Understanding how suburban public librarians respond to the health and social needs of communities

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ARTICLE INFO	ABSTRACT
	Existing research in urban and rural contexts has found that community members use public libraries to access needed information and resources to improve health and wellbeing; however, little is known about the social and health needs of patrons in suburban public libraries. In this study, 95 staff from 32 public libraries in two contiguous suburban counties were interviewed to understand perceived health and social needs of their patrons. Interview transcripts were analyzed using thematic analysis. The top needs identified were mental health, exercise, diet/nutrition, technology literacy, housing, and employment. Library staff described responding to patrons' intersecting health and social needs despite not having had formal training to do so. Engaging social workers, public health educators, and health care professionals in the public library space may be one way for librarians to respond to the health and social needs of patrons using evidence-based tools and best practices.

1. Introduction

The role of public libraries in a culture of health (Robert Wood Johnson Foundation, 2022) is well established (Morgan et al., 2016; Philbin et al., 2019; Wahler et al., 2020; Whiteman et al., 2018). Most Americans have a positive view of public libraries and use them for a variety of purposes: to find trustworthy information, obtain internet access, or avail themselves of educational opportunities (Becker et al., 2010; Horrigan, 2016; Pelczar et al., 2021). Prior studies, conducted in urban (Morgan et al., 2016; Wahler et al., 2020) and rural (Flaherty and Miller, 2016) communities with centralized library systems, have identified how public libraries address health and social needs of patrons, such as assisting patrons to access shelter and housing, providing meals to children to mitigate insecurity, and connecting patrons to healthcare providers (Flaherty and Miller, 2016; Morgan et al., 2016;

Philbin et al., 2019; Wahler et al., 2020; Whiteman et al., 2018). However, no prior studies have explored the needs addressed by public libraries in suburban areas composed of communities that are geographically proximal yet socioeconomically disparate. To fill this gap, interviews were conducted with staff in a large suburban decentralized public library system to explore the salient health and social needs of patrons and how librarians responded to them.

2. Problem statement

Public libraries are valuable places for health promotion as they are highly frequented and trusted within communities (Horrigan, 2016). There are 9057 public libraries in the United States (Pelczar et al., 2021). In 2019, there were 1.2 billion public library visits. Prior research has indicated that public library visits are highest among the working poor

(Becker et al., 2010) and those who are low to middle income (Horrigan, 2016), making the public library a place to provide resources to those in need.

Public libraries have expanded the programs and services offered from those that promote access to books and improve literacy to those that address the health and social needs of communities (Morgan et al., 2016; Philbin et al., 2019; Wahler et al., 2020; Whiteman et al., 2018). However, these findings are based primarily on studies in urban and rural communities, and may not be transferable to other contexts, such as large suburban areas where communities of different socioeconomic profiles exist in close proximity. Additionally previous studies have tended to focus on large, centralized library systems rather than those that are decentralized. Given this existing research, it is important to understand more about how librarians in a large, socioeconomically diverse suburban decentralized library system support patrons with varying health and social needs.

3. Literature review

3.1. Public librarians' role in promoting the public's health

Public health is a broad field, with distinct branches of practice focused on advancing population health. The subfield of community health includes all types of approaches including community health assessment; engagement with and capacity building of community lay leaders; and development, dissemination, and documentation of evidence based and culturally relevant programming (Goodman et al., 2014).

One focus of community health is responding to the social determinants of health (SDOH) in the places where people live, work, learn and play that may affect their health risks and outcomes. Healthy People 2030, an ongoing population health benchmarking system led by the United States Department of Health and Human Services (HHS), provides objectives related to the SDOH, specifically improving economic stability (such as joblessness, homelessness), education and health care access, and the quality of the built environment in neighborhoods (Office of Disease Prevention and Health Promotion, 2022.). Patrons visit public libraries for a variety of needs that address the SDOH, including finding health information, obtaining assistance to access resources available in and out of the library that promote health, and accessing the internet to search for jobs. Morgan et al. (2016) found that the Free Library of Philadelphia addressed the SDOH in the inner city setting by providing programs that support early childhood, adult literacy, youth leadership skills and healthy behaviors, employment support, nutrition support, and support for the elderly. Whiteman et al. (2018) surveyed public library directors to investigate how public libraries in the state of Pennsylvania were meeting the health and social needs of their patrons and reported that public libraries provided support for health and social concerns beyond literacy and education. Philbin et al. (2019) performed a scoping review and found that public libraries assist with access to healthcare, opioid use, stress reduction, food insecurity/nutrition, literacy development, homelessness, English as a second language, gaining citizenship, reducing social exclusion, social support, unemployment, and disaster relief.

It is important to assess the needs of public libraries and their communities to inform the development of community partnerships and to strategically design, implement and evaluate community-based programs that optimize regional health systems, academic institutions, local departments of health, and public libraries.

3.2. The suburban context

According to the Department of Housing and Development (HUD), about 52% of people in the United States describe the neighborhood that they live in as suburban (U.S. Department of Housing and Urban Development Office of Policy Development and Research, 2019).

Definitions vary as to what exactly constitutes a "suburban area" (Airgood-Obrycki et al., 2021; Bucholtz et al., 2020; Pankeieva et al., 2020). The Pew Research Center (Parker et al., 2018) defines a suburban area as "those outside the core cities of the largest metro areas, as well as the entirety of other metropolitan areas" (p. 17) and recognizes Long Island's (LI) Nassau and Suffolk counties to be suburban. According to Parker et al. (2018) suburbs are growing more rapidly than urban areas, are becoming more racially and ethnically diverse than rural areas, and the poverty rates are rising more sharply in suburban areas compared to urban and rural areas.

Recent demographic shifts underscore the important role that suburban public library staff play in the present day. The COVID-19 pandemic has affected SDOH such as access to affordable housing and unemployment rates (Orgera et al., 2021). Many households struggle with food scarcity and paying for housing (Center on Budget and Policy Priorities, 2022). There is evidence of a significant population shift with migration of city dwellers to suburban communities prior to and in response to the COVID-19 pandemic (Whitaker, 2021), particularly from New York City (NYC) to LI (New York City Comptroller, 2021). In March 2020 to August 2020, net migration more than doubled on LI, with the majority of migration to Suffolk County from NYC and other nearby urban areas (New York City Comptroller, 2021). It is not yet known whether this urban exodus to suburban communities is permanent, and what additional burdens this will put on suburban community resources. LI is ranked one of the most economically and racially segregated suburban areas in the United States (Winslow, 2019), and serves as a useful context to assess the role of public libraries in a suburban area where SDOH disparities are evident.

3.3. The present study

Researchers at Stony Brook University and the University of Pennsylvania collaborated to understand how public library personnel in a suburban setting, LI, New York, are addressing the health and social needs of patrons in public libraries that vary in the socio-demographic characteristics of patrons. LI is a 118-mile-long suburb and is home to 2,917,251 residents (U.S. Census Bureau Quickfacts: Nassau County, New York; Suffolk County, New York, 2021). On LI, there are 56 public libraries (63 buildings) in Suffolk County and 57 public libraries in Nassau County, each functioning independently with respect to funding, governance, and programming. The characteristics of communities served by LI public libraries are diverse and greatly vary depending on location (see Fig. 1).

The purpose of this study was to understand how suburban public libraries currently advance population health, and to identify strategies for promoting more effective public library public health partnerships. The research questions were: 1) What are public library staff members' perceptions of the health and social needs of their patrons?; and (2) How do public libraries meet these health and social needs? The discussion of findings considers ways in which partnerships between public libraries, health care systems and providers, academic institutions, and other community based organizations can apply innovative strategies to advance population health.

4. Methods

4.1. Design, sample, and recruitment

Approval of study procedures for the protection of human subjects was obtained through the University of Pennsylvania Institutional Review Board (IRB).

As social and health needs disproportionately affect poor communities and communities of color, a maximum variation sampling frame was designed to select library staff employed in libraries from communities with a variety of median income levels and racial demographics. A list of all public libraries on LI was generated and sorted by zip code.
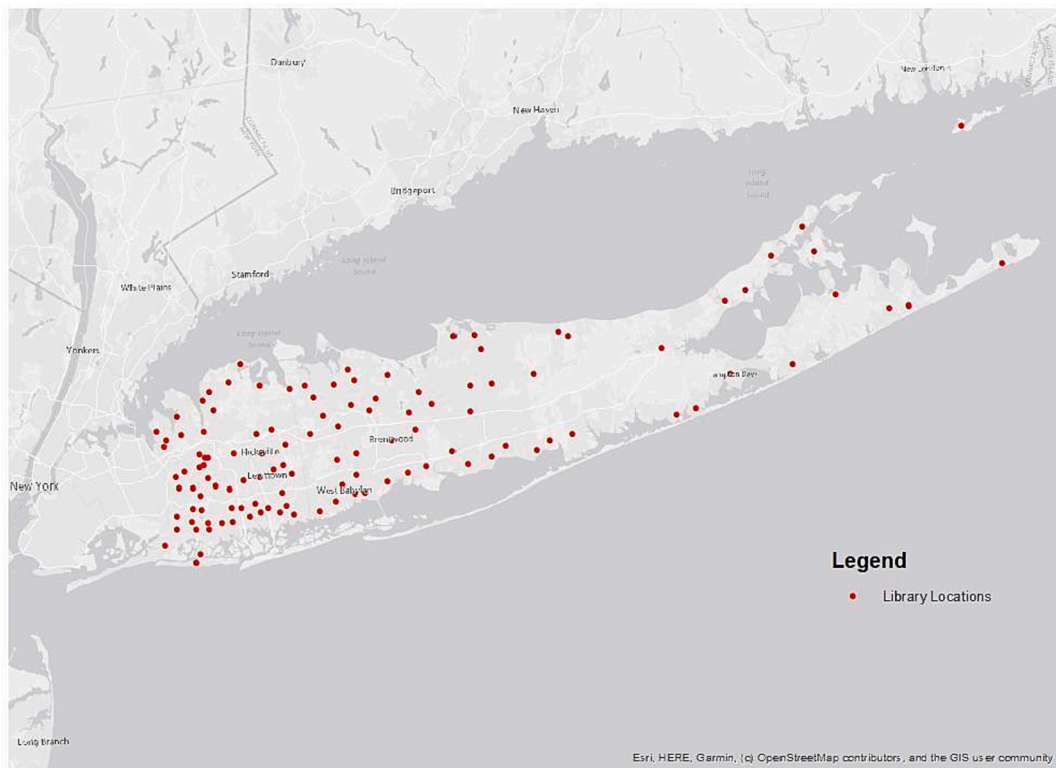
Fig. 1. Map of Nassau and Suffolk County with public libraries.
Description: This map shows public libraries locations in Suffolk and Nassau County, New York. This map was created using publicly accessible addresses shown for each library location using ArcGIS version 10.7.

Simple block randomization was used to select 50% of the libraries to include in the sampling frame. Several library staff were interviewed from each library to ensure that diverse within-group perspectives were captured.

Library directors of selected locations were contacted to schedule an interview. Three attempts were made (email or phone). If a director refused to participate or did not respond, the next library on the list was contacted. Of the 53 library directors contacted, 12 declined and 9 never responded. If a library director consented, they were asked to identify two additional public facing staff members, ideally with different job descriptions, to be interviewed (e.g., reference or circulation librarians, security guards, custodians, or outreach directors). Three staffers consented from nearly every participating library.

4.2. Data collection

Ninety-seven staff interviews were conducted at 32 public libraries between December 2017 and January 2020 (28 directors, 4 assistant or associate directors, 44 reference, clerk, and circulation staff, 10 outreach or programming staff, 9 security or custodial staff, 1 network systems technician, and 1 trainee).

In-person semi-structured interviews occurred in a quiet space in each library. Participants were asked the same questions regarding their job responsibilities, perceptions about the health and social needs of their patrons, how they addressed needs, and additional probes. There were no prompts to assist staff with identifying or prioritizing the topics they chose to discuss. On average, interviews lasted approximately 30 minutes (range of 25 minutes–60 minutes). Interviews were audiotaped via a digital recorder and professionally transcribed by an independent private company approved by the IRB. Three audio files were from the same library and two additional interviews were inadvertently damaged; thus, the final sample size for analysis was 92 staff from 31 libraries.

4.3. Data analysis

A senior qualitative researcher and four trained undergraduate assistants conducted data analyses as a team. Interview transcripts were uploaded into Dedoose 2.0. All team members conducted open coding on a subset of transcripts ($n = 5$). The team convened to discuss coding and resolve discrepancies in coding decisions, resulting in a coding framework with 11 main codes, each with various subcodes. The coding framework is available as an appendix by request to the corresponding author.

The 92 interview transcripts were divided among the team for focused coding using the framework. To guard against selectivity in what data were deemed relevant, two team members coded each transcript. Pairs of coders met regularly to discuss and resolve discrepancies. Coding congruence checks were made throughout focused coding using the interrater reliability test function in Dedoose 2.0. The team achieved an interrater reliability factor of 90%.

Once coding was complete, the data under each subcode were examined for common themes, as well as any instances of divergent views. To ensure credibility of the findings, two team members were assigned to examine the data within each subcode separately and then discuss their interpretation of the data together. Then, one of the two team members wrote a 5–7 sentence summary of the main themes in the data from that subcode. This process was conducted for all subcodes under "Health Needs," "Response to Health Needs," "Social Needs," and "Response to Social Needs."

In addition to the use of multiple coders, triangulation was achieved by enumerating the degree to which each health and social need was identified, both across the library system and as well as within each library. Researchers extracted counts of the number of libraries to which codes for social and health needs were applied, the number of librarians to which these codes were applied, and the absolute number of times these codes were applied to each interview.

To further ensure credibility of findings, a summary of the results was shared and discussed in the aggregate with content experts and county level library leadership who are knowledgeable about local community needs. The results were also presented and discussed at a regional meeting of library directors, some of whom had participated in the study. The feedback from this meeting confirmed that the themes found were salient to the lived experience of these library directors. Given confidentiality concerns, it was not possible to conduct member checking directly with each interviewee.

5. Findings

A total of 12 health needs and 12 social needs of patrons were identified by librarians as those that they responded to most often. The health needs mentioned were mental health, exercise, diet, hygiene-related personal health, opioid use, health insurance, diabetes, heart disease, dementia or Alzheimer's disease, disabilities, alcohol use, and cancer. The social needs identified were technology literacy, homelessness, unemployment, English language learning, food insecurity, socialization, transportation, family functioning, education, loneliness, tax filing preparation, and childcare.

Librarians' responses to these needs included handling disturbances through formal and unwritten procedures, compiling and providing resource lists, offering programs for basic needs such as food, offering enrichment classes and health screenings, providing computer help, and getting personally involved. Details about the needs and how librarians responded to them are summarized in Tables 1 and 2. In-depth analysis of the top three identified needs and librarians' responses follows.

5.1. Health needs and response

5.1.1. Mental health

Mental health, including information about PTSD, depression, counseling, and social services, was the most frequently cited health need of patrons. Two types of patrons with mental health needs were identified: (1) those who came to a library seeking information about a particular mental health condition or a referral to counseling services, and (2) those with mental health conditions who were homeless or addicted to substances; these patrons were described as having a tendency not to seek out information or resources while at the library, but rather to come in regularly for extended visits.

> I had one woman… She told me that she had PTSD and was looking for a psychologist. Sometimes they don't tell you anything, or they tell you everything. She had some issues with insurance and – basically just wanted someone to help her regarding her PTSD.

> You may sometimes see a drifter that you never see in the library come in here and they're just acting kind of odd. They'll sit in the corner. And they just start doing strange things sometimes…I've had people get in my face and stuff like that… I've actually been hit by someone… We had to clear the building one time… It was a bad situation.

5.1.2. Response to mental health needs

Librarians described that they stocked the shelves with mental health resources, helped patrons search for reliable medical information online, referred patrons to community mental health resources, and designed library wide programming, such as support groups.

> I remember one woman coming in one day…and she was so upset. And I turned around to her and I said the Mental Health Association [is] here, two support groups, go here, go there.

Many staff reported providing emotional support to patrons. Several interviewees expressed a nagging feeling that they may be crossing the limits of their professional expertise.

Table 1
Patrons' health needs and how libraries address each need.

Identified health need	Respondents (% of 92)	Libraries (% of 31)	Librarians' responses to health needs
1. Mental Health	54 (58.7)	26 (83.9)	➤ Policies/protocols to remove/ban the person from the library (by police if necessary) if their behavior or language was causing a "disturbance" ➤ If not creating a disturbance, librarians tended to let patrons stay as long as they wanted to ➤ Stock shelves with books on mental health; provide list of mental health resources in the community ➤ Providing individual emotional support to patrons with mental illness
2. Exercise	45 (48.9)	25 (80.6)	➤ Provide many exercise classes, particularly gentle classes, like Tai Chi and chair yoga, for free or for a small fee (~$5–10)
3. Nutrition/Diet	35 (38)	21 (67.7)	➤ Compile and distribute information on diets to improve certain conditions (e.g., diabetes, heart disease, etc.) and for weight loss ➤ Offer cooking programs for patrons
4. Hygiene-related personal health	30 (32.6)	19 (61.3)	➤ Ignore patrons' body odor, unless the odor was affecting other patrons' ability to be at the library ➤ Policies about how long one person could use the bathroom ➤ Policies prohibiting use of bathroom to wash one's body or clothes
5. Opioid use	29 (31.5)	20 (64.5)	➤ Offered staff opportunity to be trained in administering Narcan, an overdose reversal medication; few made training compulsory
6. Health insurance	28 (30.4)	17 (54.8)	➤ Sit with patrons at the computer to help them as they fill out health insurance applications; importantly, however, librarians are not allowed to advise patrons on which health insurance to sign up for, nor to help them physically type in their information when applying for health insurance online ➤ Offer counseling programs for health insurance through the Office of Aging
7. Diabetes	26 (28.3)	17 (54.8)	➤ Offer programs to discuss what diabetes is and how to prevent it ➤ Partner with medical providers to arrange for mobile screening of diabetes at the library
8. Heart Disease	25 (27.2)	14 (45.1)	➤ Stock shelves about heart disease, as books on this topic are regularly checked out ➤ Incorporate learning about high blood pressure and heart disease into LOTE classes
9. Dementia / Alzheimer's	23 (25)	19 (61.3)	➤ Offer programs about Alzheimer's and/or Dementia, usually presented by a third party who uses the library as a base

Table 1 (*continued*)

Identified health need	Respondents (% of 92)	Libraries (% of 31)	Librarians' responses to health needs
10. Disabilities	18 (19.6)	13 (41.9)	➤ Periodically, offer advertisement and space for local hospital vans to park at the library and screen for Alzheimer's ➤ Offer story and crafting programming designed with special attention to the needs of people on the Autism spectrum
11. Alcohol use	18 (19.6)	12 (38.7)	➤ Offer space for Alcoholics Anonymous meetings and/or programs to help those with substance abuse or their family members
12. Cancer	17 (18.5)	14 (45.2)	➤ Offer books and/or online resources for cancer inquiries, rather than creating programs ➤ Periodically, offer advertisement and space for local hospital vans to park at the library and screen for cancer

I just let her talk for a little while and told her that if she needed anything else, she knew where I was. To come back and we would go more in depth with it. But that's scary…I know her mother knew [about the teen's mental health challenges] already, but I didn't know if I should go to her mother, or if I should not go to her?

We do get questions, people that have [mental health] symptoms and they want us to kind of pinpoint what those mean… Those are scary questions, because I don't want to get myself into a trap where I am diagnosing, because again I have no experience with any of that.

Staff were empathetic to those in their community with mental health challenges and expressed eagerness to help. However, staff also described dismay at how mentally ill patrons caused noise and odor disturbances, or used substances in the library, making them and other patrons nervous.

Mental people… they'll just walk around in corners and pace up and down by the shelves. And it makes the staff uneasy sometimes, because you just don't know who's got a gun on them. What if they're gonna attack you or somebody else? If it's gonna create some kind of a turmoil…

Librarians expressed concern about not having the correct expertise to assist patrons with acute mental health needs. Most respondents described allowing visibly mentally ill patrons to stay in the library if they were not disturbing others. Some libraries had policies or protocols to remove a person from the library, by the police if necessary, or ban them for a period of time if their behavior or language was causing a disturbance. Several respondents expressed a desire for in-house social workers who are trained in this field and could provide more support.

5.1.3. Exercise

Interviewees described patrons' increased interest in improving "wellness." Those on low or fixed incomes, particularly senior citizens, regularly requested exercise programming that was accessible and budget-friendly, including yoga, Tai Chi, and strength training.

5.1.4. Response to exercise needs

Library staff were responsive to their patrons' suggestions of possible types of exercise classes.

Table 2

Patrons' social needs and how libraries address each need.

Identified social need	Respondents (% of 92)	Libraries (% of 31)	Librarians' response to social needs
1. Technology Literacy	62 (67.4)	28 (90.3)	➤ Answer patrons' questions; provide one-on-one tutorials ➤ Offer classes in basic computer skills ➤ Creation of staff position dedicated to technology assistance
2. Homelessness	60 (65.2)	28 (90.3)	➤ Allow patrons to stay in the library for long periods of time ➤ Ask patrons to leave if they are disturbing others or sleeping; sometimes call police if patrons will not leave ➤ Provide a resource list of local homeless shelters and housing options ➤ Allow patrons to use telephones to call shelters to find a bed
3. Unemployment	41 (44.7)	21 (67.7)	➤ Provide computer support, helping fill out online job applications ➤ Assist in sprucing up resumes
4. English Language Learning	35 (38)	22 (71)	➤ Hire a bilingual (Spanish/English) librarian, or express plan to do so ➤ Provide English as a Second Language (ESL) classes ➤ Offer print and audio resources to help English language learners practice ➤ Bilingual storytime for children ➤ Provide books/resources in Spanish
5. Food scarcity	33 (35.9)	19 (61.3)	➤ Offer summer feeding programs ➤ Run food drives for local food banks ➤ Offer programming about federal Supplemental Nutrition Assistance Program (SNAP) and other government assistance, and how to apply
6. Socialization: Developmental Disabilities	26 (28.3)	14 (45.2)	➤ Provide space for children with developmental delays to socialize; this also creates a supportive community of parents
7. Transportation	23 (25)	17 (54.8)	➤ Offer service to deliver books to elderly patrons without access to transportation or who live in assisted living facilities ➤ Some staff drive patrons home if they do not have a way to get home ➤ Partner with community vans or buses that take patrons to a church or other public establishments ➤ Allow patrons to use telephones to call a cab
8. Family functioning issues	23 (25)	14 (45.2)	➤ Help patrons find information on family functioning issues: domestic violence, finding

Table 2 (*continued*)

Identified social need	Respondents (% of 92)	Libraries (% of 31)	Librarians' response to social needs
			court approved parenting classes, and family counseling ➢ Offer programs for children with autism in order to help parents ➢ Offer talks by experts on parenting topics, such as diagnosing speech issues ➢ Offer parent/toddler programs in order to support families ➢ Divorced parents use the libraries as designated drop off spots for children, because it's a neutral place
9. Lack of education	23 (25)	14 (45.2)	➢ Offer space for tutoring (either tutoring programs run by the library or individual private tutoring) ➢ Hold GED or SAT preparation courses, usually implemented by a third party
10. Loneliness	21 (22.8)	15 (48.4)	➢ Offer many activities during the day and evening designed for children and adults to get to know each other, such as craft activities, movie discussions, book clubs, and more
11. Tax filing preparation	14 (15.2)	14 (45.2)	➢ Offer programming about taxes, including how to grade your taxes, how to grieve your taxes, and how to fill out your tax forms ➢ During tax season, provide space for volunteers to assist patrons with their tax forms and other questions
12. Childcare	9 (9.8)	7 (22.6)	➢ Assist patrons with internet searches about affordable child care options ➢ Some parents rely on time at the library after school as a form of child care, particularly for children in between elementary school and high school

Exercise, like fitness, I've gotten a lot of requests for different programs… If I get three suggestions that are of the same nature, I would act on that… Some [were for] Tai Chi. We started that….And, other than that, I talk with the programmer, and libraries talk a lot amongst each other, so if something is popular we'll try it.

The crowd-sourced way of determining exercise programming described by the library director, above, was similar to how exercise programming was decided upon at many libraries. The main factor determining exercise class type seemed simply to be that a subset of patrons wanted to try it, or that it was a popular class taught at other libraries. Several library staff mentioned that they wanted to offer more such classes but had space constraints.

When reflecting on why exercise classes were so popular among patrons, library staff gave several reasons: some classes were free, others were well below market rate at an average of $7 per class, and that most of them were gentle since they were geared towards the needs and abilities of older adults.

When somebody who has the walker or has the cane can sit down on that chair and do that yoga, they might not be able to get on the floor to do it any other way. Or the Tai Chi. They're learning how to do their balance, and people who have the fear of falling. I mean, what they do is amazing.

Another reason given for the success of exercise classes was their benefit beyond improving physical fitness, including improving mental health and socialization.

… as a health person, I would see yoga as meeting two things [goals]. One is mental health, right? It's prevention and wellness. But [it's] also physical exercise. Just knowing…the reason they come is super important for us to understand the need that we're meeting…Is that meeting a health need, a social need, a physical need? Why do they come to yoga? What is that about? It could be all three…And some of the people are friends. They come as a group. They wanna be in the same class, so that's a social thing.

5.1.5. Diet and nutrition

Another top health need of patrons was improved nutrition and diet. Regularly, patrons would come into the library asking for cookbooks and online resources to lose weight and to eat more healthfully. Often these requests were about particular diets, such as gluten-free, paleo, and vegan.

I would say the most common is things on diet and weight control. Books on that. Resources for that.

Other patrons looked for cookbooks and recipes to improve particular physical health conditions. Diabetes and heart disease were the diseases asked about most often.

5.1.6. Response to diet and nutrition needs

As patrons answered their questions about nutrition by reading informational books and internet searching, several librarians reported regularly ordering new books on the newest health and diet trends.

I mean you go from paleo, keto. I don't even know what the new one is. I just ordered a recent one.

For patrons not as computer-savvy or who preferred one-on-one interaction, library staff answered questions at the reference desk, or helped the patron to find the information they needed.

Lots of times they'll just say I just want a recipe to take care of this or a few recipes so I can give them a book or I can print out a few recipes from the computer.

While all libraries offered written or online resources to those seeking out diet and nutrition information, some offered additional programming to address common health issues, such as cooking classes, educational seminars, and health screening fairs. These programs were mainly directed at older adults and were often put on for free by outreach divisions of local health care provider organizations.

The hospitals are doing a lot of community-based activities. They want to get a little bit more embedded in it. And so they sent chefs here one day. We had healthy eating. We had healthy soups upstairs and they gave out recipes and they had the chef from the hospital. And anybody could come and ask them any questions.

Several library staff indicated that they wanted to put on even more diet and nutrition programming for patrons, because the topics were so popular and the information so needed, given the high rates of diabetes, heart disease and obesity in this country. Many library staff felt constrained by their budgets or by the space available to hold these programs.

5.2. Social needs and response

5.2.1. Technology literacy

According to the interviewees, the library was a vital resource for many community members seeking to use new technology. Patrons frequently asked for help with downloading e-books, navigating new electronic devices, and filling out online forms. Job seekers came for assistance filling out online applications and creating resumes. Patrons asked library staff for personal assistance searching computers at the library for medical journals, job postings, and other information.

In addition to seeking out logistical assistance with technology, for some patrons, meetings with library staff to go over technological issues served to mitigate loneliness.

> We have a lot of regulars who come in for technology support. They tend to be on the older side of our demographic range… I think part of it then also becomes social where the same person is coming for six months in a row.

5.2.2. Response to technology needs

Most library staff was familiar with the technology in the library and assisted patrons with questions they had, often through a scheduled one-on-one appointment or an impromptu hands-on tutorial. Many libraries also offered basic computer classes, some in multiple languages. A few libraries had a staff member dedicated to providing technology assistance. Despite implementing some or all the above measures, staff at most libraries struggled to keep up with demand, given their other responsibilities.

> With computer help, we don't have the staffing to sit there and do it for you. We can set you up to do it to get you started. We can help you log in. But we're not going to do the work for you…

In addition to these staffing constraints, another challenge in providing technological support was librarians' inability to input information for the patron due to privacy issues.

5.2.3. Housing

Shelter and housing was identified by almost every interviewee as a main unmet social need. Staff working at libraries close to public transit discussed homelessness often. People who were homeless visited the library for many reasons: to rest their bodies, clean themselves in the bathroom, use computers to find jobs, locate homeless shelters, and get information on local food pantries.

5.2.4. Response to housing needs

Many librarians kept a list of shelters and food banks at the main desk for quick reference. Several librarians allowed patrons to use the telephone to contact shelters or transportation and had resource lists with phone numbers to assist in this endeavor.

In some library spaces, people who were homeless were able to use the bathrooms as many times as needed and sleep in library spaces undisturbed; other libraries had policies that barred extended bathroom use and sleeping. Most librarians stated that they "did not mind" homeless people being in the library as long as they were "not disturbing" the other patrons. There was wide variation in library staff's opinions on what counted as a disturbance. Some librarians classified foul body odor as being a disturbance and grounds for asking someone to leave, while others felt that if they kept to themselves and did not fall asleep, homeless patrons should be able to stay. Interviewees mentioned that it was disturbing when patrons used bathroom sinks as make-shift showers or spent a long time in the bathroom "freshening up." Several interviewees expressed a wish that the library could do more to provide adequate showering and laundry facilities for their homeless patrons.

The procedures for addressing a homeless person's hygiene were usually not set in stone and were situation dependent. If a person had an odor that was powerful, some, but not all, library staff asked these patrons to leave and to come back after they had washed up.

> They came to me [the library director] and they said, 'This guy, he's got three – it's the middle of the summer – he's got three ski jackets on and his hygiene is really suspect; I mean it's bad.' And, generally, you don't put people out. I mean we're air-conditioned. We think of peoples' wellbeing and such. So, I went over to speak to him, and I said to him you have to do something about your hygiene, and he didn't. So, I called the social worker…and she came in. They have a mobile {shower} unit, and they came down and they spoke to him.

Library staff expressed frustration at how the needs of homeless patrons were beyond the scope of their jobs. One staff member describes:

> We have quite a bit of people… sent here by social services…They don't know how to use a computer and they [at social services] go, 'Well, yes, but you have to find an apartment and go to the library, the computer librarians will help you.' So, you end up sitting with them researching possible places where they could live… but we're kind of walking blind…because we don't know what they need.

The incident described above is a good example of the benefit of having a social worker present to provide direct services in the library space. Libraries in this sample had important partnerships with local expertise: some libraries served as placement for social work interns from Stony Brook University School of Social Welfare, others were in the process of hiring one, and others relied on outside partnerships with mental health professionals or law enforcement. Rarely were in house social workers in full-time, paid positions.

5.2.5. Unemployment

Unemployment was another social need, often mentioned when discussing technology literacy. Unemployed patrons often went to the library to search for jobs electronically and receive help with their resumes.

5.2.6. Response to unemployment needs

The most immediate way that library staff met this need was by assisting patrons in navigating job search engines on the internet. This approach was dependent on library staff availability.

> They really didn't know how to use it [the computer], so I set them up on it, I found them the site they needed to go to… We [library staff] don't have a whole lot of extra staff a lot of times – so we can't always sit down one on one to do résumé help…there's almost never enough of us to dedicate those hours.

> I remember one patron came in for… a period of three months. And every day she would come in and I would help her apply for jobs. Finally…she did get one. So that was a happy ending… having access to a computer is a huge thing because most of these people don't have access.

Some library staff helped patrons apply for unemployment benefits as well. While privacy rules prohibited library staff from filling out these applications on behalf of the patron, the staff often helped them to understand what to type in each section.

6. Discussion

This study found that suburban libraries are spaces of public health practice, a finding consistent with other studies in urban and rural libraries (Morgan et al., 2016; Philbin et al., 2019;Wahler et al., 2020; Whiteman et al., 2018). The methods of this study including in-depth interviews in which library staff identified the top health and social needs of their patrons without being given a list of options, is unique in the existing body of literature on this topic, useful for confirming results found in more deductive studies (Wahler et al., 2020; Whiteman et al., 2018) as well as providing contextual descriptions from the library staff

themselves about how they go about addressing health and social needs.

The varied sociodemographic landscape within this suburban context was reflected in the health and social needs identified by librarians, as well as their responses to those needs. For example, while several of the identified needs were related to the SDOH, such as housing and transportation, others were not, such as tax filing and exercise. Commensurately, library staff offered a variety of services, which can be divided into two distinct categories: (1) survival support services and (2) enrichment programs. Survival services tended to be used by low-income patrons and address the SDOH, for example, assisting with resources and information to access financial stability, shelter and housing, or food security. In contrast, enrichment programs tended to be used by economically stable patrons and were those designed to enhance wellbeing, such as exercise or cooking classes, and arts and crafts programs. This multifaceted work requires a flexible and adaptive workforce, able to assess and respond to the needs of patrons.

Regardless of the need to which librarians were responding, a key element of librarians' response was the provision of social support, an essential ingredient in individual and community wellbeing (House, 1981). This social support was of many different types: informational, instrumental, and emotional. Informational support was provided through programming about various health topics and resources to nearby shelters, food pantries and other services. Instrumental support was also provided to patrons in various ways: assistance with technology, help understanding complicated medical or other forms to fill out and use of the telephone to find shelter or food. Emotional support was also provided by librarians, as they listened to patrons' concerns about their health, transportation, or other needs. While informational support is that which librarians are trained to provide, instrumental and emotional support are less clearly thought of as the work of traditional library science.

The findings of this study confirm and expand on previous literature that has found the scope of work of library staff to be broader than conventionally understood, with strain on work performance. Similar to earlier studies (Luo and Park, 2013; Rubenstein, 2018), there was variation in the comfort felt by library staff when answering some health information questions, a finding congruent with a recent analysis of American Library Association (ALA) accredited Master of Library and Information Science degree programs' curricula which found a lack of health-related coursework offered and required (Pandolfelli et al., 2022). This study demonstrated that library staff also feel concerned about their abilities to address situations involving intersecting health and social issues, such as disturbances caused by mentally ill patrons who were also homeless or lack medical insurance due to unemployment. Indeed, some patrons have complex health and social needs that may require comprehensive care and case management that may extend beyond the scope of practice for public librarians.

One way to support public librarians in addressing the health and social needs of their patrons is by providing evidence-based training programs that are developed and evaluated to support their work with patrons. The Consumer Health Information Specialization (CHIS) offered by the Medical Library Association (2021) and the Network of the National Library of Medicine (NNLM) trains all types of librarians to provide consumer health information but does not provide training to address social needs. The ALA also offers webinars to train library staff on social needs of their patrons, such as the program "Service At-Risk Patrons: Lessons from Library Social Workers" which aims to teach public librarians how to provide services to vulnerable patrons (American Library Association, n.d.). The Center for Disease Control and Prevention (CDC)'s Division of Scientific Education and Professional Development has an action plan for public health workforce development (Center for Disease Control and Prevention, 2019). Priorities for professional development include quality standards for training. Evidence based training on the SDOH and public health practice may help support public librarians to respond to patrons' health and social needs.

While training librarians as part of the public health workforce is

critical, equally needed is a thoughtful discussion in the field about the degree to which library staff should be engaging in health and social needs response, especially as doing so limits their time and abilities to focus on other aspects of library science services. One way to address this concern is for public libraries to form partnerships with outside organizations with specialized expertise in health and social services. The trend towards co-locating social workers, public health educators, and other health professionals in the library space is an innovative and appropriate response to addressing these situations (see Pandolfelli et al., 2021 for a description of one such endeavor, The Stony Brook Medicine Healthy Libraries Program).

6.1. Limitations, strengths, and considerations

This study drew on librarians from a relatively small geographic area (LI, NY), and may not be representative of public libraries elsewhere. The sampling approach relied on each site's library director to select two or more staff members to be interviewed, which may have influenced the range of viewpoints expressed. The sampling methods did provide some strengths, including maximum variation sampling, in which the investigators drew on interviews from libraries with a wide variety in catchment area demographics, geographic locations, and public library staffing sizes; such sampling was useful for obtaining a wide range of viewpoints.

7. Conclusion

Public libraries and their staff have become front line providers of health education and social resources, in many cases, simply because patrons ask them to do so. Evidence based training programs, such as the Healthy Library Initiative (2022)), provide training and workshops as well as ongoing need assessments of public libraries. Inter-sectoral collaborative programs should be implemented more widely so that more direct services can be provided in the library space, co-locating library staff with professionals who hold specific expertise to promote access to and utilization of health and social services (such as social workers). These and other innovative initiatives are needed with support by local government, policy makers, healthcare systems, and health sciences or medical libraries to partner with public libraries in high need communities.

Declaration of Competing Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this.

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