The International Journal of Information, Diversity, & Inclusion

Food Justice in the Public Library: Information, Resources, and Meals

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Abstract

Access to healthy, nutritious, and affordable food—food justice—is foundational to a healthy community. Yet, hundreds of millions of people, including one in eight in the U.S., lack this access. This article examines how public libraries participate in the food justice movement. This emerging role is contextualized within the history of public food programs in the U.S. A literature review then finds four ways that public libraries increase access to food: distributing food; teaching and enabling community-based agriculture; teaching how to cook, prepare, and eat healthy foods; and supporting existing food justice programs. These tactics are reviewed within the context of the information and communication channels typically used by practicing public librarians. The article concludes with a discussion of future research and education initiatives needed to understand and support public libraries as contributors to food and health justice. In particular, the authors suggest that LIS scholars would do well to establish research collaborations across disciplinary boundaries to build on work currently being done in fields like public health and environmental studies on how public libraries and librarians contribute to food justice. Just as public libraries in certain places have found ways to form powerful community partnerships focused on contributing to food justice, we suggest that in higher education we could also start and join similar multi-disciplinary networks in our scholarship and teaching.

Keywords: community health; food justice; library programming; public health; public libraries

Publication Type: review article

Introduction

Access to healthy, nutritious, and affordable food—food justice (Alkon & Agyeman, 2011)—is foundational to a healthy community. Yet, in 2016, an estimated one in eight Americans did not have access to nutritious and adequate amounts of food: There are 42 million Americans, including 13 million children, who are food insecure (Feeding America, 2018). According to the United Nations, 815 million people go hungry throughout the world (Food and Agriculture Organization of the United Nations, 2017). Local communities, non-governmental organizations, and federal governments each have long histories of working to bring food to people in need (U.S. Department of Agriculture, 2017). Public libraries are now also framed in the media as having a role to play within the food justice movement: Although federally-funded meal programs are often associated with schools, senior centers, and Head Start facilities, we see public attention on public libraries as sites for food provision, food production (in the form of community gardens), and food distribution (e.g., Nguyen, 2018; Saint Louis, 2017). Although our focus is primarily on public libraries and librarianship in the U.S., we also briefly discuss how

ISSN 2574-3430, jps.library.utoronto.ca/index.php/ijidi/index
DOI: 10.33137/ijidi.v3i4.33010

this issue has been framed by libraries and library professionals outside the U.S.

This paper examines how public libraries in the U.S. work to contribute to food justice. Our conceptual frame is grounded in an understanding of libraries as institutions and librarianship as a profession each with a long historical focus on social justice and human rights, uniquely rooted in particular local communities (Freeman & Blomley, 2018; McCook & Phenix, 2006). This paper asserts the interconnectedness of food justice research and activism with economic, environmental, racial, and social justice (Alkon & Agyeman, 2011). Food justice work is also an essential aspect of public policy development that addresses health inequities with an eye to achieving health justice (Hoflund, Jones, & Pautz, 2018).

In our analysis of this trend, we discuss how the changing and evolving social roles of public libraries leads them to adopt new service models. These types of new activities complement the traditional, informational roles of public libraries, such as providing access to resources about where to find healthy food or information on nutrition guidelines (Flaherty, 2018; Rubenstein, 2016). The diffusion of new ideas and new information into professional practices does not happen all at once. It takes time. The fact that food justice programs are not yet widespread in U.S. public librarianship does not mean that these initiatives are not worthy of study. A secondary aim of this study is to better understand how the diffusion of information related to these sorts of new initiatives takes place within the public library profession. As such, the article concludes with a discussion of additional work needed to understand this emerging trend, particularly through interdisciplinary scholarship and educational endeavors that draw upon the expertise of individuals in such fields as nutritional sciences and public health.

Short History of Public Food Programs

We begin by situating this topic in the historical context of the development of federally-funded food programs administered by the U.S. Department of Agriculture (USDA). Our research draws on current statistics provided by the USDA, which show that at least 3.6% of the over 40,000 summer meal sites in the U.S. are public libraries (U.S. Department of Agriculture, 2018, and see below). However, what is also evident from the USDA figures is that the distribution of libraries that participate in this program is uneven. For instance, two similarly populated southeastern states (North Carolina and Georgia) differ significantly in the number of USDA-funded public library summer feeding sites: 95 in Georgia but only 5 in North Carolina (See Table 1, below).

To understand the current participation of U.S. public libraries within the food justice movement it is helpful to understand the history of public food programs. The history and politics of meal programs in the U.S. are intimately tied to the politics of childhood, the economics of immigration and the work force, social reform activities and programs associated with the Progressive Era, as well as to the vagaries of agricultural production (Levine, 2008). Hunger was one critical result of the Great Depression of the 1930s. The federal government responded by directing agricultural surpluses to meal programs. Federal aid was made available to individual states to help pay food workers in schools. In the mid 1930s the Secretary of Agriculture of the U.S. was granted access to federal funds to “encourage the domestic consumption of certain agricultural commodities” in order to “remove price-depressing surplus foods from the market,” using them instead “for the needy” without disturbing “normal sales” (Gunderson, 1971). Schools and school children were among the needy, and the growth in this program, which distributed surplus agricultural goods to them, is worth noting. According to Gunderson, there were meal programs in 3,839 schools that fed 342,031 children daily in 1937. In 1939 those numbers

ISSN 2574-3430, jps.library.utoronto.ca/index.php/ijidi/index
DOI: 10.33137/ijidi.v3i4.33010

increased to 14,075 schools and 892,259 children; between 1939 and 1942 the total number of participating schools rose to 78,841 and the number of children receiving daily meals in schools reached 5,272,540. As Gunderson (1971) demonstrates, the provision of meals to schoolchildren continued to grow during the first years of World War II, but as agricultural surpluses declined, the number of participating schools and the number of children supplied with meals dropped significantly. Congress continued to include funding for the programs but did not make it a permanent commitment until 1946 with the passage of the National School Lunch Act:

> It is hereby declared to be the policy of Congress, as a measure of national security, to safeguard the health and well-being of the Nation's children and to encourage the domestic consumption of nutritious agricultural commodities and other food by assisting the States, through grants-in-aid and other means, in providing an adequate supply of food and other facilities for the establishment, maintenance, operation and expansion of nonprofit school lunch programs. (Gunderson, 1971)

Federal support for food and nutrition programs continued throughout the second half of the 20th century but the provision of services and the sources for the food in federally subsidized meal programs were increasingly run by private companies contracted by the government. The fresh farm commodities of U.S. agriculture were less frequently cooked in a school kitchen by workers from the community and employed by the school district and increasingly sent to be processed at increased cost and with significant loss of nutritional value. In 2011 the investigative reporter Lucy Komisar wrote an op-ed in the *New York Times* that identified "an increasingly cozy alliance between companies that manufacture processed foods and companies that serve the meals" to school children (2011, para. 1). Not only was the nutritional quality of school lunches dropping with the turn toward processed foods, but federal money was lining the pockets of transnational corporations: "Food service management giants like Aramark, based in Philadelphia; Sodexo, based in France; and the Chartwells division of the Compass Group, based in Britain. They work in tandem with food manufacturers like the chicken producers Tyson and Pilgrim's, all of which profit when good food is turned to bad" (Komisar, 2011, para. 3).

The late 20th century and early 21st witnessed the elevation of local (healthy and fresh) foods. The values and ethos that guide the so-called farm-to-table movement and an increasing awareness of and appreciation for fresh and nutritious foods in general is also surfacing in school lunch policy and provision in a movement known as "farm-to-school" (FTS). But scholars warn of the inequities associated with this practice: "FTS programs are employing the rhetoric of neoliberal governmentality, including personal responsibility and individual success, consumerism, and choice. While these may be tactical choices used to secure funding in a competitive environment, they may also contribute to the normalization of neoliberalism, further circumscribing the possibilities of what can be imagined and created to solve social problems" (Allen & Guthman, 2006, p. 401).

In the first quarter of the 21st century, federally-funded food assistance programs are big business both in terms of dollars and the number of people who participate in the 15 programs run by the USDA, according to a report by the Agricultural Research Service (ARS) of the USDA (Oliveira, 2018). The total cost for FY2017 was $98.6 billion. The Supplemental Nutrition Assistance Program (SNAP) expenditures in FY2017 were $68 billion with an average monthly participation of 42.2 million. The next largest program is the National School Lunch Program (NSLP) at $13.6 billion and an average daily participation of 30 million. Of those 30 million children, 20 million received fully subsidized lunches, 2 million paid a portion, and 8.1 million

ISSN 2574-3430, jps.library.utoronto.ca/index.php/ijidi/index
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paid the full price of the meal (Oliveira, 2018, 2). The meal programs administered by USDA focus on schools, but federal legislation in 2010 designates "schools and local educational agencies in high-poverty communities to offer free breakfast and lunch to all students" (Oliveira, 2018, p. 6). This context is important to understand because, as will be shown below, the USDA is among the largest entities with which public libraries in the U.S. work when they seek to address food justice in their communities.

Public Libraries as Sites of Food Justice Work—Method and Findings

The findings of this study consist of a broad overview of the different tactics public libraries, primarily those in the U.S., employ to address food insecurity in their communities. The methods utilized to produce this article consist of iterative attempts over a two-year period to capture and qualitatively analyze a broad range of sources related to food justice and public librarianship. Beginning in spring 2017, Lenstra, as a part of his research on how public libraries support healthy living, set up Google News alerts for the topics of "garden + public library," "gardening + public library," "seed library + public library," "health literacy + public library," and "nutrition + public library." These daily alerts of just-published online content produced much of the literature utilized in this article. The literature was supplemented with the results of database searches and citation tracking, as well as with sources that the authors encountered as active members of the public library profession. Both of us subscribe to practitioner listservs, and one of us is an active member of the Association for Rural and Small Libraries (ARSL), in which the past two conferences have each featured sessions on this topic: 2017—"Grow the Library's Role—Impact of a Community Garden" (ARSL, 2017) and 2018—"Stimulating Summers," on rural libraries in Washington State that provide lunches throughout the summer (ARSL, 2018). Lenstra also serves on the U.S. Public Library Association's (PLA) Health Initiative Advisory Group, which maintains a closed discussion list in which resources are shared (PLA, 2019).

The examples of what we are calling food justice activities at public libraries coalesce around four key areas:

1. Distributing food at the library
2. Teaching and enabling community-based agriculture
3. Teaching how to cook, prepare, and eat healthy foods
4. Offering the library's support to extant food justice programs

Although our focus is on the U.S., we have also seen some of these tactics employed in other countries. For instance, a recent article in the *Borneo Post* describes how the Sarawak Public Library in Indonesia has since July 2016 organized a community garden at the library "to promote a healthy lifestyle, healthy physical activities, and good mental health" (*Borneo Post Online*, 2018, para. 2). Similarly, Schumann (2018) discusses urban gardening and food-sharing programs at the Stadtbibliothek of Bad Oldesloe, Germany as a "best practice" that other public libraries should emulate, and Kurbanoğlu and Boustany (2014), the latter being an information science professor at the Université Paris-Est Marne-la-Vallée, argued at the European Conference on Information Literacy that librarians should engage in more "green programs" to become "center[s] for green education" (p. 51) through such mechanisms as providing information about growing food, hosting community gardens, teaching people how to garden, lending gardening

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supplies, and circulating seeds. These scattered references suggest that the food justice activities we see taking place in U.S. public libraries may also be emerging in the library profession globally.

Distributing Food at the Library

In 2017, at least 3.6% of all sites in the U.S. where children and youth could receive free meals through the U.S. Department of Agriculture's (USDA) Summer Meal program were public libraries (Table 1, below). We do not know when public libraries first started participating in the USDA's Summer Meal program, but we do know that one of the first articles written on the trend was 2008's "Feeding the Whole Child: How libraries can nourish hungry stomachs and minds," written by Jennifer Burek Pierce, a faculty member in the School of Library and Information Science at the University of Iowa, for *American Libraries* magazine. Pierce tells the story of Jennifer Teitelbaum, a librarian at the Spring Valley branch of the San Diego County Library in California, who started offering summer meals at her library after seeing the program work successfully at a different branch of the library system. Teitelbaum states: "The San Diego County Library staff gave me full support as I went forward" (quoted in Pierce, 2008, para. 5), in part because the branch had almost double its normal participation in summer programs when meals were offered at the library. As Teitelbaum noted, "this program has been a win-win in [this] community" (quoted in Pierce, 2008, Word of Mouth section, para. 2).

Food justice programs in California public libraries offer an interesting and instructive example of the value of partnerships. A few years after Pierce's study was published, momentum in California public libraries around food distribution developed to the point that a new statewide infrastructure was developed to support it. Based on successful summer meal programs in Oakland, Los Angeles, Sacramento, Fresno County, and San Francisco libraries, in 2013 the "Lunch at the Library" initiative emerged as a collaboration among large, urban California library systems working with the David and Lucile Packard Foundation, the California Library Association, the California State Library, and the California Summer Meal Coalition. As in San Diego County, libraries that participated reported "more sign-ups for summer reading programs, more library cards issued, plus children with improved behavior and attentiveness" (Rubiner, 2016, p. 45) because of their access to food at the library (Cole & Chamberlain, 2015). The coalition created a website complete with resources and stories of success about Lunch at the Library programs, and across the state 164 libraries in 24 California counties were serving meals in 2017, up from less than one dozen a decade earlier (Lunch at the Library, 2017).

Given this initial success, the Lunch at the Library coalition sought to expand the model to more public library sites in California. In spring 2018, the coalition distributed a survey to California public libraries that read "The California State Library, California Library Association, and California Summer Meal Coalition, are working to increase the number of public libraries serving summer meals and snacks" (California State Library, 2018). The aims of this "Challenges to Lunch at the Library Participation Survey" were to identify why more libraries do not serve summer meals so that the coalition could then address those barriers, thus enabling even more libraries to participate in this program. The results of this survey have not yet been made publicly available, but the efforts of the coalition led to it securing one million dollars from the California State Library, which, in turn, it is using to provide public libraries with additional resources to "expand the number of, and enhance the quality of, library meal sites in California" (California Library Association, 2019, para. 1).

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One barrier identified by librarians who participate in this program relates to the fact that the USDA will only provide meals for children and youth aged 18 and younger. This stipulation creates difficulties when it is entire families who experience food insecurity. To investigate the efficacy of feeding entire families at public libraries, public health scholars from the Stanford University School of Medicine investigated the feasibility of feeding adults along with children in a public library system in Silicon Valley. They found that:

> Since the library meal programmes in the present study provided meals to both children and adults, participants discussed an overall feeling of inclusiveness as a result of the adult meal. Parent and adult participants valued the ability to eat with children and other community members. Parent participants specifically noted that eating with their children strengthened family bonds. Even adult participants who did not have children appreciated the family atmosphere that the library meal programme fostered. (Bruce, De La Cruz, Moreno, & Chamberlain, 2017, p. 1643)

Elsewhere, public librarians have also seen positive results from providing meals not only to children and youth but also to their adult caregivers at libraries. Librarians have partnered, brainstormed, and shared information within the profession to better identify ways to address food insecurity among adults and children in their communities. Some examples of these efforts include a session at the 2018 meeting of the Association for Library Services to Children (ALSC) in which Kate McCartney (2018) of Marysville Public Library in Ohio discussed strategies that Ohio librarians have employed to provide meals for adults in their USDA-funded Summer Meal programs. She reported that libraries typically partner with local organizations, such as local food banks, to provide adult meals. Furthermore, a significant discussion during this conference session focused on how librarians could supplement the USDA program so that they could serve adults as well as their children.

Public librarians report that the Lunch at the Library initiative in California has had a catalytic effect on public library participation in summer feeding programs nationwide. Librarians in Ohio (Dwyer, personal communication with Lenstra) and Massachusetts (Rauseo & Edwards, 2013) pointed to Pierce's 2008 article in their discussions of how they started developing summer meal programs at their libraries. In 2017, supported by a grant from the U.S. Institute of Museum and Library Services (IMLS), a group of Ohio librarians formed Team Vittles, which describes itself as:

> A group of like-minded individuals in the Ohio library world committed to eradicating hunger through advocacy, outreach and social networking. Our goal is to reduce hunger in Ohio by making connections more easily available between funding, food and hungry individuals, especially children. (Team Vittles, 2018)

Their primary focus has been on increasing the number of Ohio public libraries that offer summer meal programs. Janet Ingraham Dwyer, Youth Services Consultant with the State Library of Ohio, has also formed an ad hoc committee of the Collaborative Summer Library Program (CSLP) on child and community well-being, which focuses on increasing library participation in summer meals nationwide (CSLP, 2019). Furthermore, the Ohio State Library has made this a priority area, stating in its 2018-2022 Strategic Plan that:

> The State Library has initiated a strong promotional initiative encouraging public libraries to participate in the USDA Summer Food Service Program (SFSP). Summer reading programs have long been a pillar of library literacy programming for young

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> patrons but hungry kids don't read. They can become trapped in a cycle of poor school performance and ill health that can have lifelong literacy and learning consequences. The State Library works with public libraries to help youth experiencing food insecurity by becoming an SFSP site, becoming an SFSP sponsor, partnering with existing sites, publicizing the program and/or connecting young patrons to the program. In 2016, 39 public library systems participated in SFSP, allowing 133 individual library sites (branches) to participate. Over the five years 2012-2016, there has been a 60% increase in the number of library sites, and nearly double the number of library systems participating in SFSP. (State Library of Ohio, 2017, p. 8)

Similar statewide efforts at increasing participation in the USDA SFSP have emerged in other states including Colorado, Montana, Minnesota, and Texas (Lenstra, 2018b).

At the national level, major drivers of this phenomenon include the IMLS and OCLC/WebJunction. During the presidency of Barack Obama, First Lady Michelle Obama focused her policy agenda on childhood health in a campaign called "*Let's Move!*" As part of this campaign, she worked with the IMLS to launch *Let's Move! Museums and Gardens*. Although mostly focused on museums, the campaign did advance the idea of summer meals in public libraries. For instance, as part of its participation in the *Let's Move!* campaign, the IMLS collaborated with the USDA to jointly host a webinar on 25 April 2014 on "How Libraries Can Get Involved in Summer Meals" (Caulley, 2014) that featured librarians from Osterhout Free Library in Wilkes-Barre, Pennsylvania, discussing how they started feeding children at the library. The webinar further highlighted the fact that libraries can also feed children and youth during the school year by participating in the USDA's Child and Adult Care Food Program (CACFP) after-school snack program, which the Osterhout Free Library offers, thus enabling year-round food provision in public libraries.

The other principal actor at the national level has been OCLC/WebJunction, whose Health Happens in Libraries initiative has morphed over the years from its initial focus on preparing libraries to help people sign up for the Affordable Care Act (Morgan, 2013) to a current focus on how libraries address the "opioid crisis and food insecurity" (L. Morris, personal communication with Lenstra, 2017). As part of its efforts to address food insecurity, WebJunction has turned a spotlight on libraries that offer summer meal programs, including library meal programs in Illinois (OCLC/Webjunction, 2017), Ohio, Georgia, New York, Colorado, and California (OCLC/Webjunction, 2018). By sharing the stories of public libraries that offer summer meals, WebJunction has sought to cultivate among public libraries more awareness of and participation in these types of initiatives.

Individual library systems have also taken the initiative to independently participate in the USDA program. This is what happened in Peabody, Massachusetts, where librarians in 2011, inspired by what they had seen California libraries do, decided to participate. They later published an account of their successes in which they argue that this type of program depends on robust community partnerships (Rauseo & Edwards, 2013). The librarians in Peabody have since been asked by the Massachusetts Board of Library Commissioners to share their story throughout Massachusetts, which has led more libraries in that state and in the broader New England region to participate in the program. Similar stories can be found in Kansas (Reynolds, 2018) and Minnesota (Pundsack, 2018), where librarians who started serving summer meals at their public libraries shared their stories in practitioner-oriented publications, leading to the spread of this independent-participation model. Media attention to this trend further suggests an increasing

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interest in public library participation in this program. National news coverage includes stories in the *New York Times* (Saint Louis, 2017) and *Medium.com* (Toner, 2018) highlighting this trend and showing examples of it from across the country.

Table 1. Estimated number of public libraries by U.S. state that participate in the U.S. Department of Agriculture (USDA) Summer Meal Program, 2017 (USDA, 2018)

State	Number
California	164
Ohio	146
Texas	126
New York	120
Florida	99
Georgia	95
Kentucky	70
Pennsylvania	70
Tennessee	50
Illinois	48
Indiana	47
Kansas	45
Louisiana	36
Oregon	33
South Carolina	33
Arizona	28
Virginia	28
Minnesota	27
Missouri	27
Michigan	26
Colorado	20

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Wisconsin	19
West Virginia	15
Iowa	14
Maine	14
Oklahoma	14
Nevada	13
Utah	13
Arkansas	11
Washington	12
Delaware	11
Alabama	9
Massachusetts	9
Montana	9
Mississippi	7
New Jersey	7
Alaska	6
Indiana	6
North Carolina	5
New England	5
Maryland	4
North Dakota	4
Hawaii	1

The USDA publishes the list of all summer meal sites on its website (U.S. Department of Agriculture, 2018). It can sometimes be difficult to identify public library sites in this data-set, but a conservative estimate shows that *at least* 3.6% of all summer meal sites in the U.S. are public libraries (Table 1). That is, of the 42,439 summer meal sites across the U.S. in 2017, at least 1,546 were public libraries. In some states, the percentage of library meal sites is much

ISSN 2574-3430, jps.library.utoronto.ca/index.php/ijidi/index
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higher. For instance, in places like Ohio, where there has been sustained continuing education focused on increasing library participation in this program, approximately 10% of all USDA summer meal sites are public libraries (McCartney, 2018, slide 11).

Table 1 was constructed using data from 2017, the most recent data available at the time this research was conducted. The USDA data was searched using the string "libr*" to identify library meal sites. This subset was then individually reviewed to ensure it only included public libraries. Conferring with state library staff from California and Ohio on methods used to track the number of public libraries participating in this program (Dwyer, personal communication with Lenstra; Garone & Cole, personal communication with Lenstra) helped confirm that this was a viable technique for identifying library meal sites. Despite these efforts, however, these numbers represent at best a conservative estimate of the number of public library meal sites. Conversations with state library staff in Ohio and California revealed that it is not uncommon for them to discover libraries that do in fact offer summer meals but that do not appear in the official dataset. This discrepancy has many causes, but the most significant ones are: 1) the USDA data does not always capture the fact that multiple branches within a single library system offer meals, and 2) the USDA sometimes categorizes a site by the sponsoring institution, and not by the site itself: So in some cases the "sponsor"—the entity responsible for cooking the meals and delivering them to the site—appears in the USDA data in lieu of the site itself. For example, a school may be listed as a site even if the meals are actually served at a public library, but prepared at the school (c.f., McCartney, 2018 on the sponsor-site distinction).

Our research has further identified food distribution efforts in public libraries that are unaffiliated with the USDA program. In Baltimore, the public library developed a program called the Virtual Supermarket Project that involved a partnership with the city's health department to enable residents of food deserts to order groceries online, using public computers at the library; pay for them with cash, credit, or food stamps; and then pick them up at the library (Owens, 2010). In Indiana, the Madison County Public Library developed a "Read 'n' Feed" project that partners with the local United Way chapter and area food banks. The project consists of a "combination bookmobile and food pantry that makes stops each Thursday in Ingalls, Markleville, and Pendleton to offer those who need it an assortment of non-perishable food items, boxed goods, milk, bread and fresh fruits and vegetables" (Knight, 2018, para. 4). Elsewhere, public libraries in Marion, Iowa and Thorntown, Indiana, have partnered with their Area Agencies on Aging to distribute meals to older adults at the libraries (Lenstra, 2018a).

Public libraries in Richland, South Carolina and High Point, North Carolina started community farmers' markets where none existed previously (Phillips, Hambright-Belue, & Green, 2018). A library in Philadelphia also started a farmers' market but with the unique twist that the fresh produce would be distributed at no cost. The Fresh for All free farmers' market, run by Philabundance in partnership with the Lillian Marrero Library (a branch of the Free Library of Philadelphia) distributes fresh produce to low-income residents of this North Philadelphia neighborhood every Wednesday afternoon (Neil, 2018).

Other initiatives involve libraries adopting the "Little Free Pantry" program model. Inspired by the Little Free Library movement, food justice activists started developing micro-food pantries where people could take and leave food as they wished. A library in Sylvan Lake, Canada, offers this service, and the librarian said that she developed it at her library after seeing similar little free pantries offered at U.S. public libraries (Vaughan, 2016). Sometimes these programs operate without affiliation with the Little Free Pantry movement. For instance, in the small community

ISSN 2574-3430, jps.library.utoronto.ca/index.php/ijidi/index
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of Clive, Iowa, the library has what it calls a "Veggie Exchange," which consists of nothing more than a picnic table at the library where community members who garden are invited to leave excess produce for others who wish to have it. In a news story, librarians from Clive said, "they went to a conference, and heard other libraries were doing it" (Beckman, 2018, para. 3) and decided to try it at their library. This is another example of how information sharing among librarians leads to the diffusion of new and novel ways of contributing to food justice in local communities.

Teaching and Enabling Community-based Agriculture

A second way that public libraries promote food justice is by helping to support community-based agriculture. This activity takes a number of different forms, with some of the more prominent being: 1) gardening classes, 2) community gardens at libraries, and 3) seed exchanges.

Based on the fact that U.S. policymakers recognize gardening as an important form of physical activity (eXtension, 2012), "gardening" was included in a spring 2017 survey of movement-based programs in North American public libraries (Lenstra, 2017). That survey, which used convenience sampling, found that, at a minimum, 475 public library locations in the U.S. and Canada (or 2% of the 19,564 public library locations across these two nations) have offered some form of gardening programs (Figure 1).

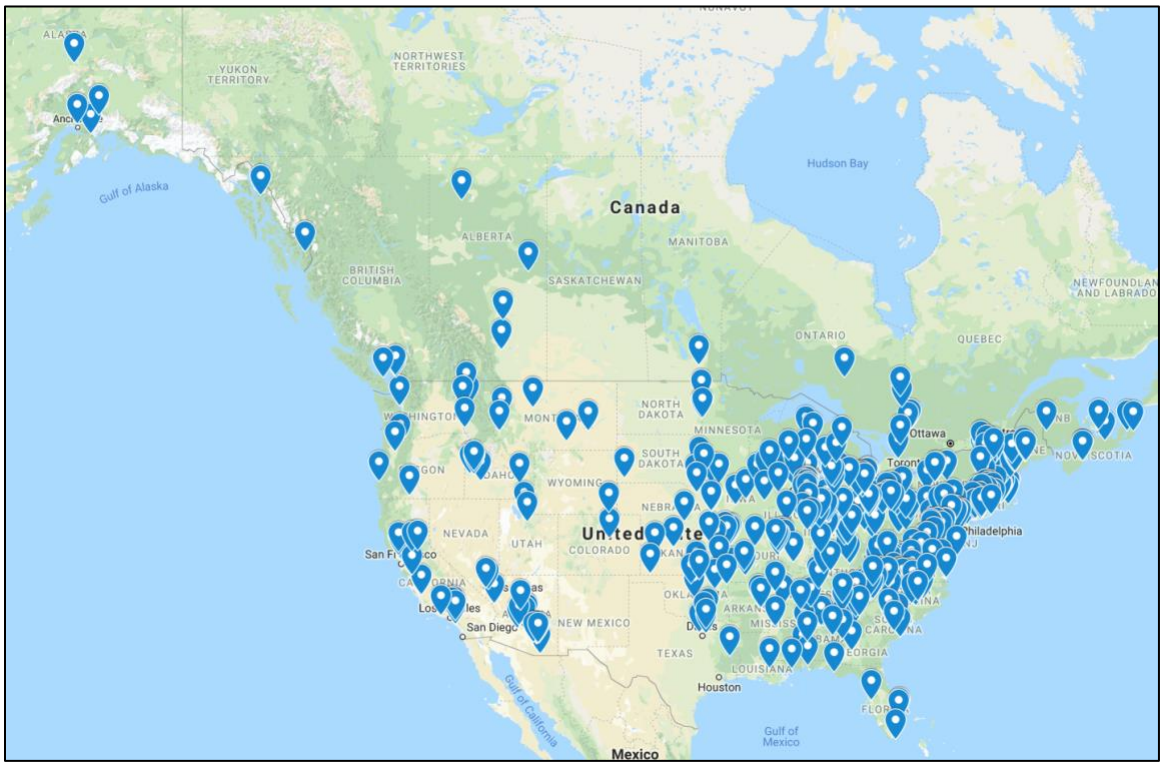

Figure 1. Map of libraries that have offered gardening programs, n=475. Reprinted from "Movement-based programs in U.S. and Canadian public libraries: Evidence of impacts from an exploratory survey," by N. Lenstra, 2017, Evidence Based Library and Information Practice, 12(4), p. 214-232. [Reprinted with

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DOI: 10.33137/ijidi.v3i4.33010

permission.]

In addition to building relevant collections and ensuring library staff are knowledgeable about community agriculture, the most basic way that public libraries support community agriculture is by having classes and special programs at the library, in addition to collections and knowledgeable staff able to provide reference services, related to how to garden and grow food. Agents of the USDA cooperative extension system and Master Gardeners trained by that system frequently offer these programs at libraries, and sometimes the Master Gardeners *are* the librarians (Lenstra, 2018c). Some libraries have gone further. In Akron, Ohio, the library partnered with Let's Grow Akron and The Ohio State University Extension to offer a "Community Garden Leadership Training Course" at the library, which focused on preparing community members to develop and sustain more community gardens (Chatfield, 2018).

In some cases, these gardening classes lead to libraries actually starting community gardens. This is what happened in Goldsboro, North Carolina, where in 2007 Shorlette Ammons, then children's librarian, worked with North Carolina State Extension and other partners to set up a community garden at the library. Reporting on the garden in the community's local paper reveals tensions within the profession about this type of new initiative (Edwards, 2008). The article states that when Ammons approached the library director with the idea of starting a community garden at the library, the director's response was, "what does that have to do with the library?" (para. 11). But Ammons pushed forward, and the director found over time that "Shorlette demonstrated how the garden is helping build community . . . . We are so proud of Shorlette. She had proof the project has been successful" (Edwards, 2008, para. 12). Ammons has since left the library to become the full-time Community Food Outreach Coordinator for North Carolina State Extension, where she works with libraries and others across the state to address food insecurity. The garden she helped to establish continues to thrive at the Goldsboro Branch of the Wayne County Public Library, North Carolina (Moore, 2018).

Since this garden started at the public library in Goldsboro, North Carolina, the idea of a library hosting a community garden has spread to other locations across the U.S. WebJunction has tracked this trend and lists as exemplars at least 17 examples from across the country (Peterson, 2016). Local news stories and library websites also highlight library community gardens in Iowa (Jordan-Heintz, 2018), Illinois (Abron, 2015), and Ohio (Overby & Mullins, 2018; Trivisonno, 2018).

The motivation to establish a garden at a public library is not always directly linked to food justice. As part of research she conducted in the doctoral program at the School of Information Sciences at the University of North Carolina at Chapel Hill, Mary Wilkins Jordan (now Executive Director at Central Minnesota Libraries Exchange) researched the spread of community gardening within American public libraries (Jordan, 2013). Jordan found that libraries start gardens for different reasons, some of which have to do with food insecurity, but others have to do with extending access to, and engagement with nature, as well as promoting ecological awareness and knowledge of scientific processes in the environment and in food systems (e.g., Everett, 2018).

Other examples of library garden programs seek to combine gardening with other means of providing food for people at the library. A public library in Alabama collaborated with the local school district to develop a program that trained cognitively impaired adolescents and adults to prepare and serve food in the library café. The produce for the café was grown in the library

ISSN 2574-3430, jps.library.utoronto.ca/index.php/ijidi/index
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garden (Nicholson, 2017).

Finally, the third way public libraries have contributed to community-based agriculture has been through seed libraries and exchanges. Two recent studies focus on the seed exchange movement within U.S. public librarianship. Soleri (2018) interviewed 30 individuals who manage seed libraries in California public libraries. She also found, based on analysis of secondary sources, that 67% of all seed exchanges (or seed libraries) in California are located within public libraries. In another recent study, Peekhaus (2018) conducted ten interviews in six states with those individuals responsible for the seed libraries at their public library. Both Soleri and Peekhaus found that public libraries frame these efforts as novel forms of community engagement and community service that connect back to the library's role in circulating things that positively impact community health. Furthermore, there is evidence that public librarians are increasingly taking on leadership roles within the larger seed exchange movement. For instance, in May 2015, the Pima County Public Library (2015) in Arizona hosted what it calls the "First International Seed Library Forum" an event attended not only by public librarians, but also by representatives from food banks, the Global Crop Diversity Trust, universities, farmers, and non-profits.

In addition to lending seeds, a number of public libraries have started checking out tools, including ones that can be used for gardening. For instance, librarians from Sacramento, California, wrote a book chapter on how and why they started checking out gardening tools at the library, while librarians from Syracuse, New York, wrote about how their library started checking out raised beds that can be used for gardening (Robison & Shedd, 2017). The Grosse Pointe Public Library in Michigan regularly promotes its tool collection on its social media sites.

Teaching How to Cook, Prepare, and Eat Healthy Foods

Libraries have long offered programs focused on educating the public on nutrition (Flaherty, 2018). There is evidence, however, that this role has, at least in certain places, expanded in recent years as some libraries have started to offer sophisticated cooking and food preparation classes, sometimes with custom-built kitchen facilities in the libraries.

An example of a typical library nutrition program appears in an article in the *Journal of Hospital Librarianship*, in which medical librarians (Woodson, Timm, & Jones, 2011) from the campus hospital at Louisiana State University describe how they partnered with public librarians at the Shreve Memorial Public Library System in Shreveport, Louisiana to offer a series of fun programs focused on encouraging healthy eating habits among children. Similarly, in California, the Sonoma County Public Library received funding from the California State Library for an initiative called "Healthy Living at Your Library," which enabled the library to offer classes on cooking foods that are in season, as well as other nutrition programs (Anderson, 2018).

These types of special, nutrition-focused programs, particularly those targeting youth, have attracted some attention from the scholarly community. Freedman & Nickell (2010) are nutrition science scholars who sought to identify the impact of nutrition programs in public libraries. They found that a public library's "low-intensity [after-school nutrition] program did not produce lasting behavior change, as measured by changes in food frequency at 3 months post-intervention" (p. 192). They argue that nutrition programs in public libraries, and in related community spaces, need more research and support to evaluate and to increase their effectiveness.

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DOI: 10.33137/ijidi.v3i4.33010

Public health scholars at the University of Pennsylvania are currently investigating similar questions. Based on a survey of health programs and services offered throughout Pennsylvania public libraries (Whiteman et al., 2018), they illustrate a growing demand for nutrition programs. They found that "although 70% of respondents [n=262] reported frequent patron questions about nutrition, only 37% of libraries reported offering nutrition classes" (p. 3). They further found that "respondents reported that they often felt unprepared to offer these services" because "respondents described a continuous balancing act to meet multiple patron demands with minimal resources" (p. 3). The study suggests that many public librarians are interested in providing nutrition programming in response to public interest in this topic, given adequate resources and support.

Our research suggests that some libraries are having greater success than others in identifying resources to offer innovative nutrition programming. Some public libraries have developed new spaces to demonstrate how to prepare and cook healthy foods. In Forsyth County, North Carolina, the new central library location opened in fall 2017 with a commercial-grade demonstration kitchen designed to enable the library to have cooking programs on a regular basis (Daniel, 2018). At the national level, the library that has developed this idea to the greatest degree has been the Free Library of Philadelphia, which since June 2014 has been "revolutionizing the way Philadelphians think about food, nutrition, and literacy" (Free Library of Philadelphia, 2017, p. 1) through its Culinary Literacy Center, "the first kitchen-classroom in a public library in the United States of America" (Free Library of Philadelphia, 2017, p. 3). The library's Culinary Literacy Center has a full-time staff focused exclusively on teaching patrons how to prepare and cook healthy foods. The Philadelphia public library created a toolkit with an eye to sharing their experience and helping other public libraries develop similar programs. The toolkit includes sections on how to start, sustain, fund, and advocate for healthy cooking classes in a public library setting (Free Library of Philadelphia, 2017). Library staff have promoted this toolkit through presentations and podcasts for the Public Library Association in the U.S., as well as at international conferences such as the NextLibrary event in Aarhus, Denmark (Fitzgerald, Urminska, & Bowers, 2017). The Free Library of Philadelphia has also partnered with researchers from the University of Pennsylvania's Department of Public Health Sciences to identify and analyze the impact the Center has had, particularly in refugee communities (Healthy Library, 2018).

In addition to building kitchens in public libraries, other libraries have sought to incorporate cooking lessons into mobile library services. In Camden County, New Jersey, the library developed in 2016 a mobile culinary literacy program that it calls "Books and Cooks." The library's mobile kitchen travels to different library branches, as well as other locations in the community, to provide pop-up cooking and hands-on nutrition demonstrations (Ewan, 2018).

Offering the Library's Support to Extant Food Justice Programs

In addition to offering these new programs, services, and spaces, public libraries contribute to food justice by both identifying and developing innovative ways to support existing efforts. In this area, there are no overall trends to document, since libraries that engage in this type of activity tailor what they do to the particular constellations of needs and actors in their local community. For instance, the library in Wilton, New Hampshire, received grant funding to purchase cooking supplies like hotplates for a program it calls "Snacks in Stacks." Working with the local Women, Infants, and Children (WIC) office (a division of the USDA's Food and Nutrition Service), the library teaches low-income youth and their adult caregivers about basic cooking

ISSN 2574-3430, jps.library.utoronto.ca/index.php/ijidi/index
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techniques, and it also feeds families through the program (Hoffman, 2017).

In Wisconsin, the Crandon Public Library organizes an annual "Iron Chef – Healthy Fruits and Vegetables competition" focused on encouraging local families to compete against each other to see who can make the best tasting dishes using healthy, fresh ingredients (Morris, 2015). The library director developed the program through her participation in the Forest County Community Coalition, comprised of community stakeholders from a variety of local organizations that meet monthly to discuss ways to build and support a healthy county.

Other libraries piggy-back on existing community activities and programs to provide nutrition information and instruction. In Oklahoma, Miami Public Library, with funding from the Oklahoma Department of Libraries' Health Literacy Grant Program, offers nutrition demonstrations at local farmers' markets throughout the year (Ballard, 2018). In Kentucky, the Appalachian Regional Commission (2018) identified the McCreary County Public Library as a "Bright Spot in Appalachian Health" in part because of the efforts of the library director to support patrons seeking assistance signing up for food stamps. And in North Carolina, the library in Rowan County has partnered with existing summer feeding sites by bringing the bookmobile to those sites throughout the summer in a program called "Books and Bites" (Post Education, 2018).

Conclusions and Next Steps

This study has documented and discussed an emerging trend that frames the public library as a significant site of food justice activity. Additional work is needed to better understand and support this emerging research topic. New research could, for example, productively frame public libraries within the broader "ecosystem" within which library-based food justice initiatives develop and evolve. For instance, we have framed the initiatives of U.S. public librarians within the context of American public food policy. Additional work could deepen our understanding of the policy contexts surrounding this topic, at local, national, and international levels. That contextualization would help us better understand the forces pushing and pulling public libraries toward taking a more proactive role in food justice initiatives in the U.S. It could also serve to stimulate and inform discussions of food justice and public libraries internationally.

In terms of next steps in scholarship on food justice and public libraries, it is important to acknowledge that researchers in LIS bring expertise to and could benefit from stronger interdisciplinary alliances with scholars currently working on understanding food justice, some of whom, as this article shows, have independently identified public libraries as partners in efforts to address food insecurity (e.g., Bruce et al., 2017). Just as public libraries have, in a number of places, found ways to form community collaborations to address food justice, we suggest that those of us in higher education could join similar networks in our scholarship and teaching. Working with public health scholars suggests a particularly promising path forward (e.g., Philbin, Parker, Flaherty, & Hirsch, 2018). In addition to research partnerships between LIS and public health scholars, opportunities exist for partnerships with scholars working in the interdisciplinary spaces of ecology and environmentalism. Researchers in those areas have independently identified public libraries as key partners in promoting sustainable, just food systems (e.g., Soleri, 2018).

In addition, work could be done to better prepare future public librarians to participate and become leaders in food justice. We see a trend in LIS curricula and education toward greater awareness of the responsibilities of the public library in society and the role of librarians as

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members of their community. Interest in courses like "community engagement" and "community informatics" suggest increasing focus on preparing LIS professionals to work more effectively with diverse communities to support the role of the library as a community gathering space. This coursework also cultivates critical cultural competency as well as firmer grounding in the history and political economy of libraries and information. In addition to preparing librarians to engage with community partners to support food justice, new curriculum could involve collaborations or partnerships with colleagues in schools of public health and food studies to highlight the political economy of food systems to develop an understanding of the various factors in the way food systems are organized that contribute to food insecurity.

Libraries and librarians are uniquely positioned to collaborate with communities to address food insecurity—the library as place and space cannot be underestimated nor can the access it provides to information resources. Noted historian of the public library in the U.S., Wayne Weigand, argues that Americans love public libraries because of a) the useful information they make accessible, b) the transformative potential of reading, and c) the public spaces they provide (Wiegand, 2015). In this article we identify and discuss four tactics that U.S. public librarians use to address food insecurity and food justice through creative utilizations of their public spaces. Additional research is needed to more fully understand how broadly these tactics are utilized by public libraries, both in the U.S. and abroad, as well as to understand the impacts of this work on health and food justice.

In her 2014 article, "Library as infrastructure," professor of anthropology Shannon Mattern asks in the subtitle, "How far can we stretch the public library?" This paper has demonstrated, documented, and discussed many of the ways public libraries are stretching and growing with respect to issues related to food justice in their communities. While there is no question that this topic and the library programming associated with it appeals to a broad cross-section of society and not only to the food insecure, we offer evidence that libraries and librarians are stretching to raise awareness in their communities about food justice as a public health and human rights issue.

Acknowledgements

The authors would like to thank the librarians who shared their expertise, in the form of personal communications, including Janet Ingraham Dwyer, Library Consultant at the State Library of Ohio; Liz Morris, former Program Coordinator of Health Happens in Libraries at OCLC/WebJunction; Patricia Garone, Programs Manager of Lunch @ the Library at the California Library Association; Natalie Cole, Programs Consultant at the California State Library; Melissa Robinson, Director of the Peabody (Massachusetts) Institute Library; and Julie Biando Edwards, Ethnic Studies Librarian at the University of Montana.

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ISSN 2574-3430, jps.library.utoronto.ca/index.php/ijidi/index
DOI: 10.33137/ijidi.v3i4.33010