



**Urban and Community
Studies Institute**

THE ROLES OF PUBLIC LIBRARY IN HEALTH LITERACY

BY TORI HAWKINS, ROSELLA MULLIN, PRECIOUS OLUMOLAWA, COURTNEY PYRKE,
AND DR. JULIA WOODHALL-MELNIK (SENIOR AUTHOR)

Written for the Saint John Free Public Library to fulfill the course requirements of
SOCI 4379: Engaging with Community-Based Health Organizations



Executive Summary

Health literacy is essential to promoting health equity (Osborne, 2005). This literature review begins by defining health literacy as the ability to access, understand, evaluate and communicate information to promote, maintain and improve health in a variety of settings across the life course (Rootman & Gordon-El-Bihbety, 2008). Canada is falling short of its health literacy goals (Murray, et al., 2008). Further, populations who experience vulnerabilities such as low-income are less likely to have access to the information needed to be health literate.

This review examines health literacy and health equity in communities and focuses on the special role public libraries play in promoting health literacy and educating their local communities. The paper discusses the barriers to the effectiveness of health literacy programs, as well as potential solutions to address these barriers.

This review highlights importance of the public library as a community institution. Public libraries provide free public spaces and free book lending services. However, they serve a variety of other critical functions. They assist patrons with locating information on housing, health, and literacy and they also welcome newcomers to their local communities. Librarians can play an important role in community health literacy. This can be done through their introduction of various initiatives to the library. Example of initiatives include providing access to computers for health-related searches and hosting free seminars on various health concerns.

There are limitations to how effective library-based health literacy programs are at reaching people experiencing health illiteracy. Some of these limitations are: lack of transportation; lack of ability to understand and/or communicate in English/French; cultural differences; lack of understanding of complex terms (medical jargon); poor communication skills; and mobility issues that are experienced with age. One key barrier that needs to be addressed is the stigmatization of

the health illiterate population. Reducing stigma around health literacy is necessary to encourage further participation in health education programs. Librarians can overcome these limitations by helping patrons gather, interpret and assess useful health information.

Health Literacy and the Role of Public Libraries in its Promotion

People with high levels of health literacy (HL) have the ability to find, evaluate, and utilize health related information (Rubenstein, 2016). HL is directly linked to health outcomes (Rubenstein, 2016). Despite this, the Canadian population lacks basic HL skills. In fact, “6 in 10 Canadian adults do not have the skills needed to adequately manage their health and health-care needs” (Murray et al., 2008, 2). Public libraries have an important role in the community. Specifically, libraries facilitate education, entertainment and host culturally significant activities. They offer children’s literacy programs, educational lectures and public computer workstations. Through our review of the literature on public libraries and health literacy, we argue that libraries and librarians have the potential to play a key role in increasing health literacy levels in their communities. Despite this potential, there are potential barriers to the success of these educational programs. These barriers are discussed in this review. Health literacy is essential to health equity. However, barriers to HL must be undertaken before individuals and communities can reach their full health potential.

The Saint John Free Public Library

The Saint John Free Public Library (SJFPL) was established in 1883 and was Canada’s first free public library. Before the establishment of this library, libraries were not publicly run; rather, they emerged through the efforts of a number of men and women who realized their necessity and utility to communities. The SJFPL provides access to a municipal collection of more than 250,000 items in its three branches, and a houses a provincial collection of more than 1.8 million items. In

addition to books, the library offers a diverse range of programs and services, such as children's Storytime, public lectures, referencing services, inter-library loans and public computer workstations. Their programs and services are designed to respond to the educational, informational, cultural and recreational needs of New Brunswick's residents. The library supports economic and social development. It promotes self-reliance by providing opportunities for patrons to enhance their knowledge and their creative capabilities (Edwards, 2003).

Methods

A thorough literature review was performed to answer the research question: how can public libraries contribute to patrons' health literacy? Several procedures were followed to ensure high quality literature was included in this review. Seven databases were used: Emerald Group Publishing Limited, Sage Journals, Worldcat.org, Sociological Abstracts, Google Scholar, SocINDEX, and ProQuest Nursing & Allied Health Source. The literature included was mostly retrieved from peer-reviewed journal articles or textbooks. Statistics were gathered from government websites and from internal reports provided directly by the SJFPL. Background information on the SJFPL was retrieved from their website. The credibility of the grey literature included in this review was determined by the qualifications of the authors and the legitimacy of contributing organizations.

Literature was found using keywords: "health literacy", "public library", "health literacy programs", "health literacy barriers", "cross agency collaborations", "library programs", "health literacy problems", "health literacy stigma" and "low health literacy". Many results were found using these keywords in the search. Results were narrowed by using the most recently published works and those deemed most relevant to our research question. The authors of this report spent time volunteering in the SJPL and were able to produce and run health literacy programming. They

drew on their expertise to choose literature on health literacy enhancement programs that they believed to have the best possibility of being successfully adapted for use by the SJFPL.

Definitions of Literacy and Health Literacy

At the core of health literacy (HL) is the more established concept of literacy. Definitions of literacy vary. Simple definitions focus on functional reading and writing skills, whereas more complex definitions include additional skills related to literacy such as “communication, critical thinking and social skills” (Gillis & Quigley, 2004, 5). The United Nations Educational, Scientific and Cultural Organization (UNESCO) views literacy as a continuum of learning which allows people to achieve their goals, develop knowledge, and participate in society (Murray et al., 2008). Literacy, in this broader sense, relates to the more amorphous concept of health literacy.

Literacy rates are discussed in many places as fundamental to individual and community wellbeing. However, the importance and even definitions of health literacy are less widespread. The Canadian Public Health Association’s Expert Panel on Health Literacy defines health literacy as “the ability to access, understand, evaluate and communicate information as a way to promote, maintain and improve health in a variety of settings across the life course” (Rootman & Gordon-El-Bihbety, 2008, 5). The World Health Organization (WHO) notes that health literacy comprises know-how beyond simply the ability to read pamphlets or successfully book doctor’s appointments (WHO, 2009). While literacy refers to the “basic skills needed to succeed in society, health literacy requires some additional skills, including those necessary for finding, evaluating and integrating health information from a variety of contexts” (Mitic & Rootman, 2012, 17). Mitic and Rootman’s (2012) scale for health literacy assessment is displayed in Figure 1 and illustrates the complex nature of health literacy.

Level	HL scores	Description (in terms of ability)
1	0-225	Reading relatively short text
2	226-275	Sorting through distractions
3	276-325	Integrate information from dense text
4	326-375	Multiple steps to find solution to abstract problems
5	376-500	Search for information in dense text with distractions, making inferences etc.

Fig. 1. Health literacy assessment scale. (Mitic & Rootman, 2012, 14)

Health Literacy and Health Equity

The importance of health literacy largely results from its relationship to the social determinants of health (SDOH) and overall health equity. There are multiple social, economic, political and environmental factors that work together to help keep individuals and communities healthy (Gillis & Quigley, 2004). The WHO defines the SDOH as the conditions in which people are born, grow, live, play and work. These conditions have a large impact on the overall health of a population (WHO, n.d.). Some examples of SDOH include: income and social status; employment and working conditions; childhood experiences; housing; gender; and education (Government of Canada, 2018).

Health literacy, as a factor related to the SDOH, has a negative impact on overall health equity in Canada. The Government of Canada (2018) defines health equity as seeking “to reduce inequalities and to increase access to opportunities and conditions conducive to health for all”. The WHO argues that improved health literacy is critical for improved health equity, as it results in more informed communities which are better equipped to manage disease and risk (Osborne, 2005). Higher HL is associated with lower all-cause mortality rates (Logan et al., 2015).

Health Literacy in Canada

Currently, Canada is falling short of health literacy goals. Murray et al. (2008) find that 60% of Canadian adults do not have the skills to adequately manage their health. This is particularly

important in Canada because 75% of all deaths are related to five chronic diseases—cancer, heart disease, diabetes, kidney disease and respiratory disease (Mitic & Rootman, 2012). So, while poor health literacy impacts the health of individual Canadians, it also has the potential to shape the overall health landscape of the country.

Research finds that certain segments of the Canadian population are at notable risk for lower levels of health literacy. These groups include Indigenous people, older adults, recent immigrants, and individuals with lower levels of formal education (Mitic & Rootman, 2012). Canada wide, approximately 55% of the working age population and 88% of the population 65 years and older do not have the skills to make appropriate health decisions (Wang et al., 2016). Older adults are of specific concern in New Brunswick due to the age distribution of the province's population. A 2016 census showed that 44% of the population was over 50 years of age, and 20% of that number were over 65 years of age (Statistics Canada, 2016). This may be one the key aspects affecting New Brunswick's poor health literacy scores (see Figure 2).

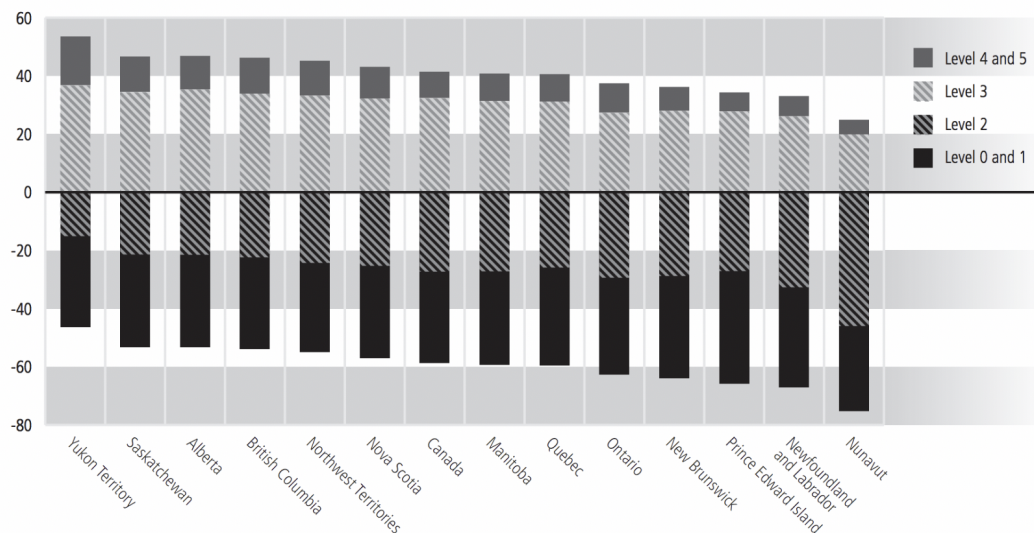


Fig. 2. Representation of health literacy scores across Canadian provinces (Rootman & Gordon-El-Bihbety, 2008, 17)

Importance of Public Libraries as a Community Space

Public spaces are essential places in the community, and one important example is the public library. Public libraries are seen as important places in communities because aside from performing their role of lending out books, they have taken on many other roles in the community. For example, libraries help people with various needs such as housing, health needs, and literacy. In fact, the health care sector now sees public libraries as a critical link to a community (Cabello & Butler, 2017). A public library actively supports many socio-cultural groups around the community, such as children's clubs, book clubs, youth forums, teachers' associations, doctors' associations and many others. By allowing them to conduct their activities within the library premises, they allow them to use their rich array of information, education, and cultural materials (Handa, 2019). Public libraries play an essential role in offering free educational resources for every member of the community; resources are completely free of charge, including books, internet access, literacy programs, seminars, and professional training. The public library provides a workspace for telecommuters, with the provision of free internet access for those in need of employment as well as offering jobs and interview training. Individuals and families around the community can depend on the public library to get many of the resources they need, and the answers to questions that will help them succeed (Trombetta, 2017).

When public libraries were originally introduced, their key priority was to divert the working classes away from moral wrongdoing such as visiting public houses, and to encourage more productive and efficient leisure time activities like reading. However, with the changes in the 21st century such as, improved standard of living, education, health care and leisure opportunities, the priorities of the libraries have shifted. These changes became particularly important as social networking web sites now challenge the library's role as a social place. However, public libraries

still represent essential destinations where individuals and groups can come together to explore, learn, meet, consult and enjoy democratic access to information and resources (Rooney-Browne & McMenemy, 2010).

The local public library is an institution firmly embedded in the local community with links to practically all sectors of activity in the community. Using the local library is a form of participation in the community with links and channels to a broad array of arenas and activities. One example of this is that newcomers can be offered introduction to the local community via the public libraries. It would be difficult to find another public institution that can take on such a significant role in the community, and this adds more context to the library's role as a meeting-place in today's multicultural society (Audunson, 2005). The library's role as a community meeting place has to be appreciated, as well as its role in facilitating community groups and sessions; whether book clubs or other social groups, or simply a public meeting space where people could come sit, discuss and read. Many individuals place great importance on the value of a public facility like the public library where they can meet, especially as it provides an opportunity for social interaction (American Library Association, 2012).

In the documentary, *Ex libris: The New York Public Library*, there is a seminar program where local community organizations like the police, fire fighters, churches, and non-governmental organizations involved in community outreach came to the public library to create awareness about their organization, as well as recruit people to join them, and explain why members of the community should be part of their organization. This is an example of how essential and useful the public library is to the community. The library offers a free space for local community groups to talk about their organizations, and to connect with local residents and members of the community (Wiseman, 2017).

Role of Libraries in Addressing the Issue of Health Literacy

As health information increases in volume and becomes more complex, librarians in public, academic and hospital settings provide assistance for patrons who need to navigate health information online and in print (Dalmer, 2013). Libraries and librarians are excellent resources for advancing research and practice in health literacy. Librarians are generally perceived as trustworthy, helpful, and experienced in general health and education. Librarians are in the perfect position to contribute to health literacy in the community as they are holders and teachers of information (Barr-Walker, 2016).

Before health literacy became a common topic of interest, libraries and librarians of various types were involved in educating patrons and providing information. Public libraries and librarians participate in health literacy promotion. For example, some libraries have added easy to use, health related websites to their computers, so that patrons can easily access reliable health information (Whitney et al., 2017).

Public librarians can also be efficient and effective leaders in efforts to make health care organizations health literate. Their contribution to promoting and increasing HL mostly occurs through their support of information prescription initiatives and information prescription programs (Whitney et al., 2017). Information prescriptions provide patients with specific health information to improve health outcomes or manage disease. Libraries are powerful tools for accessing the information needed for information prescriptions. Librarians often work in partnership with literacy groups, community organizations, hospitals, and health educators to provide easier access to health information (Burnham, 2003).

Public libraries can offer patrons easier access to health information. The Institute of Museum and Library Services (IMLS) finds that 37 percent of library computer users in the United

States an estimated 28 million people, searched for information related to health, wellness, medical issues, health care providers and insurance (Rubenstein, 2016). Another study on patrons who gather information on cancer from public libraries finds that the patrons do not have access to the internet elsewhere, are likely to be uneducated, have low incomes, are unemployed and have limited or no health insurance (Rubenstein, 2016). Many patrons using library computers have no other options. In some communities, public libraries and medical offices are the only places where people can get reliable information to answer their health-related questions (Rubenstein, 2016).

Many public libraries offer free computer and internet access. Arding and McLeod (2013) find that 61% of library patrons in the US use computers regularly during their visits. The U.S Department of Health and Human Services launched an initiative in public libraries called “Healthy People 2020” in 2000. The goal of this initiative is to improve public health by increasing access to the internet (Malachowski, 2011). It also aims to increase the proportion of easily accessible, reliable health related websites by 10%. This initiative raises awareness about the lack of broadband access as a contributor to health disparities. Patient participation in health literacy requires that people take an active interest in their health. The internet is a primary source of current health information for many individuals. In the Healthy People 2020 initiative, public librarians are educating patrons about the use of easily accessible, quality, health related websites; by doing this, they assist patrons with searches for additional health information and help them navigate through available online resources (Malachowski, 2011).

Older adults are at higher risk of low HL than younger people (Barr-Walker, 2016). Public libraries have a long tradition and history providing services to older adults (Barr-Walker, 2016). As such, they are in a unique position to offer health literacy programming to this population. While public libraries are a natural fit for reaching out to older adults, academic libraries can also provide

health literacy services to older adults. This is often done in partnership with local community agencies. For example, SeniorCHAT is a program created by a state university in Louisiana that is administered through a partnership with local senior citizen centres. This program provides older adults with basic computer instruction. Improved access to health information promotes better health outcomes in this population (Barr-Walker, 2016).

Although most librarians are not health practitioners, their expertise is highly applicable to increasing and improving health literacy. There have been many initiatives and partnerships undertaken by librarians that contribute to health literacy (Arndt, 2016). For example, the SJFPL launched a health seminar series. This initiative brings experts in health-related fields from the community to the library to provide talks and workshops on a variety of issues which include mental health awareness, dieting, nutrition, the SDOH and more. This program was designed with the goal of improving community HL. This initiative provides patrons with HL tools.

Barriers and Limitations of Effectiveness of Health Literacy Programs

Although evidence illustrates the importance of HL (Sørensen et al, 2012), there are many barriers to the implementation and success of HL programs. Stigma is a barrier that prevents individuals from attending HL programs (Beder, 1991). Stigma can be described as perceptions, often shaped by lack of understanding, held by others that a group of people are socially undesirable (Link & Phelan, 2001). Stigma contributes to status loss, which in turn impacts the distribution of life chances in areas such as earnings, housing, criminal involvement, and health (Link & Phelan, 2001). Health illiterate individuals are often labelled as having failed lives and being poorly educated. As a result, they experience poor self-concepts and self-esteem which creates additional barriers to improving health literacy (Beder, 1991). The stigma surrounding low HL may limit engagement with health literacy programming.

Health literacy programs must strive to reduce stigma to be effective (Beder, 1991). Further, providers of health information must be sensitive to the anxieties and fears that many people have about accessing and comprehending reliable health information (Parker, 2000). This could be accomplished by public libraries who offer welcoming and judgement free environments for people to search for health information. The library can also assist in stigma reduction by educating the general public on the barriers to health literacy that are experienced by vulnerable populations.

Health literacy education programs are a great tool to reduce the stigma surrounding poor HL and to increase HL in populations. However, the programs themselves have limitations and there are barriers which prevent individuals in need from accessing them. It is important to first identify the vulnerable populations who most commonly face barriers to HL. These includes older adults, non-native English or French speakers, less educated individuals, those with lower socioeconomic status, and homeless populations (Vamos, 2013). Many people with low health literacy belong to more than one of these at-risk populations and they often face multiple barriers to HL. Some of these barriers include lack of transportation, lack of ability to understand and/or communicate in English/French, cultural differences, difficulty comprehending medical jargon, poor communication skills, and limited mobility (Parker & Kreps, 2005).

There are also limitations to many of the HL programs themselves which limits their success. A lot of them focus solely on reading, writing, speaking, and listening skills and not on communication strategies that individuals need to get the most out of the healthcare system (Jones, Kreps & Phillips, 1995). A further limitation, in certain circumstances, is the length of the programs. Educational programs targeting HL often take a long time; this is less helpful when people need more specific information to address their current health problems (Nielsen-Bohlman, Panzer &

Kindig, 2004). Additionally, many HL programs do not provide education on the culture of healthcare and effective strategies for communicating with healthcare providers (Parker, Davis, & Williams, 1999). The understanding of health literacy as simply functional verbal skills still prevails among many health service providers (Wolf et al, 2009). When this approach is applied to immigrants to Canada who are not proficient in official languages, the social and cultural context of communication practices are neglected, and the meanings of important messages are lost (Bowen, 2001).

Possible Solutions to Address Barriers and Limitations

Providers of health literacy programs can help overcome barriers and limitations. To overcome barriers, programs should focus on individuals' functional abilities to gather relevant health information, interpret health information, engage in meaningful deliberations with health care providers, and explain their symptoms and experiences clearly (Jones et al., 1995). It is also important to learn to communicate health needs for acute, chronic and preventative care (Parker & Kreps, 2005). An example of a program which provides training for functional health literacy is the Virginia Adult Education Health Literacy Toolkit. This toolkit was created to help HL educators design their programs. One section of the toolkit provides a list with an assortment of popular and accessible books on health topics. This list includes easy-to-read stories and workbooks which are beneficial for individuals who struggle with functional illiteracy and communicating (Singleton, 2003).

Newcomers to Canada often require assistance navigating the health system. Access could be improved by the provision of trained cultural or community interpreters in all health care settings and HL programs (Simich, 2009). The use of plain language is essential for those with limited English/French language proficiency (Woloshin, Schwartz, Katz, & Welch, 1997). HL

programs can assist with translating complex terms and medical jargon into more easily understood terms. HL providers can use charts, diagrams, and photographs to help explain complex health procedures and to illustrate anatomical and biological processes (Parker & Kreps, 2005). Community-based programs have been useful for improving HL in refugee populations. Researchers find that workshops located in communities that use translated materials, interpreters, and hands on approaches are successful in improving HL on medication use in refugee populations. Participants in these workshops report an increase in knowledge of medication bottles, labels and dosing. The researchers find that working within a community setting provided the refugee participants with an environment where they felt safe and comfortable asking questions (Prescott, Dascanio, Klosko, & Shogan, 2018).

Older adults are at higher risk of experiencing health illiteracy (Barr-Walker, 2016). Some older adults are unfamiliar with technology and the internet. This unfamiliarity prevents access to health information that can be found efficiently through online resources. Public library computer training for older adults has been shown to increase computer and online literacy which can improve HL (Xie & Bugg, 2009). Computer skills can help older adults access relevant information on their health concerns. Computer training courses guide them to useful and straightforward websites and sources that are easy to access. For example, they may be directed to online videos on YouTube which provide easy to digest information. Filming health literacy programs and posting them online may also provide access to older adults and other populations who lack the transportation to physically participate in programs. Providing older adults with computer training can enhance their self-confidence and independence (Shapira, Barak, & Gal, 2007).

Cross-agency collaborations have been shown to improve health literacy program quality and help overcome barriers such as transportation, lack of funding and cultural differences (Vamos,

2013). Health care workers, different health associations, local universities, governments and or other non-governmental agencies can collaborate to focus on the overall enhancement of health literacy levels. A collaboration between a public and university library in California illustrates the impact of cross-agency collaborations. The agencies strove to improve HL and services for homeless populations. They organized a task force to complete an inventory of library programs and to develop a list potential partner agencies. This led to the formulation of a homeless resource page on their library websites. One barrier they identified was lack of transportation for persons experiencing homelessness. They began outreach programs where librarians met people in the community. They were able to do this by partnering with other agencies who had direct knowledge of and contact with local homeless populations. This helped the homeless access their programs. Participants were also encouraged to visit the libraries in the future to attend computer classes, resume workshops, literacy programs, cultural programs or English as a second language conversation groups. These types of programs positively impact HL (Collins, Howard, & Miraflor, 2009).

Newcomers to Canada experience barriers to HL. Integrating HL programs into existing settlement programs for newcomers is also an example of how to meet HL needs. Building HL is a long-term process and partnerships between health programs and immigration agencies would be beneficial to health literacy. These programs could be offered to newcomers at their local community libraries. Early exposure to HL for newcomers could increase the impact of HL programs (Simich, 2009). Offering HL programs through libraries can also help to familiarize newcomers with their local libraries which may motivate them to utilize other beneficial programs.

Conclusion

Health literacy is multifaceted and involves the ability to find, evaluate, and utilize health related information. So far, health literacy initiatives have fallen short, as many Canadians have inadequate health literacy levels. To increase health literacy levels for individuals and communities, there must be an attempt to address some of the many barriers to participation in health and health related education programs. Some of these barriers include lack of transportation, lack of ability to understand and/or communicate in English/French, cultural differences, lack of understanding of complex terms (medical jargon) and poor communication skills (Parker & Kreps, 2005). Public libraries have existing resources and structures which make them ideal places to house health education. Librarians can support HL. They have expertise in literacy training, are often trusted members of their communities, and form ongoing relationships with library patrons (Barr-Walker, 2016). If barriers to health literacy are addressed, libraries have the potential to have far-reaching positive health impacts on individuals and their local communities.

References

- American Library Association. (2012). *The Economic Contribution of Wisconsin Public Libraries to the Economy of Wisconsin*. Retrieved from <http://www.ala.org/tools/research/librariesmatter/economic-contribution-wisconsin-public-libraries-economy-wisconsin-0>.
- Arding, A., & McLeod, S. (2013). The Role of Canadian Public Librarians in Promoting Health Literacy: Potential programs and partnerships. *The Canadian Journal of Library and Information Practice and Research*, 8, 2-3.
- Arndt, T. (2016). Health Literacy: A Natural Role for Librarians. *Reference Services Review*, 44 (2), pp.81-84, <https://doi.org/10.1108/RSR-04-2016-0026>.

- Audunson, R. (2005). The Public Library as a Meeting Place in a Multicultural and Digital Context: The Necessity of Low-intensive Meeting Places. *Journal of Documentation*, 61 (3) 429-441.
- Barr-Walker, J. (2016). Health Literacy and Libraries: A Literature Review. *Reference Services Review*, 44 (2) 191-205.
- Beder, H. (1991). The stigma of illiteracy. *Adult Basic Education*, 1(2), pp. 67–78.
- Bowen, S. (2001). Language barriers in access to health care. Retrieved from: www.hc-sc.gc.ca/hcs-sss/pubs/care-soins/2001-lang-acces/index_e.html
- Burnham, E. (2003). Libraries as Partners in Health Literacy. *Journal of Consumer Health on the Internet*, 7(4) 7-15.
- Cabello, M., & Butler, S. M. (2017, March 30). *How Public Libraries Help Build Healthy Communities*. Retrieved from Brookings: <https://www.brookings.edu/blog/up-front/2017/03/30/how-public-libraries-help-build-healthy-communities/>
- Collins, L. N., Howard, F., & Miraflor, A. (2009). Addressing the needs of the homeless: A San José library partnership approach. *The Reference Librarian*, 50(1), pp. 109–116.
- Dalmer, N. (2013). Health Literacy Promotion: Contemporary Conceptualizations and Current Implementation in Canadian health librarianship. FIMS publications. Retrieved from <https://ir.lib.uwo.ca/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1039&context=fimspub>
- Edwards, M. (2003). *The Story of the Saint John Free Public Library, 1883-2003, and Notes on Other Libraries from 1811*. Saint John: Legislative Library of New Brunswick.
- Gillis, D. & Quigley, A. (2004). Taking off the Blindfold: Seeing How Literacy Affects Health. *A Report of the Health Literacy in Rural Nova Scotia Research Project*. Retrieved from <https://www-deslibris-ca.proxy.hil.unb.ca/ID/251582>.
- Government of Canada. (2018). *Social Determinants of Health and Health Inequalities*. Retrieved from <https://www.canada.ca/en/public-health/services/health-promotion/population-health/what-determines-health.html>.
- Handa, T. S. (2012). The future public library services in ICT environment with special reference to India. *Journal of Radix Internatonal Educational and Research Consortium* 1(2), 30-41.
- Jones J.A., Kreps G.L., & Phillips G.M. (1995). *Communicating with your doctor: getting the most out of health care*. Cresskill, NJ: Hampton Press.
- Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. *Annual Review of Sociology*, 27, pp. 363-385.

- Logan, R., et al. (2015). Health Literacy: A Necessary Element for Achieving Health Equity. *National Academy of Medicine*. Retrieved from <http://nam.edu/wp-content/uploads/2015/07/NecessaryElement.pdf>.
- Malachowski, M. (2011). Patient Activation: Public Libraries and Health Literacy. *Computers in libraries*, 31(10) 5-9.
- Mitic, W. & Rootman, I. (2012). An Inter-sectional Approach for Improving Health Literacy for Canadians. *Public Health Association of BC*.
- Murray, S., et al. (2008). Health Literacy in Canada. *Canadian Council on Learning*. Retrieved from <http://www.en.copian.ca/library/research/ccl/health/health.pdf>
- Nielsen-Bohlman, L., Panzerm, A.M., & Kindig, D.A. (2004). *Health literacy: a prescription to end confusion*. Washington, DC: The National Academies Press.
- Osborne, H. (2005). *Health Literacy from A to Z: Practical Ways to Communicate Your Health Message*. Boston: Jones and Bartlett Publishers.
- Parker, R. (2000) Health literacy: a challenge for American patients and their health care providers. *Health Promotion Int.*, 15(4), pp. 277–283.
- Parker, R., Davis, T.C., & Williams M.V. (1999). Patients with limited health literacy. In: Bateman, W.B. & Kramer, E.J. (Eds.), *Patient and family education in managed care and beyond: seizing the teachable moment*. (pp. 63-71). New York, NY: Springer.
- Parker, R., & Kreps, G. L. (2005). Library outreach: overcoming health literacy challenges. *Journal of the Medical Library Association*, 93(4), pp. 81–85.
- Prescott, G. M., Dascanio, S. A., Klosko, R., & Shogan, M. (2018). Development of a medication health literacy program for refugees. *Journal of the American Pharmacists Association*, 58(6), pp. 673–678.
- Rooney-Browne, C., & McMenemy, D. (2010). Public Libraries as Impartial Spaces in a Consumer Society: Possible, Plausible, Desirable? *New Library World*, 111 (11) 455-467.
- Rootman, I., & Gordon-El-Bihbety, D. (2008). *A Vision for a Health Literate Canada: Report of the Expert Panel on Health Literacy*. Ottawa: Canadian Public Health Association.
- Rubenstein, E. (2016). Health Information and Health Literacy: Public Library Practices, Challenges, and Opportunities. *Public Library Quarterly*, 35(1) 49-71.
- Shapira, N., Barak, A., & Gal, I. (2007) Promoting older adults' well-being through Internet training and use. *Aging & Mental Health* 11(5), 477-484.

- Simich, L. (2009) Health literacy and immigrant populations. Retrieved from: http://www.metropolis.net/pdfs/health_literacy_policy_brief_jun15_e.pdf
- Singleton, K. (2003) Virginia adult education health literacy toolkit. Retrieved from: <https://files.eric.ed.gov/fulltext/ED482788.pdf>
- Statistics Canada. 2016. *Census Profile, 2016 Census, New Brunswick*. Retrieved from <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/Page.cfm?Lang=E&Geo1=PR&Code1=13&Geo2=&Code2=&Data=Count&SearchText=New%20Brunswick&SearchType=Begins&SearchPR=01&B1=All&GeoLevel=PR&GeoCode=13>
- Sørensen, K. et al. (2012). Health literacy and public health: A systematic review and integration of definitions and models. *BMC Public Health*, 12(1), 80. <https://doi.org/10.1186/1471-2458-12-80>
- Trombetta, S. (2017, March 20). *7 Reasons Libraries are Essential, Now More Than Ever*. Retrieved from Bustle: <https://www.bustle.com/p/7-reasons-libraries-are-essential-now-more-than-ever-43901>
- Vamos, S. (2013). Health literacy policy and programs. In: Hernandez, L.M. (Eds.), *Health literacy: Improving health, health systems, and health policy around the world: Workshop summary*. (pp. 37-57). Washington, DC: The National Academies Press
- Vamos, S., et al. (2014). Examples of Health Literacy in Practice. *Canadian Public Health Association*. Retrieved from https://www.cpha.ca/sites/default/files/uploads/resources/healthlit/examples_e.pdf
- Wang, H., Emrich, T., & Collette, M. (2016). Health Inequities in New Brunswick. *A Report from the Office of the Chief Medical Officer of Health*. Retrieved from https://www2.gnb.ca/content/dam/gnb/Departments/h-s/pdf/en/Publications/HealthInequitiesNewBrunswick2016.pdf?fbclid=IwAR3tAhqZCBbiGoi-on-iwSdU_6mpA45e4DX-lwrtjd1PVcrc7so0-K3ogSIM.
- Whitney, W., Keselman, A., & Humphreys, B. (2017). Libraries and Librarians: Key partners for progress in health literacy research and practice. *Information*, 85-100.
- Wiseman, F. [Director]. (2017). *Ex Libris: The New York Public Library* [video file]. Massachusetts; Zipporah films.
- Wolf, M. S., et al. (2009). Literacy and learning in healthcare. *Pediatrics*, 124(0 3), S275–S281. <https://doi.org/10.1542/peds.2009-1162C>
- Woloshin, S., Schwartz, L. M., Katz, S. J., & Welch, H. G. (1997). Is language a barrier to the use of preventive services? *Journal of General Internal Medicine*, 12(8), 472–477. <https://doi.org/10.1046/j.1525-1497.1997.00085.x>

World Health Organization. (2009). Health Promotion. *7th Global Conference on Health Promotion*. Retrieved from <https://www.who.int/healthpromotion/conferences/7gchp/track2/en/>

World Health Organization. (n.d.). *About Social Determinants of Health*. Retrieved from https://www.who.int/social_determinants/sdh_definition/en/

Xie, B., & Bugg, J. M. (2009). Public library computer training for older adults to access high-quality Internet health information. *Library & Information Science Research*, 31(3), 155.