, however, these policies overlook the complexity of food practices and food systems. The reductive focus on nutrients and foods that are deemed healthy through nutrition guidelines medicalize food, which is taken up in the school food environment through food access programs and food pedagogies (Poppendieck, 2010; Welch et al., 2012). This framework of constructing food through nutrition in the school food environment reproduces the binaries of healthy/unhealthy foods, which also moralizes individuals as either good or bad based on their food choices (Lupton, 1996) through a Eurocentric lens. This instrumental approach, or viewing food as the sum of its nutrients on bodily functioning, can have significant impacts on how food, health, and bodies are understood in a pedagogical context (Cameron & Russell, 2016; Scrinis, 2013). In particular, the complex social meanings shaping food in the school food environment are neglected at the expense of other ways of knowing food (Best, 2017) and the structural constraints of food access programs remain hidden from policy

¹The school food environment is conceptualized broadly to capture the food cultures within schools including policies, programs and food practices.

² The Policy Program Memorandum #150, or PPM150 is currently under review with no set date for release.

³ Health Canada released an updated version of the official food guide in January 2019, after we had finished data collection. The new 2019 food guide encourages a more holistic approach to healthy eating incorporating social and environmental awareness alongside nutrition. See <https://www.cbc.ca/news/health/canada-food-guide-unveil-1.4987261>

makers (Raine et al., 2003). There are missed opportunities to use food as a lens for thinking about the interconnections between health and identity (Guptill et al., 2015).

In order to address the high prevalence of food insecurity among children and increasing concerns about health and well-being, the Coalition for Healthy School Food has been advocating for a national healthy school food program, which the federal government has pledged its intention to work toward (Coalition for Healthy School Food, 2019; Government of Canada, 2019; Ruetz & Kirk, 2019). Hernandez et al. (2018) suggest that any future national school food policy must be based on principles of universality, based in health-promotion, respectful to local conditions, connected to local communities and economies, aware of the cultural diversity of students, and be sustainable both financially, and in terms of schools' capacities (p. 220). Oostindjer et al. (2017) suggest that school food programs promote health and sustainable eating practices through education, which can be integrated with the school meal. This integrated approach echoes Poppendieck (2010) who suggests that we need to consider critical food literacy in addition to health and nutrition within the school food environment. According to Cullen et al. (2016) food literacy is when individuals understand food as relational and contextual (p. 143). That is, there is a need to know or learn about food through a framework that includes the social, cultural, economic, political, health, and nutritional aspects of food in order to be able to develop a positive relationship with it, similar to emerging socio-ecological-nutrition or social justice models, which position food and nutrition as much more than nutrients (Hayes-Conroy & Hayes-Conroy, 2013; Mason & Lang, 2017).

In this paper, we explore school food environments and food access programs across four school boards. Administrators were interviewed about their school's food philosophies, their priorities for the school food environment, and how they might envision a national school food program. Currently, there is limited research on food access programs and the school food environment from the perspective of school administrators.

School food programs

Many countries have national school food programs including the USA, Japan, Finland, Sweden, and the United Kingdom (Harper et al., 2008). These programs vary significantly, from universal free-for-all models in Sweden and Finland, to programs which are moderately subsidized as in Japan (Kimura, 2016; NIER, 2013), to minimally subsidized programs in the US that are only free for low-income students (Harper et al., 2008; Poppendieck, 2010). The purposes and goals of school food programs are not the same in all countries. While providing a nutritional meal is a major goal for national school food programs, some countries take an integrated approach and recognize food programs as an important educational tool with socio-cultural significance (Kimura, 2016; Oostindjer et al., 2017; Persson, 2012).

Some national school food programs position food in economic and instrumental terms, which is evident in the US model (Poppendieck, 2010). When food is approached in an

instrumental way, feeding children is viewed as necessary to ensure that hunger or nutritional deficits do not interfere with learning (Colley et al., 2019). According to Poppendieck (2010), the US National School Lunch Program (NSLP) and School Breakfast Programs (SBP), both of which are available in most elementary and high schools, pursues this mandate (p. 3). Both programs are federal child nutrition programs administered and subsidized by the United States Department of Agriculture (USDA). The lunch program began in the first half of the 20th century, emerging from the Great Depression as a response to increasing malnutrition among young students and agricultural surplus (Poppendieck, 2010). While the two programs are available to all students in most states and school districts, it is not universally accessible as means-testing based on household income enable some students access to free meals whereas others pay subsidized fees or the full price. Although much more complex than there is space here to describe,⁴ Poppendieck (2010) argues that the purpose of the NSLP and the SBP have changed little since their inception with feeding food insecure children a nutritious meal and finding a use for agricultural surplus as the main justification for its continuance, which she points out is problematic given that these objectives are often in conflict with each other. The need for cheap and easily prepared school meals often forces cafeterias to sacrifice the quality and rely on cheaply processed, commodity foods such as pizza, French fries, chicken nuggets, or burgers. According to Weaver-Hightower (2011) and Laird (2018), food in US schools is often treated as a utilitarian necessity rather than seeing the potential and value of a more integrative approach and how it might benefit students.⁵

Alternatively, food can be understood as an integral part of the school day and the pedagogical aspects of food and eating are emphasized alongside the provision of food in an integrated model, which is found in Japan, Sweden, and Finland (Oostindjer et al., 2017). Scandinavian countries and Japan take a different approach to universal school food programming in that food is viewed in the context of food systems and food practices, and is seen as a pedagogical tool (Benn & Carlsson, 2014; Janhonen et al., 2016; Kimura, 2016; NIER, 2013; Persson, 2012). Finland, Sweden, and Japan recognize the provision of food as a public responsibility, which stands in contrast to Canada where parents have historically, and still today, largely been responsible for providing their children with bagged lunches (Carbone et al., 2018).⁶

Finland has numerous policies that regulate the provision of food in schools. Central to their model is that every child attending school must be provided a free lunch daily and that the

⁴ See Levine (2008) and Poppendieck (2010) for a more complete history of US school food programs.

⁵ In addition to the federal policies governing public school food in the US, there are private enterprises that collaborate with some community schools to bring a more integrative model of food pedagogy to schools, such as The Edible Schoolyard Project whose mission is to make a connection between curriculum and food education and uses school gardens and school kitchens as sites of experiential learning (The Edible Schoolyard Project, 2017).

⁶ Oostindjer et al., (2017) argue that the education-integrated approach is not working in Sweden because students do not view the food program positively.

school meal is pedagogical in that it should teach "information about national and international food cultures, proper nutrition, good manners and a sustainable way of life" (Pellikka et al., 2019, p.7). Sweden and Japan have similar models which also emphasize school lunch as a pedagogical meal (Kimura, 2016; NIER, 2013; Persson, 2012). For Persson (2012), a pedagogical meal is an opportunity for teachers and students to connect over lunch, which serves as a learning occasion where students can learn about various aspects of food and food systems in an informal setting. Similarly, in Japan, Shokuiku, or the Food Education Law introduced in 2014, "teaches the contributions of various people to the production of food, to deepen understanding of traditional foods, and to foster the spirit of cooperation, in addition to the intake of appropriate nutrition" (Cabinet Office, 2008 in Kimura, 2016, p. 82)

Unlike in the US, educators in Sweden and Japan share lunch with their students, eating together and cleaning up afterwards, in addition to learning where various ingredients for the meal originate, which promotes integrative learning and encourages relationship-building and social skills (Kimura, 2016; NIER, 2013; Persson, 2012)

School food programs in Canada

Carbone et al. (2018) argue that Canada missed an opportunity to start a publicly funded school meal program in the 1940s, when the issue of child malnutrition was seen as a public issue. Rather than implement a national school food program like what was happening in the US at the time, the Canadian government chose to introduce the Family Allowance,⁷ which was seen as a solution to the problem of child malnutrition in the context of existing liberal welfare state ideology (Carbone et al., 2018). Thus, responsibility for feeding children stayed with parents rather than the government. According to Carbone et al. (2018), this liberal welfare state ideology has changed little since the 1940s and has become even more focused on family and individual responsibility over governmental responsibility under neoliberalism. Under neoliberal ideology, large-scale government intervention is viewed negatively because it is assumed that the free market economy can respond more effectively than the state to rising problems (Harvey, 2005) such as rising rates of food insecurity. The logical consequence has been the emergence of community-based and charitable programs to address child hunger, which we see in the form of school or parent organized breakfast clubs supported in part through not-for-profit organizations such as Breakfast Club of Canada. This mirrors other charitable approaches to food insecurity in Canada through the growth and institutionalization of food banks across society (Riches, 2018; Tarasuk & Mitchel, 2020).

Although charity has become the dominant approach to food insecurity within schools, a study conducted in Atlantic Canada found that community-based and charitable nutrition

⁷ Family Allowance is a federal social welfare program implemented in 1945 to support families financially (Carbone et al. 2018).

programs are insufficient in addressing the needs of hungry children (Raine et al., 2003). While all programs in their study were designed primarily to address the problem of hungry students, they found that most programs did not sufficiently reach the target group because of the stigma children and parents experienced when accessing emergency food programs. Their research demonstrates the need to make school food programs universally available to all children in schools rather than singling some students out as in need of food assistance.

As noted earlier, food is a provincial jurisdiction in Canada and thus approaches, guidelines, regulations, and programs can vary drastically among schools across the country (Phorson, 2015). Yet the general approach to food in Canadian schools appears to mirror the utilitarian and instrumental approach that characterizes the dominant US approach, although there are large variations across the country and there are many examples of school boards or individual schools that aim towards a more integrative approach (Colley et al., 2019; Peterat & Mayer Smith, 2006; Powell & Wittman, 2017; Rojas et al., 2011). However, without a formal national school food policy there is no framework guiding schools to consider how an integrative approach could potentially better serve students.

Methods

A total of fifty (N=50) school administrators participated in the case study. Thirty-eight (38) elementary, eight (8) high schools and four (4) adult and continuing education programs represented schools across four school boards included the public, catholic, francophone, and a local Indigenous education council in Thunder Bay, Ontario, Canada. Participants were recruited with the assistance of the School Food Working Group⁸ of the local municipal food council.⁹

Quantitative and qualitative data were collected through in-person interviews. In the first part of the interview, participants were asked structured, close-ended questions about food access programs currently operating in their schools. This was followed with open-ended, qualitative questions about school food philosophies, their top three priorities regarding food in their school food environment, and to describe what a universal school food program would look like in their school.

Descriptive statistics were calculated for the close-ended questions that inventoried school food programs and ranked participant priorities for the school food environment. Following this, both authors worked collaboratively to undertake open-coding, an iterative

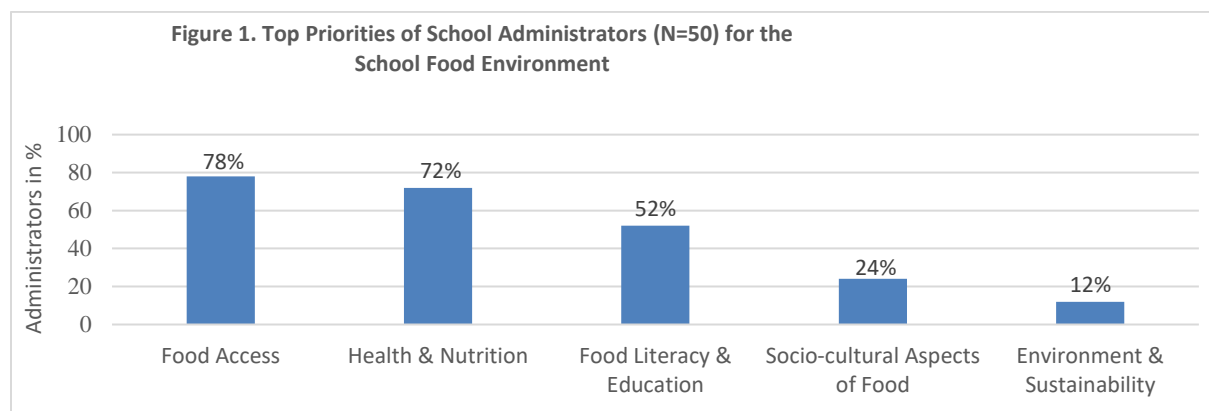
⁸ The working group consisted of representatives from the two largest school boards, public health dietitians, and not-for profit organizations who work in schools in various capacities. Both authors are members of the working group.

⁹ This research employed a community-based research approach. Community-based research (CBR) is participatory and action oriented, or meant to produce social change (MacKinnon, 2018). In line with CBR, the working group is a member of the national Coalition for Healthy School Food and advocates for a universal school food program and better food environments at the local school boards level.

process of engaging with the qualitative data to identify themes in the participant interview narratives (Creswell & Poth, 2018). Using discourse analysis and building on the thematic analysis we further analyzed the codes with a close reading of the ways in which participants described and talked about food in the school food environment. Discourse analysis is a methodological approach that examines how language and ideas emerge and circulate to reflect wider social structures (Lupton, 1992). Discourse analysis is used to examine contested knowledge and how power is operating through the construction of knowledge (Lupton, 1992). This project received ethics approval from the Lakehead University Research Ethics Board.

Findings

Five interrelated priorities for the school food environment emerged from the interviews with administrators. (See Figure 1¹⁰)

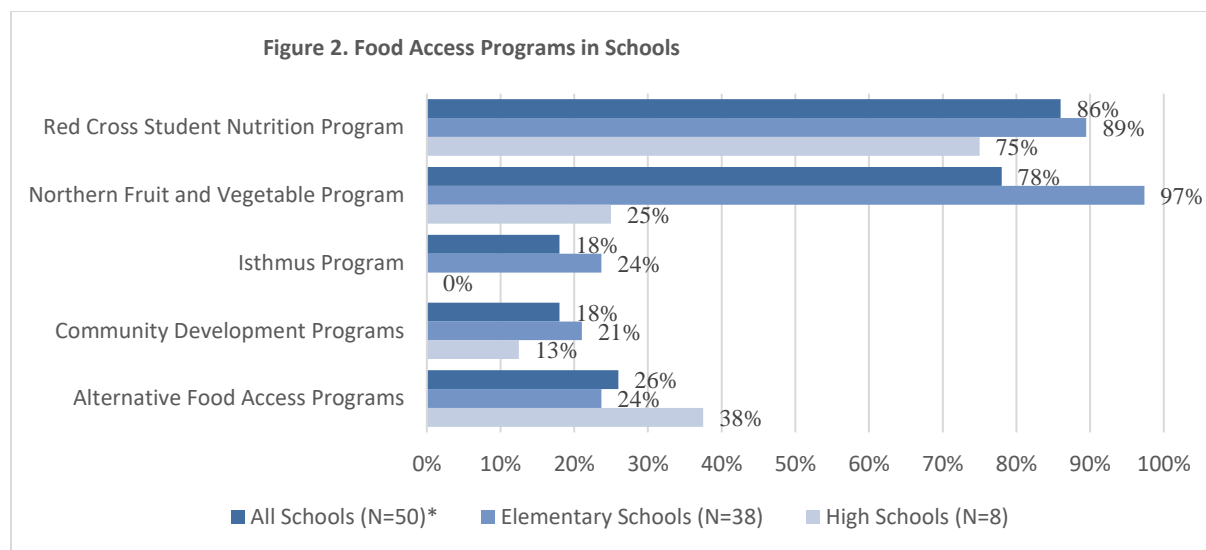


Food access

All schools had food access programs designed to support food insecurity, which participants identified as their first priority for the school food environment (78%). The Student Nutrition Program, administered by the Red Cross, is the main food access program providing food and funding for school breakfast and grab-and-go snack programs. This program is funded by The Ministry of Children, Community and Social Services, the Breakfast Club of Canada, and the Grocery Foundation, and follows the SNP Nutrition Guidelines. Eighty-six percent (86%) of schools rely on the Red Cross Student Nutrition Program as their food access program. Although this program mainly targets students from low-income and food insecure families, several

¹⁰ Figure 1 represents administrators' responses to the question of "What are the top three priorities for your school food environment?"

participants explained that the program is designed to be universal. As one elementary school principal shared, "no child goes hungry, everyone has access to food at the grab-and-go table" (0001E).¹¹ Many participants explained that "food is always available for lunch" even when there are no formal school lunch programs. Students are given food (sandwich, breakfast leftovers, etc.) if they are identified as needing lunch. (See Figure 2¹²)



*Includes 4 Adult & Continuing Education Programs

Ninety-seven percent (97%) of elementary schools participated in the Northern Fruit and Vegetable Program. High schools were not eligible for this provincial food access program. The Northern Fruit and Vegetable Program is administered by the local District Health Unit and funded by the Ministry of Health and Long-Term Care and the Ontario Fruit and Vegetable Growers Association. This weekly initiative provides fresh fruit and vegetables to schools to serve to children.

Nine of our thirty-eight elementary schools work with the Isthmus program, a Canadian charity with a local chapter. This program relies on teachers and administrators to identify K-8 children who are food insecure and then sends food home weekly in a discrete backpack handed out on Fridays for the weekend. Additionally, eight elementary schools and one high school collaborate with a local not-for-profit community development organization that provides food literacy and cooking classes in addition to a food access program. Finally, thirteen schools mentioned that they have alternative food access programs other than those mentioned above. One example is a program run by the Ontario Aboriginal Head Start Association, which focuses

¹¹ Participants are identified by their anonymized number. "E" denotes elementary, "S" is for secondary school and "A" is for adult and continuing education administrator.

¹² Figure 2 represents administrators' responses (N=50) to the question "What food programs or food initiatives are in your school? The graph summarizes data about food access programs.

on the well-being and food security of Indigenous children. As an Indigenous organization, their programming also focuses on ceremony and traditional teachings related to land-based activities such as hunting, gathering, and harvesting.

The issue of food insecurity was central to participant narratives about their school food philosophies. One principal explained, "I receive at least one phone call each week from a parent who does not want to send their children to school as they have no food to pack for lunch... it is often the cause of student distress" (0056E). Most participants shared the view that, "many students are food insecure, but those in need are able to access food at school" (0009E). Most participants shared the belief that the school is a place where students have access to food.

While there are several food access programs designed to combat student food insecurity, programs and solutions are not equitable in terms of delivery across or within schools. For instance, 59% of schools have volunteers to organize or work in food access programs, which enables some schools to provide a sit-down breakfast program while others only have a grab-and-go table. There is also a wide range of differences across K-8 schools who offer hot lunch days, with most schools having no regular hot lunch available other than a weekly pizza day. In a few schools, there was a more substantial hot lunch provided, organized by parent councils, often supervised by volunteers, highlighting the inequities across schools. These also differed from high schools, where hot food was available for purchase in the school cafeteria every day.

Within elementary schools that had hot lunch available, there is usually a fee. One participant shared, "much of the food available is free including snacks and breakfast. Only the hot lunch and milk requires purchasing" (0030E). Although milk and hot lunches require students to pay, some schools subsidize these for students who self-identify as in need, with one principal stating "children know they can ask a supervisor for food" (0047E). As explained by another participant, "we subsidize hot lunches by providing the funding through fundraising. If students opt to have hot lunch, we do not require families to pay if they cannot" (0052E). This was not the case in every school, however, with another participant saying, "there is always food for students through one of the programs, but hot lunch days are extra" (0016E). Another interviewee shared, "the church subsidizes our milk program ... this initiative is informal. Teachers know what students need milk" (0054E), while another participant explained that, "milk cards and pizza cards can be provided to students through fundraising, and the 'It takes \$2 Campaign'" (0035E), an employee payroll donation initiative.

As these excerpts highlight, there are many informal responses by administrators, teachers, and community partners who fundraise and find ways to cobble together funding for gaps in current food access programs to meet the implicit goal that, "no child goes hungry" (0001E). Additionally, it was explained that "there are no official or communicated subsidies for students with low SES" (0024E), which illuminates the lack of official policy for students from low income families to apply for support.

Stigma

Many participants expressed their awareness of issues around stigma relating to food insecurity and having to access emergency food programs. One principal stated, "there is always some food available (leftovers from breakfast club, snacks, or pizza) and teachers try to be discrete about giving it out to students in need" (0021E). Across the interviews, principals talked about not wanting to single out students as food insecure. One principal shared that food programs are run as, "a club with no stigmas or barriers. It is sociable, and anyone can go" (0038E), while another stated, "there is no stigma in the way they run programs because everyone has access to food not just food insecure students" (0027E). This underlying attitude was summed up by another principal who explained, "everyone gets food who asks for it—not just food insecure students. This approach reduces stigma" (0017S). Administrators position the school food environment as one in which food access and reducing stigma is central to their priorities and school food philosophies. This carried over to their comments about the need for a national school food program to be universal.

Health and nutrition

Health and nutrition were ranked as the second priority (72%) for the school food environment according to participants. Principals used terms like "healthy choices", "getting healthier alternatives", "message of healthy food", or "healthy living" across the interviews when describing their school food philosophy. Participants explained that provincial and federal guidelines for healthy food in schools was key to their approach. Specifically, across the public, catholic, francophone, and Indigenous schools we heard repeatedly that schools follow "Ministry Healthy Food Guidelines", "nutrition guidelines and policies" and that the "Health Canada Food Guide" is central to how they think about their school food philosophy. The message of health and nutrition is integral to the provincial policies and therefore it is not a coincidence to hear participants see these as a priority for their school food environment.

Health promotion: Knowing healthy food through nutritionism

Following adherence to these guidelines, responses to the question of a school food philosophy further demonstrated that administrators frame food through health promotion language and priorities that center around healthy eating practices and physical exercise. In terms of healthy eating, one principal shared, "students need to eat healthy food from all food groups" (0053E), while another explained that they try to take a "low sugar and sodium approach" (0038E), medicalizing food by focusing on nutrients (Scrinis, 2013). Another principal stated, "students need healthy food first, to stay hydrated, one piece of fruit per day, and we need to explain to kids what they are eating when they bring in foods from home" (0004E).

This notion that “food from home” was unhealthy was shared by another participant who explained, “many of the students from the school come from struggling homes. The school finds that students are less likely to eat healthy food provided to them by the school as they have never seen it before, or don't like it. Food from home is often sugary and unhealthy for the students” (0042E). One principal also mentioned the importance of communicating the message of healthy eating to parents to try to encourage them to pack healthier lunches saying that they, “send notes to parents to encourage healthy choices” (0008E). Similar to what we see across society, food within the school food environment is moralized as either good or bad (Lupton, 2005), and thus some parents are subsequently constructed as either good or bad, reinforcing gendered and classed social differences (Ristovski-Slijepcevic et al., 2010).

Some participants also mentioned the importance of physical exercise with more than one principal making connections between healthy eating, physical education, and healthy bodies. One principal explained, “the school is dedicated to following the concept of being fit and healthy through physical education and nutrition ... we can't be too rigid, kids should be able to have treats once in a while, but food is fuel for the body and convenience is our enemy” (0010E). Similarly, another participant shared, “food and physical activity go hand in hand” (0023E), reinforcing the belief that there is an energy balance equation of “calories in equals calories out” (Scrinis, 2013, pp.112-121). While yet another principal shared their worries about childhood “obesity”¹³ stating, “then there is the issue of overconsumption ... some students eat too much or eat the wrong foods” (0006E). These excerpts illustrate how ideas about healthy bodies circulate and are pedagogically reinforced through didactic approaches and beliefs about healthy food (Welch et al., 2012), which school administrators take responsibility for by managing the health risks (i.e., childhood “obesity” and diabetes) of student and family food choices.

Although beliefs about healthy food and the provincial policies that regulate food served at school are front and center for administrators, they are not always easy to navigate. One principal shared, “the Red Cross is restrictive: they do audits to check what the money is spent on” (0009E). As another participant explained, “we run into many restrictions that make it hard to run programming” (0028E). For instance, at one hot breakfast program a school served breakfast sausage that was made from locally produced meat, and the parent volunteers were told they could not serve (or be reimbursed for) it because it did not meet provincial nutrition guidelines (i.e., concerns over saturated fat content). Participants explained that the Red Cross follows the SNP Nutrition Guidelines, which delineate those foods that are approved as healthy and thus good or appropriate to serve to students. This reinforces the undercurrent of understanding food through the binaries of healthy/unhealthy and good versus bad foods. These participant narratives show how food is viewed in an instrumental way, that is, food is medicalized and moralized when it is constructed through public health nutrition.

Alternatively, three out of eight high schools were running a Farm to Cafeteria food program, which has at its core connections between locally farmed, seasonal food as healthier

¹³ “Obesity” is placed in quotation marks to recognize that it is a contested concept (Campos et. al., 2005).

food for students, while also being good for the environment. Although these schools have incorporated a farm to cafeteria model, they are still required to follow the PPM150. An administrator shared that the PPM150 impacts decisions about the foods they are allowed to use in the preparation of foods for sale in their cafeteria. She explained, "we're required to use 'light' cheese (reduced fat), which is highly processed and not good, compared to regular cheese (full fat)" (0011S). In this example, cheese under the PPM150 is understood by its macro-nutrient content (i.e., fat) as opposed to other ways of knowing food.

Finally, the farm to cafeteria model offers some students opportunities for experiential learning in critical food literacy, which is an integrated pedagogical approach to food.

Food literacy and education

The third priority for participants was food literacy and education (52%), although ideas about what food literacy should focus on varied.

Health promotion: Learning about food through nutritionism

For most administrators, food literacy is teaching students about health and nutrition and is mainly taught through the health studies curriculum. For instance, it was shared that, "food education is about nutrition" (0055E) and "nutrition is part of the health curriculum" (0006E). Further, it was explained that their approach to food was to "build knowledge around food and nutrition as many students lack an understanding about fresh food" (0017S), and that teaching "nutrition awareness" (0039E) was a priority. One principal stated that they wanted to, "continue promoting food literacy to teach kids about healthy food through curriculum and exposure, for example, by making smoothies in the classroom" (0024E).

Education on nutrition as an aspect of food literacy went beyond teaching the students and extended to families. A principal shared, "we have strong relationships with parents and try to educate families on nutrition" (0034E). Similar sentiments were echoed by participants who shared, "at the beginning of the year information regarding food literacy is sent home and in the monthly newsletter, DHU [District Health Unit] tips are included" (0046E) and "the Health Unit helps with nutrition education" (0010E). One principal explained, "At the kindergarten preview day, we provide parents with information about what a balanced meal looks like" (0024E). This emphasis on nutrition and public health as central to food literacy overlaps with the earlier identified priority of health and nutrition as a key element of school food philosophies.

Eco-nutrition and integrated food education

Not all participants viewed food literacy and education as exclusively about health and nutrition. Although not heard as frequently, several participants talked about teaching students about food

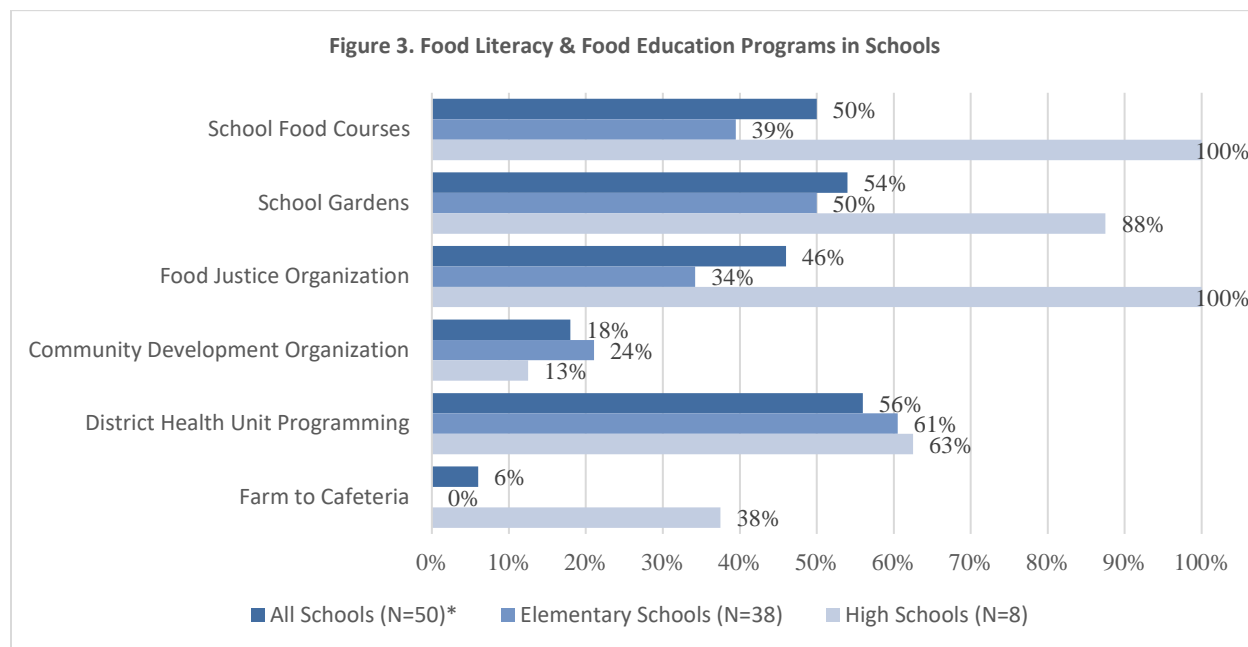
systems, including using school gardens to learn about where and how food is produced and culinary or cooking skills (See Figure 3).

Fifty-four percent (54%) of all schools had a school garden or were in the process of developing one to complement the school food environment. Efforts to create school gardens were often led by leaders in the school (e.g., teachers), many with the assistance of a local not-for-profit food justice organization that runs school gardens, food literacy workshops and in some high schools, a farm to cafeteria model, mentioned above.

Several participants described teaching about food systems using an experiential approach with teachers using the garden as a learning opportunity for students to grow food. In some cases, this was extended to a foods class where students might have opportunities to prepare food through cooking classes. One principal explained, "We really focus on working with and using local providers, chefs, farms, and locally produced food. We also focus on involving our students in all aspects of our food programs at the school as volunteers, planners, prep, cooks, and servers" (0052E).

A few schools combine food literacy using food classes with the provision of food. One principal explained, "some of the food classes make some of the food for the cafeteria, however, the cafeteria manager told me that there could be more coordination with that... maybe in a future hospitality major, with a cultural focus, for students interested in culinary arts" (0026S). The farm to cafeteria approach enables "making connections between locally sourced food and education" (0017S). While the farm to cafeteria model was not in all secondary schools, another high school offered students a unique foods class that had students prepare the daily lunch meal, using fresh ingredients, which was then served in the cafeteria as an unofficial food access program. As an experiential learning experience, students learned culinary arts and about food systems. In addition to having students make the school lunch, which was subsidized by the school, all students had access regardless of their ability to pay. See Figure 3¹⁴

¹⁴ Figure 3 represents administrators' responses (N=50) to the question "What food programs or food initiatives are in your school? The graph summarizes data about food literacy & education programs



*includes 4 Adult & Continuing Education Programs

Twenty-four percent (24%) of elementary schools worked with a local not-for-profit, community development organization with a community kitchen. Students in every grade are based on rotation to the community kitchen where they learn how to cook and eat the foods prepared collectively. As these participants stressed, learning about food systems and cooking are critical knowledge and skills. However, without provincially mandated curriculum and/or direction from school boards, administrators explained that they were limited in how they could incorporate food literacy or teach food in their school. One principal stated, "overall, food has to play a more important part at school, we need a policy, we need to connect food to school life through education" (0009E).

These examples across schools highlight the structural inequities within and between schools in terms of what students are learning about food. In particular, some schools are more instrumental in their approach, focusing on health promotion and nutrition, while others take an integrated approach, centering emerging models of eco-nutrition as important for food literacy.

Socio-cultural aspects of food

The socio-cultural aspects of food were identified as the fourth priority by participants (24%), with one principal claiming, "food brings people together" (0030E). This theme sees participants position food as relational and contextual. Food is used as a way to connect and build relationships between school staff, students, and families, as well as imparting cultural identities within the school.

Building social connections using unhealthy foods

Food is integral for events in schools and the celebration of special occasions. As one participant summed up, "food is used for *every* special occasion" (0025S). Participants described in great detail the various foods served and available in their schools for special events. One participant explained, "cookies, hot dogs, chips, pop, salad bar, fruit kabobs ... sweeter foods are served at the carnival and at holidays ... and we try to focus on serving healthy food at events ... or food that is provided by parent volunteers, which can be unhealthy" (0040E), illustrating again that food from home is considered unhealthy. Another participant shared, "we have a family barbeque in fall and spring, and serve hot dogs ... and for movie nights there is popcorn" (0020E), while yet another principal talked about the, "Spring Fling [indoor carnival] where there is pizza, cupcakes, ice cream, juice, milk" (0001E). Many schools described family barbeques in which "hot dogs, watermelon, and freezies" (0049E) are the regular feature foods.

Food is used to build relationships between teachers and students. In a few schools, secondary students are involved in the preparation of the foods served. One principal explained, "for our staff meetings, food will be prepared by one class" (0026S). Food is sometimes used as a reward. For example, one principal explained, "food might be used for perfect attendance (e.g., cafeteria or other food gift cards) ... or used in class competitions with the winning class getting a pizza party" (0026S).

Although food is used extensively to connect with students, the underlying tension between healthy and unhealthy foods persists. For instance, one principal explained, "we focus on healthy foods for events with parents (e.g., fresh fruits, veggies, granola bars) however for the grade six end of the year celebration, there is no specific focus and the food varies" (0006E). Another principal elaborated on this saying, "food is used to draw families in to engage with school through feasts ... achievement nights, and families and relatives are invited to come to most events. 35% of students are First Nation and a large percentage is impoverished... we try to have culturally appropriate food, although we have to conform to ministry guidelines" (0017S). Another participant reiterated, "food is a huge thing to draw families in (chilli, pasta, pizza, etc.) ... and we try to keep it healthy" (0016E). Health and ministry guidelines, in addition to the need to serve cultural foods, is integral. Many of the foods talked about by participants have important symbolic meaning for children and youth (Best, 2017), representing comfort and childhood, and in some cases, cultural identity.

Cultural and Indigenous foods as healthy foods

Food is important to cultural and ethnic identities. Schools are diverse and represent Indigenous students, newcomers to Canada, and the wider population demographics. One participant explained, "there is a need to provide cultural foods (such as fish, moose meat, goose, bannock, etc.) to ease home sickness, as our students leave their home communities to attend school here

and live in boarding homes across the city" (0008S). To this end, several principals described how their school food environment incorporated cultural foods, such as traditional Indigenous foods like moose or bannock. As described by one principal, "at our feasts—we have traditional foods such as turkey, ham, fish, sometimes moose meat, wild rice, vegetables, salad, buns, bannock, dessert, milk, juice, tea, coffee, etc." (0007E). Another participant explained that their school has "pow wows ... and a Fish Fry" (0028E). Serving traditional foods is a means of sharing cultural food traditions, which are connected to identity and are health promoting (Power, 2008). One principal explained, "First Nations celebrations are celebrated with traditional food ... food comes from the land and students need to understand how to care for the land so that the land can care for us. At our school, we are well on our way to developing a clear vision that encompasses all the work invested in our school food environment" (0015E). The relationship between land and food overlaps, which we discuss in our final theme on the environment and sustainability.

Finally, when asked what a universal school food program might entail, many participants explained that they would like to see more culturally appropriate food in schools, which is summed up by one participant who shared, "there is a need for culturally appropriate food, programming, and education to allow students to try and experience a variety of different healthy food" (0042E). Another participant explained that they would like to see "culturally appropriate foods, as we have a high number of Syrian refugee families" (0009E), while another participant explained that it "would be useful to have experts come in and demonstrate how to make a variety of food from different cultures" (0005A).

The environment and sustainability

Finally, fewer participants raised issues concerning the environment and sustainability as a priority (12%), however, the issues raised intersect with many of the other priorities and offer another perspective on the role food plays in the school food environment.

Environment, health & identity

As discussed in the third priority, teaching about the environment and sustainability through food systems or an eco-nutrition lens illustrates a more integrated food education. For instance, when asked about their school food philosophy, one participant explained, "we're an eco-school with an environmental focus on sustainable food and food systems... and healthy food is accessible to all kids" (0044E). Another participant stated that, "awareness is needed for food safety... the personal environmental impacts of food and large-scale farming, and personal nutrition" (0031A). Here, food risk is constructed as an overlapping responsibility for health and the environment (Parker, 2020). Yet another principal noted that their school food philosophy, "has shifted over the last two years to align with the farm to cafeteria approach, which is homemade,

seasonal, local, and healthy" (0026S). Awareness of the connections between health, the environment, and food systems included "growing one's own food" (0027E).

Participants explained that, "children need opportunities to develop sustainable habits" (0020E) and that "sustainability" (0027E) is a priority. For instance, a few participants spoke about "food waste and recycling" (0029E) and the importance of "more recycling in the cafeteria" (0026S).

Several schools mentioned how they try to prioritize using local food whenever possible. For instance, some schools sell fresh food boxes produced by local growers and farmers as fundraisers, with one participant explaining that they have a "farm to school program where families order groceries fresh from the farm during peak season and the food is delivered to the school and then distributed" (0028E).

Finally, when asked what a universal school food program would consist of in their school, one principal explained, "locally sourced food, a school garden with summer maintenance and water and facilities for starting plants indoors due to short growing season and regular nutrition programming ... integrated learning with our local food producers and farms" (0052E). Similarly, another participant shared, "culturally appropriate, local, sustainable food ... incorporating the produce from our future school garden" (0024E). Finally, another principal explained that a universal school food program should,

“Continue offering Foods Courses in both semesters of the school year; continue serving culturally appropriate food as well as incorporating more local, sustainable food in all aspects of food programming within the school; and continue providing opportunities to ease homesickness, as well as food education through the Elder's Program/Club, and after school programming in a relaxed and socializing atmosphere. We currently have undertaken the use of Grow Towers in our Foods Lab, Science Lab, and Elder's Room; we also have a greenhouse project in the works to hopefully be usable for the next school year; and we are in the process of revamping our Cafeteria menu.” (0007S)

As illustrated, connections between the environment and sustainability intersect with health, critical food literacy, and the socio-cultural aspects of food.

Discussion

The five priorities and discourse analysis above describe how administrators think about their school food environments and the underlying philosophies guiding them. Schools did not have a formal school food philosophy that was officially documented or follow any school board directive other than provincial health and nutrition guidelines (e.g., PPM 150, SNP Nutrition

Guidelines) although it was noted that the gaps in policy left many to determine their own approach to food in the school food environment.

Administrators named food access as their biggest priority, with many noting that levels of food insecurity among their students are high. This is not a coincidence given the prevalence of food insecurity among children, with thirteen percent of households in Ontario and one in six children in Canada experiencing food insecurity regularly (Tarasuk & Mitchel, 2020). Rates of food insecurity are increasing as a consequence of rising social inequality, poverty, and most recently, COVID-19 (Statistics Canada, 2020). Schools have been sites of advocacy to combat food insecurity because of the health and social impacts of inadequate availability and accessibility of food on children's development (Raine et al., 2003).

Stigma is a significant concern that inhibits individuals from reaching out to emergency food programs (De Souza, 2019; Kirkpatrick & Tarasuk, 2009) and this is no different in elementary and high schools (Poppendieck, 2010; Raine et al., 2003) Administrators were aware of the impacts of stigma and strived to ensure that any student who needed food while at school received food, although this was often done at the discretion of individual teachers and not through any specific program or formal process. There was a strong sense that the school should be a place where food is available for all children, with many saying that a national school food program should be universal.

Beyond food access, administrators view health and nutrition as a necessary element of school food philosophies and a priority for the school food environment. This approach fits with the widely accepted culture of healthism (Crawford, 2006), which medicalizes food and positions individuals as responsible for their decision-making about food choice. Administrators show how they assume responsibility for the school food environment by making sure that they follow the school food guidelines, including the PPM 150 and the SNP Nutrition Guidelines to promote healthy eating. In doing so, most principals construct food discursively through the ideology of nutritionism (Scrinis, 2013), which is the approach underlying these guidelines. As many critical dietetic scholars point out, nutritionism is a reductive approach to understanding food and food choice through the lens of nutrients in relation to bodily functioning (Biltekoff, 2013).

Most administrators fully engaged healthy eating discourses and nutritionism taking up the responsibility of health promotion and seeing themselves as responsible for their students' health via the school food environment and making healthy food available. This was evident through their use of healthy and unhealthy when describing foods available, which were unintentionally moralized when referring to “foods from home” as bad. Some parents were subsequently viewed as needing to be educated on proper nutrition or what constitutes good food. Furthermore, healthy bodies are presumed “fit” with an awareness of the need to balance food consumption with physical activity, deepening the moralizing effect of these discourses maintaining ideas about normative thin bodies (Cameron & Russell, 2016).

Yet, food is much more than nutrients—it symbolizes social inequality and social differences through the intersections of gender, race, and social class (Harrison & Jackson, 2009; Johnston & Bauman, 2015; Parker et. al. 2019), which we see above in our example of how

some parents are constructed as Other through the foods they send to school with their children. However, this tension is elucidated through the binary of healthy/unhealthy as administrators also use unhealthy foods such as sweets, popcorn, and hotdogs to bring students and families together to create belonging and a collective school community. Thus, the risks of unhealthy food are also socially constructed and dependent on who is serving them and in what context they are being eaten (Parker, 2020).

The dominant message of healthy eating, with its emphasis on nutrition, is a priority for food literacy and education. However, several administrators recognize that teaching students about the connections between food and the environment or eco-nutrition is critical. As Oostindjer et al. (2017) explain, "the current role of school meals is as a tool for improving food behaviors and population health in a sustainable way" (p. 3943), which becomes possible through an integrated approach. Although environmental concerns and sustainability were mentioned less frequently, some administrators think this should be a priority for the school food environment, which challenges the instrumental approach to food, or seeing food as solely about health and nutrition.

Poppendieck (2010) suggests we need to move beyond the idea of simply providing a universal health or nutrition program while overlooking other crucial socio-cultural aspects of food in schools (p. 279). The symbolic meanings of foods are as integral as accessing cultural foods for a diverse student body (Best, 2017). Integrating cultural foods, land-based education, school gardens, and cooking classes into school food programs and the curriculum ensures that traditional knowledges about the land, foodways, and food procurement are not overlooked (Barter, 2014). Particularly in Canada, and in line with the Truth and Reconciliation Commission (TRC) recommendations, providing opportunities to learn about and eat the traditional foods of Indigenous peoples presents an opportunity to decolonize education through Indigenous food sovereignty (Williams & Brandt, 2019), which positively reinforces health and cultural identity for Indigenous peoples (Martin & Amos, 2017). As several participants explained, this is necessary for any forthcoming universal national school food program.

Conclusion

Participant's priorities for the school food environment included: 1) food access; 2) health and nutrition; 3) education and food literacy; 4) the socio-cultural aspects of food; and 5) environment and sustainability. Although principals' priorities capture the potential for an integrated approach, most administrators describe food in their school food environment using health promotion discourses constructing food narrowly as either healthy or unhealthy, echoing provincial school food and nutrition policies and guidelines, which medicalize and moralize food through nutritionism. This instrumental approach to food does not encompass the complexity of food practices and misses key pedagogical opportunities within the school food environment.

Yet overlapping socio-cultural and environmental priorities reveal that some administrators are aware of emerging socio-ecological-nutrition frameworks and cultural food practices suggesting the need to examine current school food policies and guidelines in greater detail.

With increasing calls for, and the federal government's commitment to a national school food program, the results of this case study raise critical questions about the ideologies guiding the dominant approach to food programs in schools in Ontario. What is the goal of a national school food program? Should the focus be on improving nutrition and health? Can we address growing food insecurity in our schools? We suggest there is a need to consider how an integrated approach to food would look within a future national school food program.

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