

Health Literacy and the Opioid Crisis: An Opportunity for Health Sciences Librarianship

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Abstract

As public health challenges, information sources, and research technologies continue to change, so must the strategies that health librarians employ to meet the demands of their community. In recent years, one of the most difficult public health challenges to navigate as health information professionals is the ongoing opioid crisis. This literature review provides a summary and analysis on the impact of health literacy and health literacy interventions on the opioid crisis. It concludes that low levels of health literacy are linked to higher levels of opioid misuse, opioid dependency, and opioid misinformation and emphasizes the importance of health literacy interventions to improve health outcomes. Opportunities for health sciences librarians to implement interventions and increase health literacy are plentiful and include strategies such as plain language resource creation, community-led services, and collaboration between public, academic, and medical library environments.

Keywords: health literacy, health interventions, health librarianship, opioid crisis, opioids, health sciences

Health sciences librarians are responsible for educating others in the skills of clinical and health information literacy and making health information accessible to all (Medical Library Association, 2023). As information, trusted sources, research strategies, and public health challenges change – so must the strategies that health librarians employ to make sure they are meeting the demands of these responsibilities. In recent years, one of the most difficult health challenges faced by health information professionals has been the opioid crisis. This literature review provides an analysis on the impact of health literacy and health literacy interventions on

the opioid crisis and presents opportunities for health sciences librarians to contribute efforts their efforts to this ongoing crisis.

Health Literacy and Health Literacy Interventions

Health literacy is a term first coined in 1974 in relation to the emerging concept of health education at that time (Simonds, 1974). In his article, “Health Education as Social Policy”, Simonds (1974) argues that health literacy is the responsibility of health information professionals, health librarians, and policymakers. The concept of health literacy has evolved over time, but the core principles of the term remain the same. Currently, health literacy is defined by the National Library of Medicine as the “degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions” (2023, Scope note section). A similar definition is noted in the Encyclopedia of Nursing Education, while also highlighting that low levels of health literacy result in increased levels of morbidity, mortality, improper medication use, and more emergency department visits (Smith, 2015, p. 173). The importance of health literacy is underscored further by the International Encyclopedia of Public Health, which acknowledges that individuals have “different capacities to find, evaluate, and use health information” (Batterham et al., 2017, p. 204) and that personal experiences impact the way in which people will interact with health information or go about seeking it. This acknowledgement posits that health professionals have not always understood their audience’s needs and haven’t fully met their health literacy objectives (Batterham et al., 2017).

One of the main ways health sciences librarians try to combat a lack of health literacy is through health interventions. Health interventions are a broad range of activities that generally fall into two categories: “interventions aimed at improving health literacy, and interventions aimed at improving service delivery and outcomes for people with low health literacy or with specific health literacy limitations” (Batterham et al., 2017, p.433). Such interventions can include hospital patient programming, educational print resources creation, health volunteers in remote communities, sharing information on accessible digital platforms, and much more. In a recent systematic review it was found that libraries are well positioned to improve health literacy across a wide variety of

audiences due to their trusted roles in communities, free Wi-Fi access, knowledgeable staff, physical and digital resources, and collaborative programming (Vassilakaki & Moniarou-Papaconstaninou, 2022). For example, The Library Nurse Project in Arizona, placed public health nurses in public libraries to present educational sessions to a diverse demographic; with a positive reception (Vassilakaki & Moniarou-Papaconstaninou, 2022). Interventions like this could be beneficial in the continuing opioid crisis, and it's important to consider what opportunities exist for health sciences librarians and health information professionals in this context.

The Opioid Crisis

The opioid crisis, also referred to as the opioid epidemic, began in the 1990s with an increased rate of opioid prescribing by pharmacists and physicians. This overprescription caused a first wave of opioid overdose deaths related to dependency and misuse (Centre for Disease Control and Prevention, 2022). Since then, the crisis has evolved to result in a second wave of overdose deaths related to heroin, and a third wave of synthetic opioid overdose deaths due to manufactured drugs such as fentanyl (Centre for Disease Control and Prevention, 2022). In Canada, there has been 36,442 apparent opioid toxicity deaths between January 2016 and December 2022 (Government of Canada, 2023). In 2022 alone, there was 5,265 opioid-related poisoning hospitalizations with a median stay period of three days (Government of Canada, 2023). The lasting impact of these deaths and hospitalization is felt by family members, communities, and healthcare systems across the country and beyond.

In an attempt to manage the opioid crisis, many efforts in North America have focused on the reduction of opioid prescribing, harm reduction practices and drug-checking technologies, and opioid agonist treatments such as methadone and buprenorphine (Kerr, 2019). However, these efforts may attempt to oversimplify or medicalize a complicated problem with layers of societal intersectionality. More innovative solutions and a “holistic drug policy framework that considers broader structural conditions including a greater emphasis on engaging with those misusing substances to address underlying issues that affect them” (Ning, 2022, p. 1). Given the responsibility of health sciences librarians to provide access and education to health

information, and their direct involvement in health literacy interventions with members of the public, there is a unique opportunity for this profession to impact the opioid crisis. The literature review that follows is a summary of the relationship between health literacy and opioid misuse and the impact of health literacy interventions on the ongoing opioid crisis.

Methods

A literature search was conducted to understand the full scope of health literacy and health literacy interventions in connection to opioid use. This search focused on the time period 1990 and 2023, as the 1990s was the start of the opioid crisis and therefore significant to this research. The search was limited to peer-reviewed articles published in English and focusing on a North American perspective, as these sources of information would have the most relevance to the intended audience of health sciences librarians in Canada. Because the topic in question is most related to the disciplines of health sciences and information sciences, the following databases were used: PubMed, LISTA, and Novanet catalogue (a consortium of libraries in Nova Scotia). Searches were conducted with the controlled vocabulary from the respective databases' thesauri and relevant keywords. For example, health literacy is an identified MeSH term in PubMed but it was introduced in 2010; therefore, alternative keywords such as health education were used in conjunction. Other keywords included opioid, opioid crisis, and health sciences librarians. Results in all searches were filtered to include entries from peer-reviewed journals to ensure only high quality articles were included. Literature was then reviewed to identify any trends or common themes among health literacy and health literacy interventions and the opioid crisis.

Analysis and Commentary

Impact of Health Literacy and Literacy Interventions on Opioid

Low levels of health literacy are related to higher levels of opioid misuse, opioid dependency, and opioid misinformation (Rogers et al., 2020). This finding was consistent across the literature reviewed, with studies often employing questionnaires or surveys such as the Brief Opioid Overdose Knowledge (BOOK) to assess levels of general opioid knowledge, overdose knowledge, overdose response knowledge, and

general prescription drug and safety knowledge (Lee et al., 2023). In a study conducted by Roger et al. (2020) the impact of health literacy amongst 455 individuals with chronic pain and opioid use was assessed to find that health literacy was significantly negatively associated with opioid misuse, severity of opioid dependence, pain severity, and pain disability. The association between health literacy and these criteria surpassed other factors such as age, race, or socioeconomic status (Rogers et al., 2020).

“Evidence suggests that taking opioids may be considered a risk factor for developing misuse and abuse behaviors” (Pergolizzi et al., 2012, p. 443) and therefore the importance of having an adequate level of health literacy is present from opioid prescription, to opioid use, recovery, and beyond. For example, in a cross-sectional study of health literacy levels and opioid prescription in an emergency department, Dayaa et al. discovered that patients with low health literacy were more likely to receive an opioid in the emergency department (70%) than patients with high health literacy (52%) and were more likely to continue using them after discharge (2019, p. 267). This shows that those with lower health literacy levels are at a greater risk of being exposed to opioids and possible misuse. Furthermore, it has also been reported that individuals who have a family member with an opioid prescription are at a greater risk for overdose than individuals with no family opioid use (Khan et al., 2019). Overdoses in this situation can be attributed to inadequate health literacy such as improper drug storage or a lack of understanding on how to properly read prescription labels of warnings (Prince et al., 2019).

If opioid users develop a dependency, health literacy continues to play a major role in how users respond to potential overdoses, poisonings, or treatment. As Lee et al. (2023) reported in their study on opioid literacy in rural Alabama, low levels of literacy exist in regard to opioid prescription autonomy and this correlates with the high number of overdoses in this region. Similarly, in Wisconsin, a health education initiative by Wisconsin Health Literacy noted that participants in a series of opioid-focused workshops wanted more information about overdose responses, naloxene use, and the history of the opioid crisis (LaScala et al., 2019). Despite widely different geographical areas and populations, both studies show that health literacy in regard to opioid

overdoses is a crucial factor for users and their community. When seeking treatment for opioid dependency, literature shows that there is a lack of health literacy and a high degree of misinformation or stigma surrounding common treatments such as methadone and buprenorphine or naloxone (Brousseau et al., 2022). Participants in a study by Brousseau et al. reported negative responses when disclosing treatment for opioid dependency that was often based on misinformation (2022). These stigmatized responses often led to harmful advice being given to those receiving opioid dependency treatment that caused abrupt changes in treatment plans, premature weaning off of medication, and poor mental health consequences (Brousseau et al., 2022). Overall, low health literacy increases the likelihood of opioid prescription and use, impacts family members probability to use opioids, results in a lack of opioid overdose understanding, and contributes to negative opioid treatments outcomes. In all of these ways, health literacy is unequivocally linked to many facets of the opioid crisis.

Opportunities for Health Sciences Librarians in the Opioid Crisis

Health sciences librarians have a unique opportunity to impact the opioid crisis through health literacy interventions. In healthcare settings, librarians and information professionals need to implement plain language when creating, sharing, or acquiring resources on opioids. For example, when examining opioid education in orthopaedic surgery patients (among the most heavily prescribed patient population), it was recommended that “education tools on use of opioids must be easy to read, understand, and use for patients of all skill levels to be effective” (Prince, 2019, p. 232). Plain language principles such as white space, easy-to-read font, high contrasting colours, and bullet points should all be integrated into materials (Prince, 2019). The effectiveness of plain language health literacy interventions can be seen in a study by McCarthy et al. where patients receiving a prescription for hydrocodone-acetaminophen were given and read aloud a one-page information sheet at the time of prescription (2015). This intervention didn’t improve all aspects of patient knowledge, but it did result in a decreased likelihood that patients would drive under the influence of hydrocodone-acetaminophen (McCarthy et al., 2015). Creating simple, accessible information resources such as this and executing an organized strategy to share them with others is

a great opportunity for health sciences librarians and information professionals to make a difference in the opioid crisis.

In addition to complicated language and medical jargon, health information has also historically presented information through a biomedical lens, without taking into consideration social and cultural factors (Tyson, 2021). In order for health literacy interventions to be effective, they must acknowledge that information seekers are part of a larger social context that influence their behaviours and understanding. People with low health literacy levels are more hesitant to ask questions of a healthcare provider and more likely to seek information from unreliable sources (Nunley, 2019). For example, when studying opioid treatment education for cancer patients, Tyson et al. found that there was a large discrepancy of understanding pain and addiction amidst differing cultures (2021). Physicians described pain on a scale and used medical terminology to describe painful sensations, while participants from other cultures expressed pain in relation to spirituality, emotion, or culturally significant indicators (Tyson et al., 2021). Participants also expressed a lack of understanding in how opioids work and believed pain medication would alleviate all pain – rather than help monitor levels of pain (Tyson et al., 2021). These discrepancies highlight the importance of recognizing sociocultural elements that influence how we share and receive health information and are an important area of health literacy for health sciences librarians to continue to research and improve.

Another opportunity for health sciences librarians to impact the opioid crisis is through the implementation of health literacy initiatives that centre around collaboration and user-input. In the public library setting, there has been a tradition of replicating literacy instruction strategies from academic institutions, or formal bodies of information, without embedded community perspectives (Mehra & Jaber, 2023). This tradition continues in the ways health information about the opioid crisis and opioid use is shared directly from hospital brochures, clinic pamphlets, or government websites – rather than taking local neighbourhood considerations into account. Some recommendations to combat this copying of information and improve health literacy through the public library include addressing the opioid crisis in their strategic

development, updating web-based technologies and social media to market opioid-related services, establish partnerships with local health care providers, and engaging patrons in program planning (Mehra & Jaber, 2023). An example of a successful community-led health information initiative is the Wisconsin Health Literacy project, Let's Talk About Pain Medicines (LaScala et al., 2019). In this project, workshops are delivered to participants based on what they would like to learn about opioids. A pre and post-workshop test is given to assess learning and results indicate an improved understanding of where to store opioid medications, improved identification of opioid medicine, and an improved understanding of how to read a prescription label (LaScala et al., 2019). Health literacy strategies such as this could be replicated in a number of health library or health information settings, and the focus on user-experience should be highlighted.

Conclusion

Overall, this literature review demonstrates the importance of health literacy and health literacy interventions in the opioid crisis. High levels of health literacy are related to low levels of opioid misuse and misinformation, and therefore health literacy interventions should be a prominent tool used to help manage the ongoing crisis. Of the health literacy opportunities available to health sciences librarians an emphasis on cultural and social factors should be considered in all literacy programming, materials, and outreach. Furthermore, a focus on plain language principles and communicating information in an accessible way needs to be put into practice. Improving health literacy in regard to opioids would not only benefit users but also their family, friends, community, and healthcare systems.

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