



Research Article

Public Libraries and Health Promotion Partnerships: Needs and Opportunities

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Abstract

Objective – Across North America, public libraries have increasingly served their communities by working with partners to connect patrons to essential healthcare services, including preventative. However, little is known about the extent of these partnerships, or the need for them, as seen from the perspective of public library workers. In this study, we set out to address the following research question: What needs and opportunities are associated with health promotion partnerships involving public libraries?

Methods – Using snowball sampling techniques, in September 2021, 123 library workers from across the state of South Carolina in the United States (US) completed an online survey about their health partnerships and health-related continuing education needs; an additional 19 completed a portion of the survey.

Results – Key findings included that library capacity is limited, but the desire to support health via partnerships is strong. There is a need for health partnerships to increase library capacity to support health. Public libraries already offer a range of health-related services. Finally, disparities exist across regions and between urban and rural communities.

Conclusion – As an exploratory study based on a self-selecting sample of public library workers in a particular state of the US, this study has some limitations. Nonetheless, this article highlights implications for a variety of stakeholder groups, including library workers and administrators, funders, and policy makers, and researchers. For researchers, the primary implication is the need to better understand, both from the public library worker’s perspective and from the (actual or potential) health partner’s perspective, needs and opportunities associated with this form of partnership work.

Introduction

On November 21, 2022, the *Canadian Journal of Community Mental Health* published the research article “Supporting Mental Health in a Public Library Context: A Mixed Methods Brief Evaluation” (Oudshoorn et al., 2022). The authors explored the potential for a collaboratively constructed mental health wellness hub situated in a Canadian urban library, finding that this form of co-location was desired by patrons, mental health hub staff, and library staff.

As discussed below, the topic of public libraries and public librarians as health promotion partners has been increasingly explored by a range of scholars representing a range of disciplines. Despite an increase in calls to better understand the current potential of public library participation in health promotion (Flaherty & Miller, 2016), most studies on this topic have either been case studies of particular communities (as in Oudshoorn et al., 2022), or focused exclusively on single topics, such as consumer health at the library reference desk (e.g., Arnott Smith, 2011) or mental health (Oudshoorn et al., 2022).

To give one example: there is a growing literature on social workers in public libraries (Ogden & Williams, 2022), which suggests that this integration is neither easy, nor inevitable, but instead requires different actors and stakeholders getting to know each other and find common ground (Wahler et al., 2022). Library workers recognized the need for someone like a social worker, but perhaps that need could also be filled by other forms of partnership not being explored in any sort of broad-scale way. For instance, Baum et al. (2022), the authors of a recent study on the topic of social work-public library partnerships from the U.S. state of Florida, found that:

All seven branch managers [interviewed] expressed enthusiasm when discussing the trend of social workers in libraries, noting patron struggles with food insecurity, homelessness, immigration, substance misuse, mental health challenges, and overall economic disadvantage as major motivating factors behind their support for including them in public libraries. (p. 14)

The range of social and health needs identified by these public librarians pointed to the need for a complementary range of partnerships, not only with social workers, but also with others in the health and social services sectors. Nevertheless, we lack a broader understanding of the current state of needs and

opportunities associated with public library participation in community health partnerships. With this study, we sought to begin to fill this gap.

Literature Review

Discussions of health promotion in public libraries are as old as the profession of public librarianship itself (Mon, 2021; Rubenstein, 2012). Most public library-based health promotion partnerships have been highly localized, involving librarians working with local health partners to develop innovative solutions to local problems, such as the example of a bookmobile in rural Georgia transporting a county nurse in the 1940s (Rubenstein, 2012). In the 1960s, some urban libraries started developing community information and referral systems to refer patrons in need to the services of other agencies, including health agencies (Arnott Smith, 2011). More recently, in 1992, a public librarian in Stratford, CT, developed a partnership with a local teen counseling group and an aerobics instructor to develop a physical and mental health support group for teenagers at the library (Lenstra, 2018).

Through this literature review, we identified three themes in recent literature on this topic:

- The library as community space for access to health-related services
- The library as a space for social workers and health workers
- The critical, if understudied, role of library workers in these partnerships.

The Library as Community Space for Access to Health-Related Services

The idea of the public library as a community space has become more prominent (e.g., Klinenberg, 2018; Mattern, 2007), shaping discussions of how health promotion activities occur in public libraries. As shown in a state-wide survey of Pennsylvania library directors, health services in public libraries include, in different places, access to social workers, summer meals, bathrooms, a respite from the elements for individuals experiencing homelessness, nutrition classes, telehealth, and a range of other health and social services (Whiteman et al., 2018). This trend continued during the COVID-19 pandemic, when libraries were framed as convenient spaces to distribute tests, host immunization clinics, support access to telehealth, and even assist in efforts to address food insecurity (e.g., State of Wisconsin, 2022; Virginia Department of Health, 2021).

An additional facet of the literature on library as space has been research on libraries as crucial nodes in disaster response (Liu et al., 2017; Tu-Keefner, 2016), particularly research on libraries in areas prone to hurricanes (Hamilton, 2011; Jaeger et al., 2006; Mardis et al., 2020; Veil & Bishop, 2014). This trend has continued during the COVID-19 pandemic, with research published on the roles of public libraries and librarians during this emergency (Smith, 2020).

Another notable trend was that of the public library as a support for child and family health. Studies have been done on libraries as hosts of summer meal programs (De La Cruz et al., 2020; Sandha & Holben, 2021), nutritional education classes (Freedman & Nickell, 2010), physical activity classes (Bedard et al., 2020), oral health programs (Woodson et al., 2011), and more generally as institutions that support health, including mental health, among vulnerable teenagers and youth (Banas et al., 2020; Campana et al., 2022; Grossman et al., 2021; Winkelstein, 2019).

Providing direct medical support for adults through telehealth was a newer option being explored. Santos (2021) provided a case study of this effort in a small rural library in Pottsboro, Texas. DeGuzman

et al. (2021) found great potential for libraries to become hubs for providing health access to rural populations with little or no broadband access.

The Library as a Space for Social Workers and Health Workers

There has also been interest in placing social workers and other health workers in public libraries since the San Francisco Public Library began the practice in 2009 (Esguerra, 2019). This work emerged in part due to an increasingly public realization that public libraries were sites of public health incidents, including drug overdoses. Feuerstein et al. (2022) surveyed five states (n=356) for information on instances of substance abuse on library property, and how libraries planned and prepared for this occurrence. The researchers found that alcohol and drug use was common on library property, but most libraries did not have on-site medical help, such as Naloxone. They also found that librarians would like more training on how to handle these situations.

Giesler (2021) studied perceptions of social workers in public libraries, finding differences in how the position was utilized across library systems. Social workers might be primarily focused on training other library staff to recognize and empathize with specific patron populations, such as homeless populations. They could also interact directly with library patrons to offer services. Gross and Latham (2021) also found this benefit in staff training by the six library administrators who already employed social workers in the Southeast US (n=52). Johnson (2021) and Wahler et al. (2022) described the components of “readiness” required for both a public library and the participating university when considering a social work student internship at a library.

Other health liaisons have been found to be helpful for library staff assisting patrons with complex needs. Homeless patrons often used the library for various reasons, as described by Adams and Krtalić (2021). They found that the presence of a community health worker focused on the needs of the homeless population helped the library and its staff to better understand and provide for those needs by reducing barriers to services.

Other researchers considered alternative models of placing health liaisons in libraries. Both interprofessional student internship models and the training of library staff in health information have been the focus of research. Pandolfelli et al. (2021) considered the lessons from different experiential learning opportunities for students (n=21) from a variety of professions: general health courses at the undergraduate level, and masters’ level social worker, library science, and public health students. This study of a joint training experience for the students allowed for both support and building common ground between professions and the students involved when working in a library setting. This sort of inter-professional training model has been deployed at the University of Missouri, where Library & Information Science students took courses on public health as part of an experimental, federally funded project (Bossaller et al., 2022).

Draper (2021) conducted a feasibility study to explore the potential for collaboration between nutrition educators and public libraries. Draper found that while there were extensive overlapping goals between U.S. Department of Agriculture’s Supplemental Nutrition Assistance Program Education program (SNAP-Ed)—which is an evidence-based program that helps people lead healthy, active lives by partnering with state and local organizations—and public libraries, library staff had little knowledge of the federal program, with only 1 of the 14 participants having any understanding of SNAP-Ed and how it could support libraries.

In Spring 2022, the Texas-based St. David's Foundation announced a new \$1.5 million initiative to support what they are calling Libraries for Health. The foundation is collaborating to broaden access to mental health services for rural residents by placing non-clinical mental health workers at the public libraries in Central Texas. The non-clinical mental health worker initiative is modeled on peer navigator programs found in some urban libraries across the country. Crucially, the program includes a strong evaluation component, led by The Rand Corporation (Carey, 2022).

The Under-Studied Role of Library Workers

As public libraries were increasingly seen as opportune spaces for health promotion services, the roles of library workers in administering these services were sometimes overlooked. The absence of library workers from these discussions could sometimes lead to burnout and staff feeling overwhelmed, as they felt they were being asked to take on more and more in their daily work (Freeman & Blomley, 2019). This perception increased during the COVID-19 pandemic, when many librarians suffered trauma as front-line workers (Comito & Zabriskie, 2022). The question of what capacity public library workers have to participate in community health partnerships remains under-studied.

When library workers were mentioned in research on this topic, researchers tended to focus on how to most effectively train library workers to field reference questions related to consumer health information in ways analogous to the work done by medical or health sciences librarians. Derosa et al. (2021) described a partnership between Weill Cornell Medicine library and the city of Brooklyn, New York, focused on using a train-the-trainer model for library workers by providing training in how to better serve patrons requesting information about health issues. Other researchers have focused on the preparedness of public library workers to support patrons in crisis. Wong et al. (2021) reported on the ability of Pennsylvania public librarians (n=100) to provide health information on substance abuse issues over the phone and found that there was a wide variation between libraries. Brus et al. (2019) surveyed public library staff in Australia and found a lack of confidence in dealing with patrons with complicated social issues such as mental health and homelessness. Malone and Clifton (2021) explored this idea in a five-year study of the Oklahoma public library system (n=106 staff, n=67 libraries) to certify existing public library staff in specialized training from the Medical Library Association. Fewer researchers have focused on how to foster cross-sector collaborations most effectively between public librarians and those working in the community health sector (Lenstra & McGehee, 2022).

Aims

In this study, we set out to address the following research question: What needs and opportunities are associated with health promotion partnerships involving public libraries?

We framed this question from the perspective of public library workers. Future research on this topic could investigate the question from the perspective of actual or potential public library partners.

Methods

To understand the needs and opportunities associated with South Carolina public library participation in health initiatives, we designed a survey through a collaborative process that included the following steps:

1. A review of survey instruments used in previous surveys of the topic of public libraries and community health, including those in Bertot et al. (2015), Feuerstein-Simon et al. (2020), and Whiteman et al. (2018).
2. Codifying the range of health partnerships involving public libraries discussed in previous literature to ensure the survey inquired about different partnership configurations.
3. An alignment of the research instrument with the priorities of the South Carolina Center for Rural & Primary Healthcare (SC CRPH), a partner in this study.
4. Coordination with the State Library of South Carolina around framing this topic.

After development and testing, the research methods were approved by the Institutional Review Board of the University of North Carolina at Greensboro (Study #IRB-FY22-71).

There is no comprehensive directory of public library employees in South Carolina, either at the state or local levels. According to the U.S. Institute of Museum & Library Services (IMLS), in FY2019 – the most recent year for which data was available at the time of this writing – the total staff of all public libraries in South Carolina is 2,112 (Pelczar, 2021). This number includes 514 credentialed librarians and 1,598 other employees, including paraprofessionals, groundskeepers, and security staff, among others. There are 42 public library systems in the state. Although we were most interested in hearing from librarians, the survey was designed such that it was open to any employee of a public library in South Carolina.

To reach these employees, the researchers used a form of snowball sampling in which individuals and institutions that were pillars of the public library community in South Carolina were asked to distribute the survey to their networks on behalf of the researchers. These institutions included the State Library of South Carolina, the Network of the National Library of Medicine, the South Carolina Library Association, and the SC CRPH itself.

The survey was distributed over four weeks in September 2021, an extremely difficult moment in South Carolina and in the world. For logistical reasons, the survey had to be distributed during this moment in time. September 2021 was in the middle of the global pandemic. These logistical reasons centered around the temporal constraints of the South Carolina Center for Rural & Primary Healthcare, which wished to better understand this topic prior to releasing financial awards in Spring 2022 to South Carolina public libraries wishing to embark on novel health partnerships in their communities.

During the four weeks the survey was open, the researchers monitored the response rate, generating a weekly map of where respondents were coming from, at the county level. This response rate informed subsequent snowball sampling techniques, which focused on attempting to secure complete saturation across all counties in the state of South Carolina. More information on recruitment and sampling can be found in Lenstra and Roberts (2022).

Analysis

Descriptive statistics were calculated for all closed-ended survey responses, while thematic coding was conducted to analyze open-ended responses. To further analyze the data and to generate regional and other trends, the researchers used the demographic information respondents provided about their job titles and library locations to generate comparisons. Following federal practices established by the IMLS,

rural and urban differences were established using the procedures set by the National Center for Education Statistics, a unit of the U.S. Department of Education.

We organized this article around the sections of the survey that centered on partnerships that included public librarians and actors in the health and social service sectors, including results that helped indicate why such partnerships would or would not be desirable. The survey included a range of questions on the broader topic of needs and opportunities associated with public libraries as institutions embedded within community health ecosystems. Readers interested in accessing broader survey results, including the dataset itself and the results of the thematic coding of open-ended responses, may do so at the open access white paper published by Lenstra and Roberts (2022).

Limitations

As with any nonprobability sampling technique, there were limitations to this approach, which centered around the fact that statistical generalization to the broader population studied is impossible. Nonetheless, we chose nonprobability sampling as the best way to secure a broad sample of the South Carolina public library community within the timeframe of the project.

Additional limitations derived from the survey format itself. It was possible that different respondents may have interpreted some of the survey's prompts in different ways. For instance, the survey did not specify what was meant by "access to health literacy," and thus this prompt and others like it may have been interpreted in different ways. Despite these limitations, this survey and its results provided an unprecedented window into perceptions, needs, and opportunities associated with public library and health partnerships.

Results

In general terms, the sample of respondents roughly aligned with the distribution of public libraries across South Carolina. Figure 1 shows that the distribution of the 123 respondents who fully completed the survey roughly aligned with the distribution of South Carolina libraries. The number of "completed responses" refers to the number of library workers who totally completed the survey. There were 21 additional respondents who gradually dropped out of the survey after completing only a portion. All those who dropped out did so after completing at least a full page of questions. More information on the sample appeared in Lenstra and Roberts (2022), and the number of respondents for individual questions can be found in the Appendix.

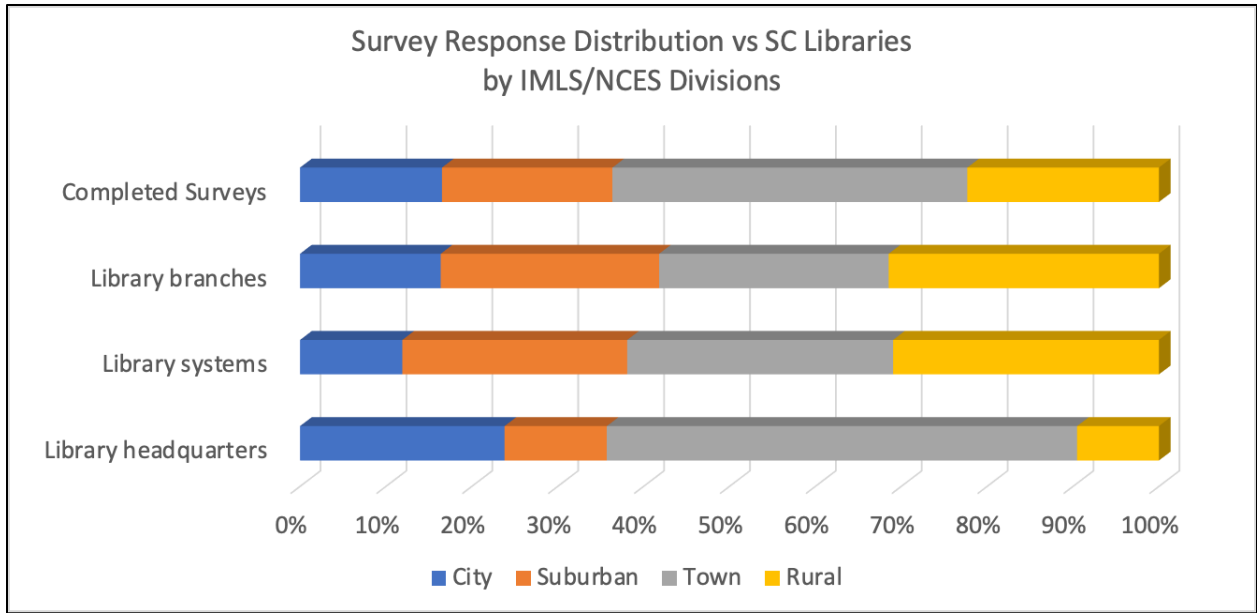


Figure 1
Survey response distribution compared to the distribution of public libraries across the state of South Carolina.

The vocabulary used in Figure 1 corresponds to the three ways that the IMLS used to assess the geographical distribution of public libraries across the nation: 1) Library branches (outlets, in the nomenclature of the IMLS) referred to library branches and bookmobiles, 2) Library systems (Administrative Entities MOD in the nomenclature of the IMLS) referred to the geographic spread of multi-branch library systems, and 3) Library headquarters (Administrative Entities ADD in the nomenclature of the IMLS) referred to the locations of the headquarters of multi-branch library systems.

The Desire to Collaborate with Health Workers is Strong, But Capacity is Limited

Nearly every respondent reported a need for a health worker or a health liaison to help them serve the public in their library: over 90% said that if outside help were available, they could see a need for a health or social worker at their libraries.

However, when respondents were asked if they would like to have specific types of health workers or health liaisons available at their libraries, interest diminished. Only 74% of respondents were interested in, or currently had available, social workers at their libraries. Social workers were the most desired type of health liaison (Table 1).

Table 1
Public Library Worker Interest in Having Health Professionals Available to the Public at their Libraries

Health Professional (n=126)	Not interested	Offered	Interested – Not Offered
Social workers	26%	23%	51%
Nurses	37%	12%	51%
Health educator	25%	27%	48%
Medical students	48%	4%	48%
Community health workers	29%	24%	47%
Social work students	44%	13%	43%
AmeriCorps or other volunteers	40%	21%	39%
Other health-related professional	69%	8%	23%

One reason for this perceived need may relate to the prevalence of health-related incidents that occur on library property. Nearly 80% of respondents reported that people experiencing homelessness used their public libraries as day shelters, and between 10-50% reported a range of other incidents on library properties, including drug deals, physical violence, and overdoses. Librarians also wrote open-ended comments about health-related incidents they had witnessed at their libraries, including seizures and heart problems (Figure 2).

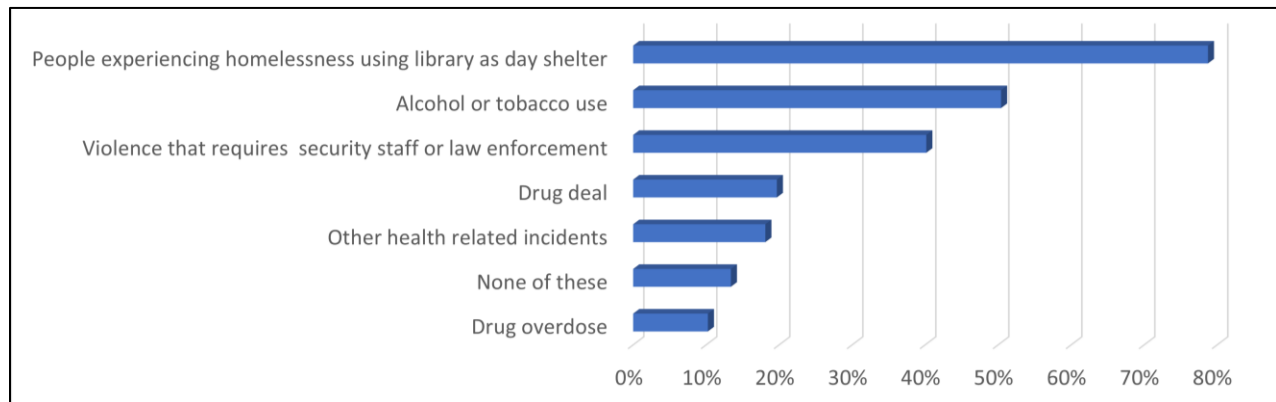


Figure 2
Medical and health related incidents occurring on public library property. (n=127)

City librarians were most likely to report all the incident types asked about, except for drug deals (Figure 3). Data suggested, however, that these sorts of incidents occurred in public libraries across the state. Less than 30% of rural respondents said no health-related incidents had occurred at their properties. As open public spaces, health issues occurring in communities tended to also occur in public libraries.

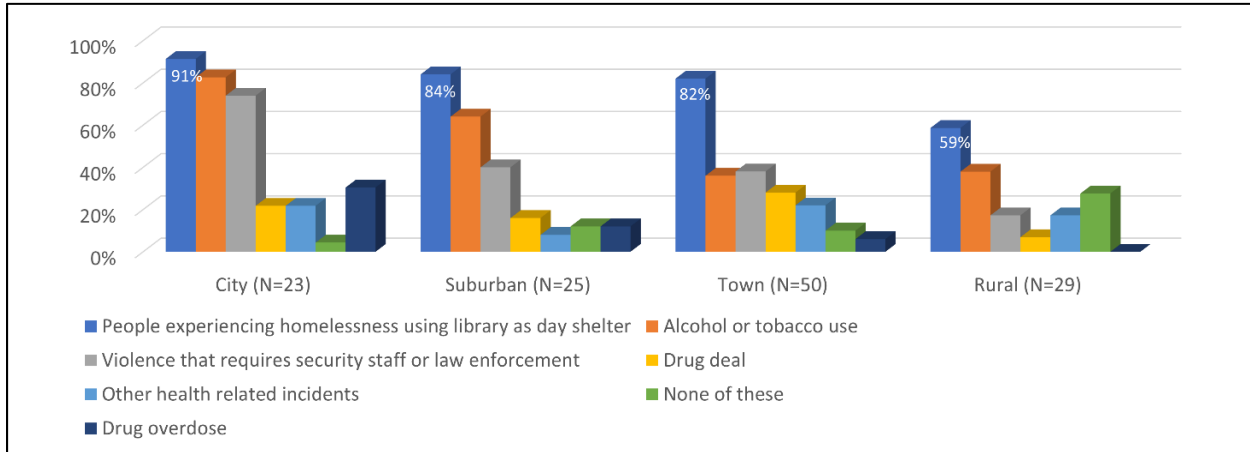


Figure 3
 Medical and health related incidents occurring on public library property, by type of community served. (n=127)

In any case, one reason for the difference between perceived need for outside help in general, and perceived need for specific forms of outside help, related to limited library capacity to develop new initiatives. As one respondent wrote in an open-ended comment: “We do not have enough staff and really cannot handle any more programs. Even when partnering with others, it takes staff time, and we just cannot do it anymore due to not enough staff.”

A Need for Health Partnerships to Increase Library Capacity to Support Health

Respondents did not always have the partnerships that would enable them to bring other types of health services to their libraries, or to refer library patrons to appropriate health or social service agencies. Public libraries typically had close connections with agencies that support the social determinants of health (SDoH), including educational institutions, parks & recreation units, and non-profits. These reported close relationships could position public libraries to effectively facilitate community conversations on health needs in ways that would bring more voices into local health planning and policy making.

Librarians also reported offering a range of services that support addressing the SDoH, including access to technology, literacy, education, food, legal aid, and employment. Across the state, many public libraries have hosted a wide array of services that support public health and the SDoH, with more than 40% reporting they have hosted everything from food drives to fitness classes, farmers’ markets, summer meals, health fairs, and blood drives.

Less robust were the relationships between public libraries and agencies specifically in the health sector, and less common were library services that directly supported access to healthcare. Less than 50% of respondents reported close relationships with any organization in the health sector (Table 2).

Table 2

Closeness of Relationships Between Public Libraries and Potential Partners (n=127)

Department/Institution	Very close or somewhat close	Not very close
K-12 Schools	89%	11%
Early education providers, including daycares	88%	12%
Local non-profit organizations	85%	15%
Parks & Recreation Unit	61%	39%
Colleges or universities	60%	40%
Health department	44%	56%
Hospital or healthcare system(s)	41%	59%
Health coalition or alliances	41%	59%
SNAP-Ed implementing agency	41%	59%
Department of Justice / Department of Corrections	31%	69%
WIC Clinics	29%	71%

Despite being less common currently, there existed a sizable number of early adopters and health champions within the South Carolina public library sector who reported already working closely with health partners. Around one quarter of respondents said they have had health liaisons and telehealth services available at their libraries. Around one-third of respondents reported the presence of a health champion employed within their libraries, someone who championed health services and partnerships and could be utilized as an entry point for programs and partnerships.

Responsive Health Services in South Carolina Public Libraries

Nevertheless, most respondents thought that individuals in their communities look to the library as a safe and trusted space, used both to access health literacy and to access health services, and most librarians saw health equity as a priority for their libraries.

The most common way in which public librarians themselves directly supported health centers was around information access, with 75% of respondents saying their libraries supported access to health information in general, 63% supporting health literacy, and 57% reporting they provided help identifying and using local health resources. Less commonly reported were informational referrals to appropriate health or social service agencies (43%). More than 60% of respondents said their libraries supported access to related services during the COVID-19 pandemic, including 42% who offered immunization clinics for COVID-19, and 29% who offered COVID-19 testing services. In the context of the ongoing opioid crisis, over 20% of urban librarians, and over 10% of rural librarians, reported having naloxone available at their libraries.

Regional and Rural/Urban Disparities

In general terms, rural librarians were broadly interested in doing more to support health, and compared to their more urban peers, have had fewer opportunities, and less capacity, to do so. For instance, most

rural librarians reported interest in offering mental health first aid trainings, while most urban librarians had already offered these trainings.

Rural librarians were also those least likely to have had formalized health partnerships, with 50% reporting no partners in programmatic or funded health initiatives, meaning they were less likely to have partnerships to support health. Given this situation, rural respondents were broadly interested in whatever resources they may be able to bring to their communities. Thinking about what kind of health liaison would be the best fit for a public library, respondents across the state articulated a preference for fully credentialed health liaisons, rather than for students, volunteers, or other health workers in training. Rural librarians, however, were broadly interested in whatever health liaisons they could bring to their libraries, regardless of credentials.

Continuing Education and Support Needs

Only 10% of respondents reported no barriers to supporting health at their libraries, suggesting a need for more robust continuing education and sustained support. Top priorities for continuing education as reported by survey respondents included how to get started supporting health at public libraries, how to sustain these efforts, and how to build partnerships around this topic. Major barriers to supporting health included a perceived lack of expertise and funding. Librarians reported wanting to learn more about this topic from other librarians who have directly dealt with these issues at their libraries.

Looking to continuing education needs, urban librarians had markedly different continuing education priorities, with sustainability and evaluation coming out on top (Table 3). In contrast, for all other parts of the state, there was more interest in introductory topics, with how to get started and how to partner rated as top priorities for continuing education. It appeared that urban libraries had, in general, already started these partnerships, and were looking to better sustain and evaluate them, while all other libraries were looking to get started with these types of partnerships.

Although it was not always identified as a top priority for continuing education, evaluation emerged as a significant obstacle. Most respondents indicated that they were not doing anything to evaluate or track the impacts of their libraries on health. One respondent wrote:

We don't really have a way to track this info. We did weight loss programs, but the partner tracked progress and no long-term info available. We have done nutrition and health programs with our hospital targeting diabetes and heart disease, distributed food during 2020, have had exercise programs for seniors, walking programs, etc. We have sponsored CPR training courses for the public.

An effective evaluation system would need to consider the myriad and evolving ways in which public libraries support health. Due to an absence of evaluation systems, the contributions of public libraries to community health were often invisible, and thus underappreciated and under-supported.

Table 3
Top Priorities for Library Continuing Education, by Community (n=121)

Urban (n=20)	Suburban (n=24)	Town (n=50)	Rural (n=27)
Sustainability (70%)	How to get started (54%)	How to get started (62%)	How to get started (59%)
How to evaluate (65%)	How to partner (tied) (54%)	How to partner (56%)	How to partner (tied) (59%)
How to get started (60%)	Sustainability (tied) (54%)	Marketing (48%)	Marketing (56%)
How to partner (50%)	Marketing (38%)	Sustainability (46%)	Sustainability (48%)
Marketing (30%)	How to evaluate (21%)	How to evaluate (36%)	How to evaluate (tied) (48%)

Discussion

Most respondents to this survey saw a role for their public libraries in health promotion, equity, and access. Nevertheless, obstacles large and small prevented the South Carolina public library workforce from doing as much as they would have liked to support health. In urban South Carolina, funding, sustainability, and evaluation were major challenges, while more rural areas were challenged in discovering how to get started and how to build partnerships. Throughout the state, respondents saw a need for help weaving health into the operations of a public library without overwhelming or overburdening the library staff. Librarians needed technical assistance, as well as support for funding and evaluation, to make their community-based health initiatives sustainable and impactful over the long-term.

Through this survey, we also found that public library workers across the state were already assisting the most vulnerable, including individuals experiencing homelessness, drug addiction, mental health crises, and more. While the survey results suggested that some libraries were working to prevent staff burnout, there was an opportunity for health partners to help libraries with current burdens and burnout issues, while also creating relationships that could be leveraged to increase health in both the short- and long-term. Previous researchers (Brus et al., 2019; Gross & Latham, 2021) have indicated that social workers and other health liaisons could provide the library workforce with the skills needed to practice self-care while also caring for the most vulnerable. In addition, this type of training could provide library staff and medical staff with a greater understanding of the benefits of each group to the wider community. This, in turn, could help build relationships that would make coordination between them more strategic when focused on health.

In this study, we identified a handful of library systems that have embraced health services and partnerships at their libraries, including in their strategic plans. The Charleston County Public Library is one example (CCPL, 2021). Their strategic plan explicitly called for the library to “empower learners of all ages to manage their lifelong physical and mental health,” “empower individuals with the knowledge to make healthy food choices,” and “empower individuals to obtain and understand basic health information” (CCPL, 2021). Finding ways to meaningfully enable these early adopters and their leadership teams to share their successes and challenges with other libraries could potentially drive innovation forward.

To extend this trend, these library health champions could share best practices, advocate for promising partnerships, and share common successes and challenges through the peer-to-peer infrastructure that exists for professional development and continuing education among public librarians.

There is a strong tradition of training programs for public librarians focused on increasing their comfort and confidence with health information. This training has been, historically, offered by medical and academic health science librarians (e.g., Malone & Clifton, 2021). The successful deployment of peer-to-peer training among public librarians, perhaps in a learning cohort, could provide public librarians with a different type of training program, one focused less on comfort and confidence with health information sources, and more on comfort and confidence working collaboratively with community health partners.

Our goal should be to find ways to enable the health and public library workforces to mutually build each other up, with the two workforces adding value to each other, and adding capacity to their abilities to support the communities they serve together.

A second promising practice would be to find ways to better connect library directors to local health leaders and to other library leaders. These connections could be made not only at the library executive director level, but also at the deputy director and branch/division manager levels. Survey results suggested these library middle managers were less connected to local health partners than library directors. In any case, at the leadership level, the focus is less on cultivating library health champions, and more on how we make these partnerships work, administratively.

Library directors and leaders need help understanding how to integrate health into library services in ways that avoid the burnout of their staff, and that are sustainable over time. They also need help integrating timely topics, such as telehealth, into their libraries. Evaluation is a perennial issue in public libraries, and thinking strategically about health in public librarianship is another need.

Evaluation of how public libraries support health is also essential. A starting point for developing this type of evaluation should be a discussion between health organizations and public libraries that promotes understanding of the different structures and needs of each group. Finding ways to embed documentation into these partnerships is crucial for their long-term viability.

Conclusion

In this exploratory study, we highlighted implications for a variety of stakeholder groups, including those working in the health sector at both local and state levels, as well as library workers and administrators, funders and policy makers, and researchers.

Given the limited and self-selecting sample, comparisons between rural and urban public library workers remained tentative. Additional research using a randomized sampling model that employs cluster sampling to ensure a strategically selected distribution of public library workers representing the rural-urban continuum could enable a more nuanced understanding of the unique needs of public library workers within different types of communities.

We are only beginning to understand needs and opportunities associated with public library participation in community health initiatives. Additional research must also consider this topic from the perspective of community health partners. How ready are community health workers and social workers

to partner with public librarians? This topic also needs to be addressed to holistically understand this topic.

More generally, many of the findings of this survey deserved more nuanced explanation through interview-based research. The survey results showed what was happening in South Carolina's public libraries; it cannot answer why things were the way they were. For instance, the survey found that in one-third of respondents' libraries, a health champion was employed. How did these health champions within the public library workforce come to be? What policies, practices, and community forces led to health champions working at these libraries? These are topics interview-based and case study research could help to illuminate.

Although tentative, the findings from this project unambiguously demonstrated interest within the South Carolina public library workforce to support health, particularly through partnerships that would bring health workers to their libraries. Although additional research is needed to build up our understanding of this topic, this survey showed a great potential for impacts associated with public library health partnerships.

Author Contributions

Noah Lenstra: Conceptualization, Formal analysis, Funding acquisition, Investigation, Methodology, Supervision, Writing – review & editing **Joanna Roberts:** Data curation, Formal analysis, Investigation, Project administration, Validation, Visualization, Writing – original draft

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Appendix
Survey Instrument

Survey Questions	Number of respondents
Do you understand the consent information provided above and agree to participate in the study?	
Part 1. Demographics	
What is the zip code* where your library is located? *Having this information will allow us to incorporate data from other sources, including the US Census.	142
What is the name of the library or library branch where you work?	142
What is your job title?	142
How long have you worked at your library?	142
Part 2. Health Services at the Library	
We would like to know how your library supports health. Please indicate what types of health-related services or programs your library has, to your knowledge, offered, as well as what types of topics you would like to learn more about in the future. (Select all that apply)	
Access to health information in general	142
Access to health literacy	142
Access to primary healthcare	142
Access to preventative health services	142
Access to health insurance	142
Access to mental health or behavioral health	142
Access to reproductive health	142
Access to services for substance use disorders	142
Access to COVID-19 related services	142
Access to food	142
Access to nutrition	142
Access to physical activity	142
Access to support with chronic disease(s)	142
Access to services related to healthy aging	142
Access to reentry services for those previously incarcerated	142
Access to housing	142
Access to transportation	142
Access to employment	142
Access to early childhood services	142
Access to education (Adult)	142
Access to education (Pre-K)	142
Access to education (K-12)	142
Access to legal aid	142
Access to economic development opportunities	142
Access to technology	142
Access to literacy	142
Part 3. Library in the Community	

How would you rate the following: [Options included Strongly agree, Slightly agree, Slightly disagree, Strongly disagree]	
My library routinely offers off-site programs or services	136
Library staff often participate in community meetings or coalitions	136
Organizations in general typically look to the library as a partner	136
Health organizations, specifically, look to the library as a partner	136
Individuals in the community typically see the library as a safe and trusted space to access health literacy	136
Individuals in the community typically see the library as a safe and trusted space to access health services	136
My library sees health equity as a priority	136
My library serves as a space where people can meet new people in the community..	136
My library serves as a space where social connections are affirmed	136
Individuals in the community typically see the library as a safe and trusted space for all ages	136
Individuals in the community typically see the library as a safe and trusted space for all ages	136
Library staff are typically well versed in the pressing issues facing the community	136
Library staff are typically able to work collaboratively with other individuals and organizations to address pressing community issues	136
Part 4. The Library and Community Health	
Have library staff and/or partners ever offered any of the following at your library, or off-site with library participation? (Select all that apply). "Partners" here includes all individuals or organizations that are not directly affiliated with the library	
Immunization clinics, in general (e.g. for vaccinations)	129
Immunization clinics, specifically for COVID19	129
COVID-19 testing	129
Health screening services: Blood pressure	129
Health screening services: Obesity	129
Health screening services: Mammography	129
Health screening services: other	129
Assistance with mental health issues (e.g. social, behavioral, emotional needs)	129
Referrals to appropriate health and/or social service agencies	129
Locating and evaluating free health information online	129
Using subscription health database(s)	129
Identifying health insurance resources	129
Understanding specific health topics	129
Identifying or using local health resources	129
Offering fitness classes	129
Offering nutrition classes	129
Summer meals	129

Other ways of distributing free food (community fridge, food boxes)	129
Health fairs	129
Farmer’s Markets	129
Blood drives	129
Food drives	129
Mental health first aid trainings	129
Telehealth services	129
Have any of the following health-related groups ever met at your library? (Select all that apply)	
Health coalitions	127
Health department task forces	127
Area Agency on Aging	127
Other health-related groups (please describe)	127
None of the above	127
To your knowledge, have any of the following ever occurred at your library, or on property owned by your library (e.g. parking lot)?	
Drug overdose	127
Drug deal	127
Alcohol or tobacco use against library policy	127
Individuals experiencing homelessness using library as de facto day shelter	127
Violence that requires intervention from security staff or law enforcement	127
Other health related incidents (please describe)	127
None of these	127
Do any of your library staff have access to the following on-site at your library? (Select all that apply)	
Naloxone	127
Epipen	127
Automated external defibrillator (AED)	127
Other health-related equipment (please describe)	127
None of the above	127
Part 5. Staffing for Health	
Does your library currently , or has your library ever had , any of the following types of individuals available to the public?	
Social workers	126
Social work students	126
Community health workers	126
Health educator	126
Nurses	126
AmeriCorps or other volunteers	126
Other health-related professional (describe)	126
If your library has any health-related professionals currently available to the public, about how often do these individuals typically provide services at your library?	

Daily	126
Weekly	126
Monthly	126
Less than once a month	126
Not applicable	126
If your library could have any health-related professionals available to the public, about how often do you think the services of such individual(s) would be needed at your library?	
Daily	126
Weekly	126
Monthly	126
Less than once a month	126
Not applicable	126
To your knowledge, does your library have someone on staff who you would characterize as a “champion” for health-related programs, services, or partnerships?	
Yes	126
No	126
If yes, could you please briefly describe what your library’s health champion(s) do to support health-related programs, services, or partnerships?	
Part 6. Health Partnerships and Funding	
Has your library ever worked with or received funding from any of the following, specifically to offer health related services or programs?	
SC Center for Rural and Primary Healthcare	123
Hands on Health SC	123
National Network of Libraries of Medicine (NNLM)	123
Institute of Museum and Library Sciences	123
Regional healthcare systems	123
Foundations	123
Food Share SC	123
South Carolina State Library	123
Clemson Cooperative Extension	123
Other organizations (please describe)	123
None of the above	123
Thinking about your local community, how would you characterize the relationship between your library and the following organizations?	
Health department	123
Hospital or healthcare system(s)	123
Health coalition or alliances	123
SNAP-Ed implementing agency	123
Local non-profit organizations	123
Colleges or universities	123
K-12 Schools	123
Parks & Recreation Unit	123
Early education providers, including daycares	123

WIC Clinics	123
Department of Justice / Department of Corrections	123
Part 7. Health Priorities	
What barriers, in your opinion, stand in the way of your library being able to participate in efforts to support health? (Select all that apply)	
No barriers	122
Not sure where to start	122
No one has asked us to help, or to participate in community efforts	122
Funding	122
Lack of expertise on topic	122
Lack of partners	122
Lack of space	122
Doesn't fit within the mission of our library	122
Other (please specify)	122
Thinking of future continuing education opportunities, what are priorities for you in terms of library support for health? (Select all that apply)	
How to get started with health-related services or programs	121
How to market the availability of health-related services or programs	121
How to sustain health-related services or programs	121
How to expand health-related services or programs	121
How to partner with community collaborators	121
How to evaluate health-related services or programs	121
Other (please describe)	121
None of the above	121
Thinking of future continuing education opportunities, how would you most like to learn more about the topics addressed in this questionnaire (select one)	
From a SC public library worker who has directly worked on these topics at their library	122
From a SC public library administrator who has supervised work on these topics at their library	122
From a medical or health sciences librarian with expertise on this topic	122
From a staff member at the South Carolina Center for Rural and Primary Healthcare	122
From a person in your community (e.g. local health department)	122
From someone else (please specify)	122
Thinking about the topics addressed in this questionnaire, is there anything else you would like us to know?	
If you would be potentially interested in participating in an interview or focus group about these topics, please insert your email address here	
Please include your email address to receive a \$10 Amazon Gift Card	