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LEARNING TOGETHER TO THINK CRITICALLY ABOUT HEALTH INFORMATION: A PARTICIPATORY CASE STUDY IN PROGRESS (Paper)

Abstract:

This participatory case study investigates how collaborative learning can enhance critical health literacy, which is instrumental for making informed health decisions, managing, and preventing health problems. Data collection sources include participant observations, interviews, and project documents, which will be analyzed using deductive-inductive thematic analysis. The study focuses on one case – a group that meets regularly online, hosted by an independent community library in Montreal, Canada. As this is research in progress, preliminary findings will be shared. Ultimately, this community-based project will provide useful insights to community partners, librarians, health organizations, and educators.

1. Introduction

Health literacy is increasingly recognized as a 'super determinant' of health for its role in improving health outcomes, reducing healthcare costs, and promoting health equity (Spring, 2020; van Kessel et al., 2022; Wu, 2021). It is also a universal challenge (Trezona et al., 2018). The Covid-19 pandemic has exposed the overwhelming overload and complexity of health information, emphasizing the importance of critical health literacy. With health information coming from diverse and potentially contradictory sources, it can be difficult to understand, sometimes inaccurate, and potentially harmful (Eysenbach, 2020).

In response to the pressing need to enhance patients' and citizens' critical health literacy capacity (Abel & McQueen, 2020; Paakkari & Okan, 2020; Zarocostas, 2020), this case study seeks to explore the potential of community-based collaborative learning to build critical health literacy capacity. The research questions guiding this work are: (RQ1) What are community-based needs, assets, and opportunities related to building critical health literacy capacity?; (RQ2) What is the role of collaborative learning in building critical health literacy capacity among community-members?; (RQ3) What factors are necessary for sustainable involvement and scaling-up of community-based critical health literacy collaborative learning interventions?

2. Literature Review

This research is built upon two key concepts – critical health literacy and collaborative learning. Critical health literacy involves individual and group abilities to access, critically evaluate, and use information to make health decisions within their own contexts (e.g., existing social support) (de Wit et al., 2017; Nutbeam et al., 2017). It also promotes community empowerment to collectively improve health and reduce inequalities (Sykes et al., 2013). Critical health literacy is key not only because most people manage their health at home without consulting a health professional, but also because family members, work colleagues, and neighbours often act as trusted information sources (Boivin et al., 2020; Green et al., 2001).

Collaborative learning holds strong potential to build critical health literacy among communities and community members (de Wit et al., 2017). In collaborative learning, learning is seen as a social rather than an individualistic activity, where group members share their experiences and understanding (Myron et al., 2018). Stated otherwise, collaborative learning prioritizes dialogue across diverse perspectives and is based on recognizing the value of collective knowledge that emerges when different types of knowledge 'meet' (Dalkir, 2017; Dillenbourg, 1999). Because

critical health literacy involves an exchange of different types of knowledge (e.g., professional and experiential) and how information is received and communicated, collaborative learning goes hand in hand with building critical health literacy capacity.

While critical health literacy is increasingly acknowledged as important and beneficial, important knowledge gaps remain. Research publications often focus on developing the concept of health literacy, rather than on experimenting with evidence-based interventions to improve health literacy (Batterham et al., 2016). Most interventions take an individualistic, rather than a collaborative community-based approach to health literacy improvement, despite the recognized need for more research on interventions that view communities as complex systems (Kendir & Breton, 2020; Nutbeam, 2000). Finally, few interventions seek to improve critical health literacy through collaborative learning as described here (Nutbeam et al., 2017).

3. Methods

This community-based research study uses a participatory approach and a case study design**.** The participatory approach fosters community engagement and empowerment by building an academic-community partnership, knowledge co-creation, and critical reflection (Israel et al., 1998; Wallerstein & Duran, 2008). Research participants are involved in co-designing the collaborative learning intervention, discussing project orientations, establishing priorities and ground rules for working together (e.g., meeting frequency). The qualitative case study enables us to study a contemporary phenomenon in-depth, occurring in a bounded real-life context, from which it cannot be separated (Miles et al., 2020; Patton, 2014; Yin, 2014).

Case Definition: A case (i.e., unit for data collection, analysis, and interpretation) constitutes a collaborative learning community. We adopt the World Health Organization's definition of

community, being a group of people "that may or may not be spatially connected, but who share common interests, concerns or identities" (World Health Organization, n.d.).

Data Collection: As per case study design, data collection is integrated into real-world events and involves several methods (Yin, 2014). Data will be collected through interviews, participant observations, a review of documents, and a debriefing questionnaire (i.e., process evaluation). Individual semi-structured interviews will capture rich and detailed data about personal views, experiences, perspectives, understanding, and explanations (Patton, 2014). Each interview will last about one hour, will be audio recorded and transcribed verbatim. All group members will be invited to participate in the interviews. Participant observation will occur in the natural setting, during project development meetings and implemented learning activities. Participants will be asked general questions and be able to express their views freely (Patton, 2014). Observations will be recorded as fieldnotes. Documents (e.g., meeting minutes) will be collected and used to corroborate and augment information from other sources (Creswell & Creswell, 2018; Yin, 2014). In addition, a research journal will be kept during the study. Finally, each group discussion will include a debriefing questionnaire to collect participants' feedback, which will be used to adapt and revise the following group discussion, if needed.

Data Analysis: After transcribing verbatim the interview recordings, all data will be analyzed using deductive-inductive thematic analysis (Fereday & Muir-Cochrane, 2006) with NVivo qualitative analysis software. Data will be coded using concepts related to critical health literacy and collaborative learning (deductive coding), while being open and alert to generating new themes (inductive coding). Coded segments will be organized by theme to create a case summary and build logical chains of evidence (Miles et al., 2020; Yin, 2014). A narrative case report will be produced, providing a detailed account of the case.

4. Preliminary Results

The case described here involves a group of people with a shared interest in learning about critical health literacy. Group members were self-selected from an online peer-café aimed at enhancing digital literacy skills and hosted by an independent community library in Montreal, Canada. The peer cafés are held weekly, lasting two to two and a half hours, and regularly attract between 15 and 30 participants. Participants come together to share knowledge, tips, and in the words of one participant "share ignorance" by asking questions in a safe peer-to-peer learning environment. Because of their established interest in collaborative learning and the interconnected nature of digital and health literacy, this community was approached to recruit participants for the case study.

In March 2023, the academic researcher initiated the partnership by attending a peer café meeting, presenting themselves and the project idea. In total, the researcher attended eight peer café meetings, taking the time in the beginning of the peer café to talk more about the project and to better understand the group's interests and needs. Discussions included project priorities, the format of eventual meetings, meeting frequency and time (during or outside the usual peer café hours), health topics of interest, encountered challenges, and information resources. Eventually, a smaller working group came together to discuss research ethics and collaborate on refining certain clauses of the consent form to make them more relevant and understandable. Since then, seven health literacy collaborative learning activities have been held, with at least two more scheduled before the conference. We will be able to share our experience with co-designing the critical health literacy activities, learning together, as well as early research findings related to the research questions.

5. Discussion

This research responds to a global need for improved critical health literacy, as well as the need for research that explores the link between critical health literacy and collaborative learning in non-clinical settings (de Wit et al., 2017; Nutbeam et al., 2017). The proposed research will have a positive impact on individuals, communities, and society. It can contribute to individual knowledge gain (e.g., skills to critically engage with health information) and better health outcomes (e.g., disease prevention) (Chinn, 2011; Sykes et al., 2013). Moreover, health literacy is a major social determinant of health, one that can help overcome other modifiable determinants (Rowlands et al., 2017). People with low health literacy tend to come from racial or ethnic minorities, be migrants or older adults. Therefore, better health literacy will help reduce health inequalities and improve the health of disadvantaged communities (Coulter & Ellins, 2007; Jackson et al., 2021).

6. Conclusion

Our findings on community-based critical health literacy interventions will be useful to health organizations, libraries, community groups, educators, and health researchers. By using a participatory approach, this research will not only contribute to knowledge creation but also to potentially empower participants by enhancing their knowledge, skills, and confidence. Finally, this research on how we can build critical health literacy skills by learning together, might help us deal with other pressing problems like health impacts of climate change.

References

Abel, T., & McQueen, D. (2020). Critical health literacy and the COVID-19 crisis. *Health Promotion International*, *35*(6), 1612–1613. https://doi.org/10.1093/heapro/daaa040

Batterham, R. W., Hawkins, M., Collins, P. A., Buchbinder, R., & Osborne, R. H. (2016). Health literacy: Applying current concepts to improve health services and reduce health inequalities. *Public Health*, *132*, 3–12. https://doi.org/10.1016/j.puhe.2016.01.001

Boivin, A., Penafiel, M., Rouly, G., Lahaie, V., Codsi, M., Isabel, M., & White-Guay, B. (2020). Covid-19—A pivotal moment in community care. *BMJ Opinion*. https://blogs.bmj.com/bmj/2020/04/07/covid-19-a-pivotal-moment-in-community-care/

Chinn, D. (2011). Critical health literacy: A review and critical analysis. *Social Science & Medicine*, *73*(1), 60–67. https://doi.org/10.1016/j.socscimed.2011.04.004

Coulter, A., & Ellins, J. (2007). Effectiveness of strategies for informing, educating, and involving patients. *BMJ*, *335*(7609), 24–27. https://doi.org/10.1136/bmj.39246.581169.80

Creswell, J., & Creswell, J. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

Dalkir, K. (2017). *Knowledge management in theory and practice* (3rd ed.). MIT Press.

de Wit, L., Fenenga, C., Giammarchi, C., di Furia, L., Hutter, I., de Winter, A., & Meijering, L. (2017). Community-based initiatives improving critical health literacy: A systematic review and meta-synthesis of qualitative evidence. *BMC Public Health*, *18*(1), 40. https://doi.org/10.1186/s12889-017-4570-7

Dillenbourg, P. (1999). What do you mean by collaborative learning? In P. Dillenbourg (Ed.), *Collaborative-learning: Cognitive and computational approaches* (pp. 1–19). Elsevier.

Eysenbach, G. (2020). How to fight an infodemic: The four pillars of infodemic management. *Journal of Medical Internet Research*, *22*(6), e21820. https://doi.org/10.2196/21820

Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, *5*(1), 80–92. /z-wcorg/.

Green, L. A., Fryer, G. E., Yawn, B. P., Lanier, D., & Dovey, S. M. (2001). The ecology of medical care revisited. *New England Journal of Medicine*, *344*(26), 2021–2025. https://doi.org/10.1056/nejm200106283442611

Israel, B. A., Schulz, A. J., Parker, E. A., & Becker, A. B. (1998). Review of community-based research: Assessing partnership approaches to improve public health. *Annual Review of Public Health*, *19*, 173–202. https://doi.org/10.1146/annurev.publhealth.19.1.173

Jackson, D. N., Trivedi, N., & Baur, C. (2021). Re-prioritizing digital health and health literacy in Healthy People 2030 to affect health equity. *Health Communication*, *36*(10), 1155–1162. https://doi.org/10.1080/10410236.2020.1748828

Kendir, C., & Breton, E. (2020). Health literacy: From a property of individuals to one of communities. *International Journal of Environmental Research and Public Health*, *17*(5), 1601. https://doi.org/10.3390/ijerph17051601

Miles, M. B., Huberman, A. M., & Saldaña, J. (2020). *Qualitative data analysis: A methods sourcebook* (4th ed.). SAGE Publications.

Myron, R., French, C., Sullivan, P., Sathyamoorthy, G., Barlow, J., & Pomeroy, L. (2018). Professionals learning together with patients: An exploratory study of a collaborative learning fellowship programme for healthcare improvement. *Journal of Interprofessional Care*, *32*(3), 257–265. https://doi.org/10.1080/13561820.2017.1392935

Nutbeam, D. (2000). Health literacy as a public health goal: A challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International*, *15*(3), 259–267.

Nutbeam, D., McGill, B., & Premkumar, P. (2017). Improving health literacy in community populations: A review of progress. *Health Promotion International*, *33*(5), 901–911.

Paakkari, L., & Okan, O. (2020). COVID-19: Health literacy is an underestimated problem. *Lancet Public Health*, *5*(5), e249.

Patton, M. Q. (2014). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). SAGE Publications.

Rowlands, G., Shaw, A., Jaswal, S., Smith, S., & Harpham, T. (2017). Health literacy and the social determinants of health: A qualitative model from adult learners. *Health Promotion International*, *32*(1), 130–138.

Spring, H. (2020). Health literacy and COVID-19. *Health Information & Libraries Journal*, *37*(3), 171–172. https://doi.org/10.1111/hir.12322

Sykes, S., Wills, J., Rowlands, G., & Popple, K. (2013). Understanding critical health literacy: A concept analysis. *BMC Public Health*, *13*(1), 1–10. https://doi.org/10.1186/1471-2458-13-150

Trezona, A., Rowlands, G., & Nutbeam, D. (2018). Progress in implementing national policies and strategies for health literacy—What have we learned so far? *International Journal of Environmental Research and Public Health*, *15*(7), 1554. https://doi.org/10.3390/ijerph15071554

van Kessel, R., Wong, B., Clemens, T., & Brand, H. (2022). Digital health literacy as a super determinant of health: More than simply the sum of its parts. *Internet Interventions*, *27*, 100500. https://doi.org/10.1016/j.invent.2022.100500

Wallerstein, N., & Duran, B. (2008). The theoretical, historical, and practice roots of CBPR. In M. M. and N. B. Wallerstein (Ed.), *Community-based participatory research for health: From process to outcomes* (pp. 25–46). Jossey-Bass.

World Health Organization. (n.d.). *Community engagement: A health promotion guide for universal health coverage in the hands of the people*. https://www.who.int/publications/i/item/9789240010529

Wu, V. X. (2021). Health promotion in the community via an intergenerational platform: Intergenerational e-Health Literacy Program (I-HeLP). In G. Haugan & M. Eriksson (Eds.), *Health Promotion in Health Care – Vital Theories and Research*. Springer.

Yin, R. K. (2014). *Case Study Research: Design and Methods* (5th ed.). SAGE Publications.

Zarocostas, J. (2020). How to fight an infodemic. *Lancet*, *395*(10225), 676. https://doi.org/10.1016/S0140-6736(20)30461-X