



Long Island's Libraries: Caretakers of the Region's Social Support and Health Needs

Results of a two-year study

*Conducted by researchers at
Stony Brook University, Program in Public Health
Adelphi University, Master in Public Health program
In partnership with the Long Island Health Collaborative (LIHC).*

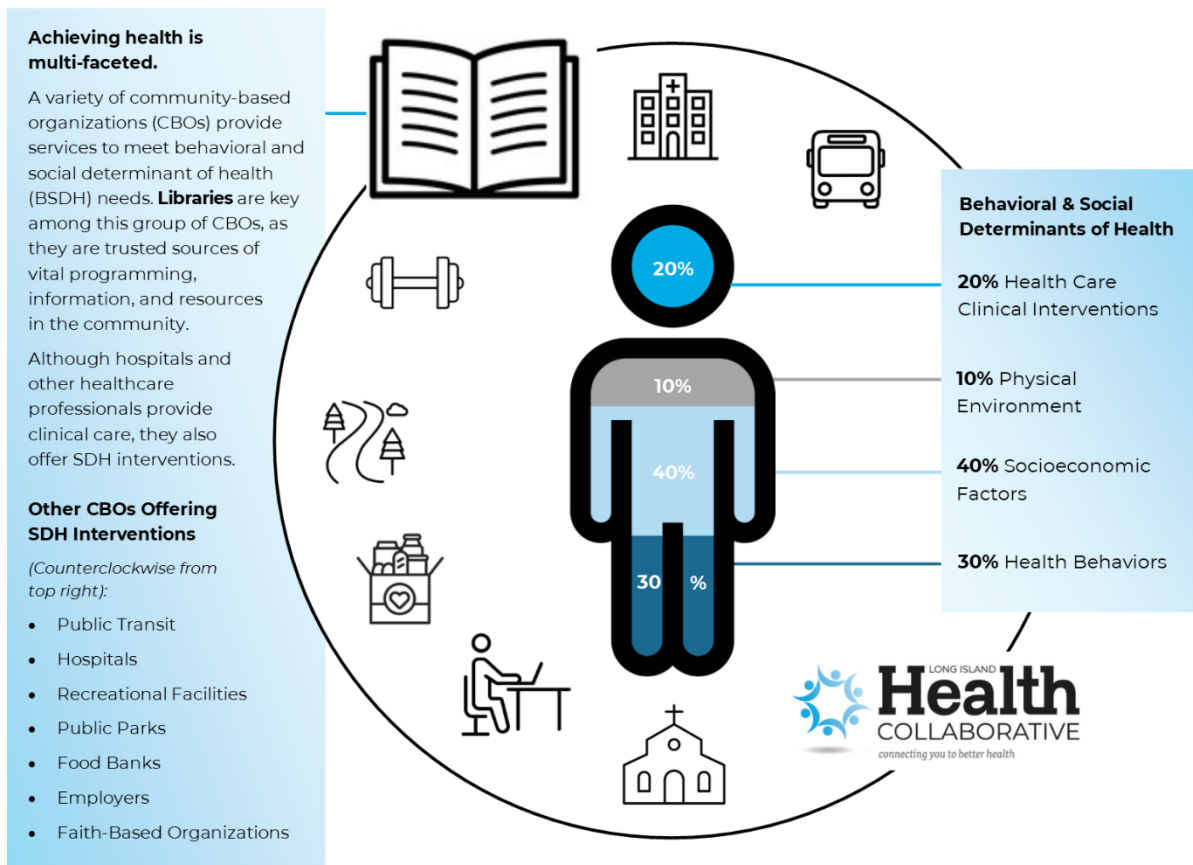
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Introduction

During a two-year period, from December 2017 to February 2020, researchers from Stony Brook University and Adelphi University interviewed library staff at randomly-selected public libraries throughout Long Island to gather information about the breadth and scope of the health and social support needs of library patrons. They also sought to learn about library staff members' ability to address these needs and their level of preparedness to do so, how staff make decisions about types of programming offered, and what additional resources libraries need to improve the health of their communities. Increasingly, empirical evidence points to the key role that public libraries play in delivering some of the health and social support services an individual requires to live his/her best life. Public libraries are invaluable community health partners, especially in socioeconomically-distressed neighborhoods.

Social determinants of health – those factors outside of medicine that influence an individual's health – account for nearly 80 percent of health outcomes, according to a growing body of public health and medical research.^{1 2 3 4} These factors include education, poverty, access to

transportation, safe and affordable housing, health insurance coverage, and access to nutritious and affordable foods, among others. Increasingly, it is these needs that public libraries often address in their community programming. In higher need communities, some libraries retain a full-time social worker. Others opt for part-time or per diem social workers to assist with meeting community health and social service needs.



Graphic: **Factors Influencing Health.** ©Nassau-Suffolk Hospital Council/Long Island Health Collaborative

Researchers found that there was a difference between the needs and program offerings based on the socioeconomic status of the neighborhood in which the library is located. Higher need communities (generally located in lower-income areas) sought programs assisting with more basic social service needs (such as unemployment, food scarcity, tech literacy, etc.) while in lower need communities (generally located in higher-income neighborhoods) patrons sought more enrichment assistance (such as cooking classes, art programs, etc.). But overall, when it

came to health needs, concerns related to **mental health/substance misuse, heart disease/diabetes, and cancer were consistent themes in most libraries.**

The research began when the New York State 2013 – 2018 [Prevention Agenda](#) and its priorities were in effect and so coding reflected themes embedded in that version of the state’s Prevention Agenda, as well as the Kaiser Family Foundation social determinants of health [rubric](#).

The research occurred prior to the start of the coronavirus pandemic, which was declared a national emergency on March 13, 2020. Library programming came to a halt as libraries were ordered to close before re-opening some months later for virtual programming only. The pandemic exacerbated the inequities in our social and health systems, and libraries, which had been an accessible resource for many communities, were shutdown perhaps at a time when they were needed the most. On June 24, 2021, New York State’s declaration of emergency was halted and many pandemic restrictions were lifted. However, as of this writing (July 2021), the federal public health emergency declaration remains in effect. Many of the region’s libraries have re-opened but with limited in-person services.

Social Determinants of Health

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Discrimination	Quality of care
Medical bills	Playgrounds	Higher education			
Support	Walkability				

Health Outcomes

Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

There are 113 public libraries on Long Island. Of these, 18 libraries in Suffolk County (from 26 randomly selected) and 14 libraries in Nassau County (from 27 randomly selected) consented to participate in the qualitative research study.

The Long Island Libraries Qualitative Research project grew out of a similar project that occurred among the public library system of Philadelphia known as the Free Library of Philadelphia. Investigators at the University of Pennsylvania published results of their research in [Health Affairs](#)⁵ and this caught the attention of the Long Island Health Collaborative and its academic partners. After reading the article “*Beyond Books: Public Libraries as Partners for Public Health*,” Long Island researchers reached out to investigators at the University of Pennsylvania to learn more about the Philadelphia project. After sharing ideas, the Long Island researchers collaborated with the team at University of Pennsylvania, approved by the University of Pennsylvania’s Institutional Review Board (IRB), to conduct interviews among Long Island public librarians and staff.

Selection and Recruitment Methods

The Long Island Health Collaborative staff worked with the researchers to develop a recruitment strategy that began with ensuring that a representative sample of public libraries was achieved. After a complete list of libraries was verified by the Nassau Library System and the Suffolk County Cooperative Library System each public library was sorted by zip code/location. Several towns had more than one zip code but only one library, and several different library locations were located within the same zip code. Researchers accommodated this by developing a selection process that (1) eliminated zip codes without library locations, and (2) included all libraries in the selection process, despite having multiple branches or more than one library in a single zip code.

Using the demographic factors pulled from 2014 American Community Survey, libraries were then sorted by county and categorized into need levels from “low-need” to “high-need” by the following demographic factors:

- **Education** – percentage of high school graduates or higher in the population that are 25 years and over and percentage of bachelor's degree or higher in the population that are 25 years and over.
- **Language** – percentage who speak only English
- **Unemployment** – unemployment rate for population 16 years and over
- **Poverty status** – percentage below poverty level (estimate) and population for whom poverty status is determined
- **Public assistance** – percentage of households with cash public assistance or food stamps/snap for the past 12 months
- **Income** – median household income (dollars)

- **Foreign born residents** – percentage of foreign born

Each demographic factor received a county score by using an inverse average formula used for: unemployment, poverty assistance, public assistance and foreign born and an average score determined for each zip code using the average of all demographic scores. Libraries were then sorted into need categories from highest need to lowest need. The top 20 percent of libraries were determined to be located in a “high need” area (quintile 5) and the bottom 20 percent of libraries were determined to be located in a “low need” area (Quintile 1). All other library locations were categorized as either “moderate high need,” “moderate need,” or “moderate low need” communities. (Appendix A) As a reference, there were 11 locations in Suffolk and 9 locations in Nassau that were categorized as high-need communities.

After the list of public libraries in each county was organized into “need” categories, the team used a simple block randomization strategy to select 50 percent of those in each category for an invitation to participate in the study. Using this method, on average there were five libraries from each quintile that were randomly selected to be recruited for participation in this study. The randomly selected list of libraries was sent to the outreach directors at the Suffolk Cooperative Library System and the Nassau Library System who then sent an email notification to each of the library directors from the selected list to inform them of the research project and encourage them to participate. Library directors were then contacted by the Long Island Health Collaborative for a more in-depth explanation of the research project, invite their participation, and to schedule the interview. Three attempts to connect (one email and two phone follow-ups) were made.

Interview Process

Total interview time lasted from 1.5 to 2 hours, including time for further project explanation and signing informed consent documents. Interviews were audio recorded. The goal was to interview three staffers at each library – always the library director and then such staff members as front desk clerk, reference librarian, security officer, and custodian. Directors chose the staff members. Interviewees were given a participant number to ensure anonymity and confidentiality. Letters were assigned to each of the libraries to ensure facility anonymity. The interviewers used a standardized set of questions and prompts so that there was consistency in the themes explored across each site. Interview recordings were uploaded to a secure HIPAA-compliant website approved by the University of Pennsylvania’s IRB and an IRB-approved transcription service transcribed each interview into a separate word file for each interview. A total of 96 interviews were completed.

Coding and Data Analysis

The transcribed interviews were reviewed by researchers at Stony Brook, and they trained and supervised a team of four research assistants to create a coding scheme for all of the interview files for both counties. The transcribed interviews were coded based on themes that emerged from the interviews across sites using a qualitative analyses software (DeDoose) licensed to Stony Brook's Program in Public Health. The analyses resulted in a robust coding schema with 11 categories and many subthemes within each category. A summary of primary findings is summarized below, and a peer-reviewed publication of more in-depth findings is expected to be available within the year (currently under review by a scholarly journal with LIHC included as a co-author). Once the journal publication of the more in-depth analyses is available for release, we will share it with all LIHC partners.

The overarching questions that were used to motivate the data analyses were:

- (1) What is the knowledge of library staff about the social support and health needs of their patrons?
 - What do the staff think are the most pressing health needs of the community they serve?
 - What do the staff think are the most pressing social support needs of the community they serve?
- (2) What do library staff feel about addressing the health/social support needs of their patrons?
- (3) How do libraries address the social determinants of health, if at all?
 - What do staff at libraries think is lacking in terms of addressing the social determinants of health in their library?
 - What do library staff wish they could do to address the social support and behavioral health needs of their community?
- (4) How do libraries make decisions about how to invest in their services?
- (5) How do libraries define and prevent/address/manage/respond to/resolve disturbances in the libraries?

Summary of Findings

Top 5 identified health needs	Top 5 identified social needs
Mental Health	Homelessness
Exercise	Technology Literacy
Diet	ESL/LOTE
Opioid Use	Unemployment
Personal Health	Food

Differences in types of programming were identified and there were some trends that higher need communities tended to have programs focused on social service needs, such as assistance with unemployment, access to economic stability support services, hunger solutions, homelessness, ESL/LOTE classes, health insurance assistance and technology literacy. Programs in lower need communities tended to have programs focused on enrichment, such as cooking classes, adult art, yoga, and other wellness opportunities to address loneliness. The moderate-need communities tended to have a mix of programs. The emphasis on social support programs in high-need communities is consistent with the health disparities and inequities individuals in these communities face. This finding, in particular, confirms the key role behavioral and social determinants of health play in health outcomes.

The health topics most likely to be the focus of library programs included exercise, access to health insurance (which is also a social support need), information about diet/nutrition, mental health, and Alzheimer's Disease/Dementia.

Usefulness of Research

Decisions about programs in libraries are largely based on community interests, access to content experts to deliver the programs at low or no cost to patrons, and scheduling. Interviewees' responses reflect the needs of the communities served by the libraries. The findings from the Long Island Libraries Qualitative Research project can be used to inform future health and social support service programming offered by libraries, including resource and staff allocation. This is also true of the partnering organizations with which many libraries work, such as the local hospital and health department, and the many community-based organizations that bring health and social support service programming to libraries.

In conjunction with the Long Island Qualitative Research project, graduate students from the Stony Brook University Program in Public Health and undergraduate students from the Hofstra University Community Health Degree program mapped the health and social support service programming at all of Long Island's libraries. Their efforts produced two interactive layered maps – one for use by [researchers](#) and one for the [public's](#) use. The latter map includes convenient links to library websites. The students reviewed data from 2016-2018 by analyzing publicly accessible newsletters, calendars, pamphlets, flyers, and websites. Content analysis was conducted for every program and coded by social determinants of health and Prevention Agenda (2013-2018) Priority Health topics and results were entered into an Excel spreadsheet.

Further Study

As this research was conducted prior to the COVID-19 pandemic, it would be helpful to conduct a limited follow-up study asking specific questions related to how libraries responded to

community needs during the pandemic. Libraries pivoted to virtual programming. It is likely this new mode of delivery had an effect (positive or negative) on the scope and breadth of programs and community members' access to such programming. Results from such a follow-up could also be compared to the current study results to determine the change in volume and type of programming offered before, during, and after the pandemic.

Acknowledgements

The Long Island Libraries Qualitative Research project is a good example of collaboration at its best. A public and a private university joined forces with local public libraries located in diverse communities under the organizational leadership of a multi-sector coalition – the Long Island Health Collaborative. The voluntary efforts of the academic researchers, public health students, and support staff who worked on this project are very much appreciated. Most importantly, we thank the individual library directors and each member of their staff for their time and graciousness in hosting the researchers and for participating in the study. Special acknowledgement goes to Valerie Lewis, the Administrator of Outreach Services for the Suffolk Cooperative Library System and Nicole Scherer, Assistant Director of the Nassau Library System. Without their assistance, this study never would have occurred.



Long Island's public libraries are led by exceptionally caring individuals with dedicated and compassionate staff. They are centers of community life and provide a place where patrons can go to learn, to be safe, and to be part of their community.

The LIHC acknowledges its partners in this research project.

About the Long Island Health Collaborative

The [Long Island Health Collaborative](#) is a partnership of Long Island's hospitals, county health departments, physicians, health providers, social service and health-related community-based organizations, academic institutions, health plans, local government, and the business sector, all engaged in improving the health of Long Islanders. The LIHC is overseen by the [Nassau Suffolk Hospital Council](#) (NSHC), the association that advocates for reasonable and rational healthcare legislation and regulation on behalf of Long Island's hospitals.

¹ <https://www.kff.org/racial-equity-and-health-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/>

² Hacker KA, Alleyne EO, Plescia M. Public Health Approaches to Social Determinants of Health: Getting Further Faster. *J Public Health Manag Pract.* 2021 Sep-Oct 01;27(5):526-528. doi: 10.1097/PHH.0000000000001410. PMID: 34292912.

³ Henize AW, Beck AF, Klein MD, Adams M, Kahn RS. A Road Map to Address the Social Determinants of Health Through Community Collaboration. *Pediatrics.* 2015 Oct;136(4):e993-1001. doi: 10.1542/peds.2015-0549. Epub 2015 Sep 21. PMID: 26391941.

⁴ Bhattacharya D, Bhatt J. Seven Foundational Principles of Population Health Policy. *Population Health Management* vol. 20,5 (2017): 383-388. doi:10.1089/pop.2016.0148

⁵ Morgan AU, Dupuis R, D'Alonzo B, Johnson A, Graves A, Brooks KL, McClintock A, Klusaritz H, Bogner H, Long JA, Grande D, Cannuscio CC. Beyond Books: Public Libraries as Partners for Population Health. *Health Affairs* 35, no.11 (2016):2030-2036 doi:10.1377/hlthaff.2016.0724.

APPENDIX A: Community Need Levels by Socioeconomic Factors

Methodology:

1. Locations sorted by County and categorized into need levels by demographic factors: education, language, unemployment, poverty status, public assistance, income and foreign born.
2. Each demographic factor received a County score.
3. Inverse average formula used for: unemployment, poverty assistance, public assistance and foreign born.
4. Average score determined for each location (average of all demographic scores).
5. Locations without libraries were eliminated.
6. Sorted into need categories from highest need to lowest need.
7. Top 20% (Quintile 5) determined high need.
8. Bottom 20% (Quintile 1) determined low need.
9. All others fall into Moderate need communities.
10. 11 Locations in Suffolk and 9 locations in Nassau selected as high-need communities.

Demographic factors pulled from 2014 American Community Survey

Key	Suffolk	Nassau
Q5 = High Need	(81.4 - 100.6)	(50.1 - 68.1)
Q4 = Moderate High Need	(64.5 - 81.4)	(37.9 - 50.1)
Q3 = Moderate Need	(46.4 - 64.5)	(28.9 - 37.9)
Q2 = Low Moderate Need	(36.1 - 46.4)	(20.5 - 28.9)
Q1 = Low Need	(17.9 - 36.1)	(10.1 - 20.5)

Suffolk County

Location	Score	Quintile
Wyandanch	100.625	High Need
Brentwood	100.625	High Need
Central Islip	98	High Need
Riverhead	97.125	High Need
Copiague	95.75	High Need
Patchogue	89.5	High Need
Greenport	88.875	High Need
Amityville	87.25	High Need
Bellport	86.25	High Need
Shirley	82.75	High Need
Lindenhurst	81.375	High Need
Deer Park	79.75	Moderate High Need
West Babylon	77.625	Moderate High Need
Longwood	76.5	Moderate High Need
Dix Hills	76	Moderate High Need
Centereach	75.75	Moderate High Need
Port Jefferson Station	74.625	Moderate High Need
Hampton Bays	73	Moderate High Need
Southampton	70.25	Moderate High Need
East Hampton	69.75	Moderate High Need
Montauk	65.875	Moderate High Need
Westhampton	64.625	Moderate High Need
North Babylon	64	Moderate Need
Selden	63.75	Moderate Need
Brookhaven	63.375	Moderate Need
Connetquot	63.25	Moderate Need
Mattituck	59.5	Moderate Need
Sag Harbor	57.875	Moderate Need
Bridgehampton	55.375	Moderate Need
Greenlawn	51.25	Moderate Need
Kings Park	50.625	Moderate Need
Center Moriches	48.5	Moderate Need
Cutchogue	47	Moderate Need
Amagansett	46.375	Moderate Need
Islip	45.625	Low Moderate Need
Holbrook	45.25	Low Moderate Need
Babylon	43.875	Low Moderate Need
Huntington	43.5	Low Moderate Need
Nesconset	41.125	Low Moderate Need
Commack	39	Low Moderate Need
Hauppauge	37.75	Low Moderate Need
Port Jefferson	37.25	Low Moderate Need
Southold	36.625	Low Moderate Need
Smithtown	36.5	Low Moderate Need
Setauket-East Setauket	36.125	Low Moderate Need
West Islip	35.875	Low Need
Shelter Island	35.625	Low Need
Shoreham	31.625	Low Need
Melville	31	Low Need
East Islip	29.875	Low Need
Northport	29.75	Low Need
Sayville	27.375	Low Need
Quogue	27.25	Low Need
Fishers Island	26.25	Low Need
Blue Point	26.125	Low Need
Cold Spring Harbor	20	Low Need
Brightwaters	17.875	Low Need

APPENDIX A:**Community Need Levels by Socioeconomic Factors****Nassau County**

Location	Score	Quintile
Hempstead	68.125	High Need
Uniondale	65.5	High Need
Roosevelt	65.125	High Need
Elmont	63.5	High Need
Freeport	63	High Need
Glen Cove	57.125	High Need
Westbury	56.875	High Need
Island Park	52.875	High Need
Baldwin	50.125	High Need
West Hempstead	49.875	Moderate High Need
Franklin Square	49.75	Moderate High Need
Mineola	47.25	Moderate High Need
Hicksville	45.75	Moderate High Need
Lynbrook Village	43	Moderate High Need
East Meadow	42.625	Moderate High Need
Long Beach	41.125	Moderate High Need
New Hyde Park	41	Moderate High Need
Farmingdale	39.875	Moderate High Need
Bethpage	37.875	Moderate High Need
Levittown	37.375	Moderate Need
Port Washington	36.375	Moderate Need
Albertson	35.625	Moderate Need
Floral Park	35.375	Moderate Need
Rockville Centre	34.375	Moderate Need
Oceanside	34.125	Moderate Need
Massapequa	30.875	Moderate Need
Lawrence	29.375	Moderate Need
Williston Park	28.875	Moderate Need
East Rockaway	27.25	Low Moderate Need
Locust Valley	26.875	Low Moderate Need
Bayville	25.625	Low Moderate Need
Hewlett	25	Low Moderate Need
Massapequa	24.125	Low Moderate Need
Bellmore	23.5	Low Moderate Need
Syosset	23.5	Low Moderate Need
Seaford	22.75	Low Moderate Need
Manhasset	21.125	Low Moderate Need
Plainview	20.5	Low Moderate Need
Jericho	20.25	Low Need
Roslyn	20	Low Need
Oyster Bay	19.75	Low Need
Merrick	19.125	Low Need
Malverne	19	Low Need
Wantagh	18.125	Low Need
Sea Cliff	17.125	Low Need
Glen Head	15.25	Low Need
Garden City	15.125	Low Need
Long Beach	10.125	Low Need