Rural and Remote Health www.rrh.org.au
James Cook University ISSN 1445-6354

Original Research

Critical analysis of interprofessional student-led community health promotion workshops

AUTHORS


Catherine O'Connor[1,2] Senior Director of Research * [https://orcid.org/0000-0003-3243-181X]


Alyssa Labelle[1,2] Senior Director of Research


Tyler Pretty[1,2] Research Assistant


Kayla Katerynuk[1] RN, Research Assistant


Gayle Adams-Carpino[1,3] Faculty Advisor

CORRESPONDENCE

*Ms Catherine O'Connor caoconnor@nosm.ca

AFFILIATIONS

[1] Reach Accès Zhibbi (RAZ), Sudbury, Ontario, Canada

[2] Division of Medical Sciences, Northern Ontario School of Medicine University, Sudbury, Ontario, Canada

[3] Division of Human Sciences, Northern Ontario School of Medicine University, Sudbury, Ontario, Canada

PUBLISHED

4 March 2025 Volume 25 Issue 1

HISTORY

RECEIVED: 18 October 2024

REVISED: 28 January 2025

ACCEPTED: 28 January 2025

CITATION

O'Connor C, Labelle A, Pretty T, Katerynuk K, Adams-Carpino G. Critical analysis of interprofessional student-led community health promotion workshops. Rural and Remote Health 2025; 25: 9522. https://doi.org/10.22605/RRH9522

Abstract

Introduction: Health promotion interventions can empower communities and individuals by focusing on social and environmental interventions, rather than on individual behaviour changes. The settings-based approach, rooted in WHO's Health for All initiative, emphasizes community involvement, collaboration, and equity. Community-based health promotion, especially in rural and remote areas where there is a higher proportion of underserved populations, can leverage community assets and

promote health equity. Student-led health promotion initiatives are gaining traction, benefiting both students and communities. Reach Accès Zhibbi (RAZ), a student-led organization in Sudbury, Ontario in Canada delivers evidence-based health promotion workshops to vulnerable populations, promoting health literacy and equity. This study examines the impact of RAZ's workshops, addressing a gap in research on student-led, non-clinical health promotion efforts.

Methods: This cross-sectional mixed-methods study examined RAZ workshops at five partnering community agencies. Data was collected with two surveys: a web-based survey for staff and a paper-based survey for workshop participants. The first gathered perspectives on long-term impacts of the workshops, while participant surveys were given before and after the workshops to assess baseline knowledge, learning, and behavioural intent. The surveys were developed using the Health Behaviour Scale-16 and were designed at a grade 5 reading level for accessibility. Data analysis involved frequency analysis and Wilcoxon signed-rank test to assess perceived learning gains. Thematic analysis was conducted on qualitative data.

Results: Seven employees from three of the five partnering agencies rated the effectiveness of RAZ workshops, with a mean score of 9 out of 10. They highlighted benefits such as increased knowledge, skills, and mental wellness. Thematic analysis identified three key themes: long-term impact, practical application, and mutual collaboration. Among 33 workshop participants, significant improvements were observed in health literacy, decision-making, and physical and mental health knowledge post-workshop. A Wilcoxon signed-rank test on adjusted change scores for pre- and post-workshop data revealed statistically significant gains in perceived learning across all aspects. Most attendees found the workshop helpful, with 57.6% planning behaviour changes.

Conclusion: This study showed that interprofessional student-led health promotion workshops effectively enhance health literacy and empower underserved communities. Significant improvements in participants' knowledge and confidence suggest these workshops help address health disparities. The findings highlight their potential scalability and adaptability across communities, promoting sustainable health promotion efforts, an important consideration for rural and remote communities.

Keywords

Canada, community participation, health promotion, North America, public health, student-led.

Introduction

Health promotion can empower individuals and communities to improve their wellbeing through social and environmental interventions, rather than focusing solely on individual behaviour or curative services[1,2]. A setting-based approach, originating from the WHO's Health for All initiative and the Ottawa Charter[3], emphasizes community involvement, equity, and systemic collaboration to address multiple risk factors simultaneously. With growing recognition of social determinants of health, community-based health promotion has shown promise as an effective strategy, particularly in underserved populations, by mobilizing local assets and fostering participation, empowerment, and sustainability[4-6].

In rural and remote areas, disparities in healthcare access[7] and lower health literacy[8] contribute to poorer outcomes and to challenges navigating healthcare systems[9]. Evidence supports the use of community-based programs that engage local resources and involve populations in health promotion. Interprofessional student-led health promotion efforts may be a flexible and cost-effective approach to addressing such health disparities. Recent studies demonstrate their potential. For instance, motivational interviewing by Australian undergraduates led to sustained behaviour change[10], while student-led fall-prevention programs reduced risks among older adults[11]. These initiatives highlight the value of students as health promoters, especially in underserved areas where access to services can be limited.

Reach Accès Zhibbi (RAZ) is a student-led not-for-profit in Sudbury, Ontario in Canada[12]. It delivers evidence-based health promotion workshops in collaboration with community agencies, while providing students and professionals with interprofessional experience to challenge their assumptions and perspectives on both the populations they serve and the professionals they work with[12]. Workshops address priority topics identified through a formal needs assessment with the agencies and aim to enhance health literacy and empower participants. At the time of this study, a total of five organizations were partnered with RAZ, ranging from school boards with programming for high-risk youth, addiction recovery and rehabilitation centers to drop-in centres for both youth at risk for or living in homelessness, and for adults with disabilities. Guided by the principles outlined in the Ottawa Charter for Health Promotion[13] and the settings-based approach to health promotion[3], RAZ fosters supportive environments where participants can learn, share, and apply health knowledge in ways that are meaningful to them.

Numerous studies highlight the effectiveness of student-led clinics in improving healthcare access, managing chronic diseases, and delivering preventive services to underserved populations[14,15]. These initiatives provide low-cost or free care, enhance health outcomes, and offer students hands-on, supervised learning opportunities to strengthen skills, interprofessional collaboration, and social accountability[15-18]. However, research has largely focused on clinical settings, leaving a gap in understanding the impact of student-led efforts in non-clinical health promotion. This study seeks to fill this gap by investigating the outcomes of student-led, community-based health promotion workshops delivered by RAZ volunteers.

Methods

Study design

This cross-sectional mixed-methods study evaluated RAZ workshops at five partnering agencies. A web-based survey (Supplementary material 1) administered via Qualtrics (Qualtrics; https://www.qualtrics.com) was emailed to key contacts at partnering organizations for further distribution to staff at the agency to assess long-term changes in workshop participants. Additionally, a two-part paper-based survey (Supplementary material 2) was administered to workshop participants from September 2023 to April 2024. The first part, completed pre-workshop, gathered baseline data; the second, completed

immediately post-workshop, assessed learning, behavioural intent, and perceived workshop value. Surveys were distributed by a research team member not involved in workshop design or delivery to minimize bias or coercion.

Questionnaire development

The survey distributed to partnering organizations assessed workshop familiarity and effectiveness and perceived benefits. Pre- and post-workshop surveys for attendees were based on the Health Behaviour Scale-16 by Chawlowska et al[19]. The pre-workshop survey included demographic questions and four Likert-scale items on confidence in health information and decision-making. The post-workshop survey used a modified Likert scale to assess changes from baseline and included questions on workshop informativeness, helpfulness, and intent to change behaviour. Both surveys were adjusted to a grade 5 literacy level using Microsoft Word's Readability Statistics tool, ensuring accessibility as recommended by the Centers for Disease Control and Prevention's *Simply Put* guide[20].

Volunteers and workshop development

RAZ volunteers include interprofessional students (eg nursing, kinesiology, medicine, pharmacy) and professionals (eg lawyers, nurses, faculty). Recruitment occurs through presentations at Sudbury-area post-secondary institutions, volunteer fairs, and social media.

New volunteers complete an orientation covering RAZ's mission, values, partner organizations, and key concepts from the Canadian Interprofessional Health Collaborative competency framework[21]. They also undergo training in 'Using a trauma-informed care approach', developed by a former volunteer and approved by the student-led board of directors, which is supported by a faculty advisor specializing in interprofessional education[22].

Each partner organization is assigned an ambassador, a student volunteer selected annually who coordinates workshops and conducts needs assessments with their respective organization to tailor topics to their community needs. A master workshop calendar is distributed for volunteer sign-up, offering flexibility for involvement. Outside of signing up for individual workshops, and contributing to development and delivery, there is no long-term commitment for volunteers.

Workshops typically include an icebreaker and evidence-based learning activities, with designs adapted to organizational needs. Ambassadors submit a workshop application form detailing the topic, resources, logistics, and safety considerations. These forms are reviewed and need to be approved by at least five board members, who also ensure content quality and provide feedback for improvement as necessary.

Participants

Staff at the partnering community agencies who were familiar with the workshops delivered by student volunteers were invited to complete the web-based surveys (n=7). An email with a link to the web-based survey for key informants was sent to primary contacts for each agency, with a request for distribution to staff across the respective agencies via email. No direct communication by the research team occurred with the agency staff outside these email chains, which may have contributed to low response rates. All individuals who attended a workshop between September 2023 and April 2024 were invited to fill out the paper-based surveys (n=33) before the start of the workshop, and immediately afterwards.

Data analysis

Responses from key informants at partnering organizations underwent frequency analysis for the first four questions. Three experienced research team members completed blinded cross-triangulation for the qualitative responses.

For workshop participants, the pre-workshop surveys measured baseline knowledge and comfort on a scale from 1 ('strongly disagree') to 5 ('strongly agree'). Post-workshop surveys measured perceived knowledge gain on a scale from 1 ('a lot less') to 5 ('a lot more'). To account for high baseline scores indicating perceived learning, an adjusted change score was calculated as follows:

$$\text{Adjusted change} = \frac{\text{postworkshop score} + (\text{preworkshop score} - 1)}{5 - 1}$$

The numerator adds the post-workshop perceived gain score to the pre-workshop score, minus 1, to centre it as 0. The denominator is the maximum possible gain (ie 5 minus the minimum score of 1). The adjusted change score scales the improvement relative to how much room there was for learning. This way, participants who gave themselves a high pre-workshop score of 5 but still learned 'a lot more' have a positive adjusted change score. To analyze whether the adjusted change scores were significantly greater than zero, or if there were significant learning gains, the Wilcoxon Signed-Rank Test using the Statistical Package for Social Sciences v29 (IBM Corp.; https://www.ibm.com/support/pages/downloading-ibm-spss-statistics-29). It is a one-sample non-parametric test used as the data for individual questions did not follow a normal distribution. The null hypothesis (H0) was that the median of the adjusted change scores was equal to 0 (ie there is no knowledge gain), with the alternative hypothesis (H1) being that the median of the adjusted change scores is greater than 0 (ie there is knowledge gain). Missing values were represented by 0 in the analysis.

Ethics approval

This study was reviewed and approved by the Laurentian University Research Ethics Board (REB) on 6 July 2023, under REB file number 6021409.

Results

Key informants

Employees from the five partnering agencies were invited to participate in the study. However, the response rate from agency staff was lower than anticipated, with only seven responses received from staff across three of the five agencies. The exact response rate remains unknown, as the total number of eligible participants invited to respond was not determined.

All respondents reported being familiar with the organization and their health promotion workshops. In response to the question, 'On a scale of 1 to 10, how effective do you think the health promotion workshops by RAZ are at improving the health outcomes of your clients/students?', one person rated it a 5, two

people rated it a 9, and four people rated it a 10, leading to a mean score of 9. Of the benefit options listed in the survey, respondents found that 'increase in knowledge and skills' (57.1%) and 'improvement in mental wellness' (42.9%) were the most significant for their members. Options that were not selected included 'increased health literacy', 'improved self-efficacy', 'improved physical wellness', and 'improved social wellness'.

Thematic analysis of key informant responses revealed three overarching themes: (1) long-term impact of knowledge translation, (2) practical application and (3) mutual collaboration and benefit.

1. Long-term impact of knowledge translation

The workshops contributed to skill and knowledge development, as evidenced by agency staff observation of clients acquiring valuable skills such as self-defence techniques, conflict resolution skills, and overall enhanced health literacy, among others. As highlighted by the following quote, workshops are not only providing immediate educational benefits, but also serving as catalysts for discussions that continue beyond the workshop's duration.

> *[The workshops] are often a starting point to open dialogue about health and wellness. This leads to increased knowledge and awareness with the eventual possibility of healthy changes.*

One particular shared success story further supports the ongoing dialogue once the workshop is complete:

> *We had a workshop on smoking/vaping. Several clients afterwards immediately shared that they needed to cut down. Since the workshop, several conversations have occurred about the harmful effects of vaping.*

Another respondent touched on observable change in workshop attendees after being empowered with the tools for behavioural changes:

> *Our clients enjoy workshops that promote health and wellness. We see a huge difference in the members' activities once they learn the material.*

2. Practical application

The practical application of workshop content has been a significant positive outcome, with many clients expressing gratitude for the health promotion resources and techniques provided. The interactive nature of the workshops allows participants to engage with the material in real time, and familiarize themselves with the skills so they are more comfortable applying them afterwards. The following quote reinforces the workshops' role in creating enjoyable and effective learning experiences:

> *Members have spent time in our kitchen learning healthy eating habits after learning more about the new Canada's food guide.*

3. Mutual collaboration and benefit

The collaborative aspect of the workshops has fostered valuable connections between clients and students delivering the workshops, facilitating knowledge-sharing and discussion not only about the health promotion topic at hand, but also about various academic and career pathways, given the interprofessional background of students delivering the workshops. As highlighted by one of the respondents, this collaboration not only benefits the clients but also enriches the students' learning experiences, highlighting the workshops' broader positive impact on the community.

Workshop attendees

During the data collection period, seven workshops were held with 33 survey respondents (n=33). All workshop attendees responded to the survey, resulting in a 100% response rate. Nine of the surveys were partially completed, with missing responses represented by 0 in the data analysis. Table 1 outlines the demographics (age and gender) of participants.

Prior to the workshops, the majority of respondents reported being confident with health literacy (strongly agree 48.5%; agree 30.3%) (Table 2).

Table 1: Demographic data for health literacy workshop attendees (*N*=33)

Characteristic		*n* (%)
Age (years)		
	0–15	2 (6.1)
	15–30	7 (21.2)
	30–45	6 (18.2)
	45–60	8 (24.2)
	≥60	3 (9.1)
	Prefer not to answer	0 (0.0)
	(No answer)	7 (21.2)
Gender		
	Woman	3 (9.1)
	Man	22 (66.7)
	Transgender	0 (0.0)
	Non-binary	0 (0.0)
	Prefer not to answer	0 (0.0)
	(No answer)	8 (24.2)

Table 2: Pre-workshop survey responses from health literacy workshop attendees

Pre-workshop survey statement/question		*n* (%)
1. I am confident in understanding information about my health.		
	Strongly agree	16 (48.5)
	Agree	10 (30.3)
	Neutral	5 (15.2)
	Disagree	0 (0.0)
	Strongly disagree	1 (3.0)
	(No answer)	1 (3.0)

2. I am comfortable making decisions about my health.		
	Strongly agree	16 (48.5)
	Agree	8 (24.2)
	Neutral	7 (21.2)
	Disagree	0 (0.0)
	Strongly disagree	1 (3.0)
	(No answer)	1 (3.0)
3. I know where to find more information if I don%u2019t understand something about my health.		
	Strongly agree	13 (39.4)
	Agree	8 (24.2)
	Neutral	8 (24.2)
	Disagree	2 (6.1)
	Strongly disagree	1 (3.0)
	(No answer)	1 (3.0)
4. I am aware of ways I can take care of my body.		
	Strongly agree	13 (39.4)
	Agree	10 (30.3)
	Neutral	6 (18.2)
	Disagree	2 (6.1)
	Strongly disagree	1 (3.0)
	(No answer)	1 (3.0)
5. I am aware of ways I can take care of my mind.		
	Strongly agree	13 (39.4)
	Agree	8 (24.2)
	Neutral	8 (24.2)
	Disagree	2 (6.1)
	Strongly disagree	1 (3.0)
	(No answer)	1 (3.0)

Most were also comfortable with health decision-making (strongly agree 48.5%; agree 24.2%) (Table 2). A total of 13 (39.4%) (Table 2) strongly agreed, and eight (24.2%) (Table 2) agreed they knew where to find health information. Over half of respondents reported knowing how to take care of their physical health (strongly agree 39.4%; agree 30.3%) (Table 2) and their mental health (strongly agree 39.4%; agree 24.2%) (Table 2).

After the workshops, 19 (57.6%) (Table 3) of respondents felt they were leaving the workshop more confident about understanding health information, and 17 (51.5%) (Table 3) felt more comfortable making decisions about their health.

When asked about change in their knowledge on where to seek health information, 16 (48.5%) (Table 3) felt they knew more after the workshop, while 9 (27.3%) (Table 3) stated there was no change. Of the 33 participants, 19 (57.6%) (Table 3) left the workshops knowing more about caring for their physical health while 16 (48.5%) (Table 3) reported knowing more about their mental health.

The Wilcoxon signed-rank test on the adjusted change score for individual questions showed a statistically significant increase in perceived knowledge and comfort levels (Table 4), even with high baseline knowledge, following the health promotion workshops.

For each question, responses for all 33 participants were analyzed (n=33). The adjusted change scores revealed a mean score ranging from 1.583 to 1.705 (Table 4), with all scores reflecting improvements in participants' perceived knowledge. The test statistic (W) was consistently 561 (Table 4) for all questions, indicating a strong positive shift. The Z-value ranged from 5.030 to 5.060 (Table 4), all resulting in p-values less than 0.001 (Table 4), demonstrating statistically significant increases in knowledge.

The majority (69.7%) (Table 5) of workshop participants found the workshop informative and helpful, while 57.6% (Table 5) said they see themselves making changes based on what they learned from the workshop.

Table 3: Post-workshop survey responses from health literacy workshop attendees

Post-workshop survey statement/question		*n* (%)
1. After the workshop, I am _____ confident in understanding information about my health.		
	A lot more	5 (15.2)
	More	19 (57.6)
	No change	7 (21.2)
	Less	0 (0.0)
	A lot less	0 (0.0)
	(No answer)	2 (6.1)
2. After the workshop, I am _____ comfortable making decisions about my health.		

	A lot more	5 (15.2)
	More	16 (48.5)
	No change	9 (27.3)
	Less	1 (3.0)
	A lot less	0 (0.0)
	(No answer)	2 (6.1)
3. After the workshop, I know _____ about where to find more information if I don%u2019t understand something about my health.		
	A lot more	4 (12.1)
	More	17 (51.5)
	No change	9 (27.3)
	Less	1 (3.0)
	A lot less	0 (0.0)
	(No answer)	2 (6.1)
4. After the workshop, I am aware of _____ ways I can take care of my body.		
	A lot more	4 (12.1)
	More	19 (57.6)
	No change	7 (21.2)
	Less	1 (3.0)
	A lot less	0 (0.0)
	(No answer)	2 (6.1)
5. After the workshop, I am aware of _____ ways I can take care of my mind.		
	A lot more	5 (15.2)
	More	16 (48.5)
	No change	8 (24.2)
	Less	1 (3.0)
	A lot less	1 (3.0)
	(No answer)	2 (6.1)

Table 4: One-sample Wilcoxon signed rank test for adjusted change scores evaluating knowledge gains from health literacy workshops

Question number	*N*	Min.	Max.	Mean	Standard deviation	W†	Standard error	*Z*¶	*p*-value
1	33	0.75	2.25	1.705	0.397	561	55.44	5.060	<0.001***
2	33	0.75	2.25	1.659	0.441	561	55.77	5.030	<0.001***
3	33	0.50	2.25	1.591	0.450	561	55.71	5.035	<0.001***
4	33	0.75	2.25	1.621	0.415	561	55.62	5.044	<0.001***
5	33	0.75	2.25	1.583	0.436	561	55.73	5.034	<0.001***

*$p<0.05$, **$p<0.01$, ***$p<0.001$

† Test statistic for Wilcoxon signed-rank test.

¶ Standardized test statistic.

Table 5: Responses on health literacy workshop informativeness and potential behavioural changes

Survey question		*n* (%)
Did you find the workshop to be informative and helpful?		
	Yes	23 (69.7)
	No	0 (0.0)
	Not sure	7 (21.2)
	No answer	3 (9.1)
Do you see yourself making changes based on what you learned today?		
	Yes	19 (57.6)
	No	3 (9.1)
	Maybe	8 (24.2)
	No answer	3 (9.1)

Discussion

This study evaluated the impact of RAZ's student-led, community-based health promotion workshops on health literacy, empowerment, and knowledge of participants. Results demonstrated significant improvements (Table 4) in perceived knowledge and comfort levels of workshop attendees, particularly in understanding health information and making health-related decisions. Participants reported greater awareness of health resources (Table 4) and improved understanding of physical and mental health care (Table 4). These findings align with previous studies that emphasize the effectiveness of student-led, community-based health promotion interventions[4,6,23].

Key informant responses from partner organizations highlighted three themes: 'long-term impact of knowledge translation', 'practical application', and 'mutual collaboration and benefit'. These themes emphasize the workshops' potential for lasting change through knowledge-sharing, skill application, and strengthened community partnerships. The workshops effectively addressed gaps in health literacy by providing participants with the tools and knowledge necessary to make informed health decisions. The success of these workshops mirrors the outcomes seen in other studies where student-led interventions contributed to sustained behaviour changes and improved health outcomes[10]. The emphasis on practical application and active participation in the workshops aligns with the principles of adult learning, which suggest that hands-on, experiential learning is more effective in promoting lasting knowledge and behaviour change[24,25]. These findings are particularly important when considering the rural context, where healthcare providers and access to health care are often limited[7], and health literacy is often lower[8]. Interprofessional student-led workshops can play a vital role in delivering health education and promotion in rural and remote communities. This study has demonstrated such efforts as a scalable approach to health promotion that leverages local partnerships and community engagement. By addressing the unique needs of rural populations, such initiatives can help fill critical gaps in health outreach and empower individuals in underserved areas to take control of their health, while fostering a sense of community engagement among student volunteers.

Unlike student-led clinics focused on healthcare delivery, RAZ's interprofessional student-led workshops prioritize education, empowerment, and community engagement, which are crucial for sustained behaviour change and improved health outcomes. The workshops' interactive and practical nature likely contributed to the significant perceived learning gains among participants. The hands-on approach allows community members to engage actively with the material, enhancing their ability to apply the knowledge and skills in their daily lives. For practical application in the rural setting, a hands-on approach might not always be feasible given geographical and resource barriers, but minor modifications could easily adapt to a virtual yet interactive approach, to overcome such challenges.

The findings from this study have important implications for health promotion practice. First, they support the idea that interprofessional student-led health promotion workshops are a viable and effective strategy for improving health literacy and empowering individuals in underserved communities. The success of these workshops demonstrates the potential for similar initiatives to be scaled up and adapted to different community settings, particularly in lower resourced, rural communities. Second, the study highlights the importance of collaboration between interprofessional student volunteers and community organizations in delivering health promotion interventions. The partnerships formed through these workshops facilitated knowledge-sharing and mutual benefit, with students and community members gaining valuable insights and skills. This collaborative approach can serve as a model for future health promotion programs, encouraging a more integrated and community-centred approach to public health. Finally, the practical application of workshop content, as evidenced by participants' reported intent for behaviour change, underscores the need for health promotion programs to be interactive and engaging. By involving participants in hands-on activities and providing them with practical tools and strategies, these workshops made health information more accessible and relevant, leading to greater uptake and potential for sustained behaviour change.

Strengths and limitations

This study has several strengths, including its use of a mixed-methods design, which provided both quantitative and qualitative insights to the effectiveness of the workshops. The involvement of a variety of community partners also allowed for a broader understanding of the impact of workshops across different settings. Additionally, the focus on an underserved community with diverse health literacy levels adds to the relevance and applicability of the findings.

There are some limitations to consider. The small sample size, particularly in the key informant survey, may limit the generalizability of the findings. Additionally, the reliance on self-reported data introduces the potential for response bias, as participants may have over- or under-reported their knowledge gains and intent of behavioural changes. The study's cross-sectional design also limited the ability to assess the long-term impact of the workshops on health outcomes. While this study adjusted for high baseline knowledge scores, the use of perceived change as an outcome measure may not fully capture the actual impact of the workshops on participants' knowledge and behaviours.

Recommendations for future research

Future research should focus on several key areas. First, longitudinal studies are needed to assess the long-term impact of interprofessional, student-led health promotion workshops on health behaviours and outcomes. Second, exploring the impact of different types of health promotion content (eg mental health, chronic disease management, nutrition) and delivery methods could provide insights into the most impactful interventions. Additionally, investigating the use of digital tools could expand the reach of these interventions and offer new opportunities for engaging participants. Third, further research should explore the adaptability of these workshops to rural contexts, where healthcare access and literacy are often limited.

Finally, exploring students' experiences in delivering health promotion workshops could offer valuable insights into their learning, professional growth, and the role of community-based initiatives in their education.

Conclusion

This study demonstrates the effectiveness of interprofessional, student-led, community-based health promotion workshops in enhancing health literacy and empowering participants in underserved communities. The significant improvements in participants' perceived knowledge and confidence, coupled with the positive feedback from key informants, suggests that these workshops are a valuable tool for addressing health disparities and promoting health equity. The findings also highlight the potential for interprofessional, student-led initiatives to be widespread and adapted to different community settings, providing a scalable and sustainable model for health promotion. This is especially important for rural and remote communities where health

promotion resources may be limited. Future research should continue to explore the long-term impact of these workshops and identify ways to further enhance their effectiveness and reach.

Acknowledgements

A special thank you to Nina Jodko for her contribution to the literature review and Andrée-Michelle O'Connor for survey distribution. We also thank the partnering agencies of RAZ that continue to support community members in need. We also acknowledge the health promotion volunteers of RAZ who put the time and effort into design and delivery of the workshops themselves.

Funding

No funding was received by any of the authors or contributors to this study.

Conflicts of interest

All members of the research group are current volunteers of the student-led health promotion organization included in this study.

References

1 Public Health Ontario. *Health promotion.* Available: web link (Accessed 1 September 2024).

2 World Health Organization. *Health promotion.* Available: web link (Accessed 1 September 2024).

3 Kumar S, Preetha G. Health promotion: An effective tool for global health. *Indian Journal of Community Medicine* 2012; **37(1):** 5-12. DOI link, PMid:22529532

4 Estacio E, Oliver M, Downing B, Kurth J, Protheroe J. Effective partnership in community-based health promotion: lessons from the Health Literacy Partnership. *International Journal of Environmental Research and Public Health* 2017; **14(12):** 1550. DOI link, PMid:29232877

5 South J, Bagnall AM, Stansfield JA, Southby KJ, Mehta P. An evidence-based framework on community-centred approaches for health: England, UK. *Health Promotion International* 2019; **34(2):** 356-366. DOI link, PMid:29206912

6 Srivarathan A, Jensen AN, Kristiansen M. Community-based interventions to enhance healthy aging in disadvantaged areas: Perceptions of older adults and health care professionals. *BMC Health Services Research* 2019; **19(1):** 7. DOI link, PMid:30611262

7 Leader J, Bighead C, Hunter P, Sanderson R. "Working on a shoestring": critical resource challenges and place-based considerations for telehealth in Northern Saskatchewan, Canada. *Bioethical Inquiry* 2023; **20:** 215-223. DOI link, PMid:36795190

8 Murray TS, Hagey J, Willms D, Shillington R, Desjardins R. *Health literacy in Canada: A healthy understanding.* Ottawa, ON: Canadian Council on Learning, 2008.

9 Aljassim N, Astini R. Health literacy in rural and urban populations: A systematic review. *Patient Education and Counseling* 2020; **103(10):** 2142-2154. DOI link, PMid:32601042

10 Dziano J, Milanese E, Bogomolova S, Dollman J. Student-led motivational interviewing for physical activity promotion among rural adults: a feasibility and acceptability trial. *International Journal of Environmental Research and Public Health* 2021; **18(3):** 1308-1319. DOI link, PMid:33535648

11 Kiyoshi-Teo H, McKinley-Yoder C, Ochoa-Cosler O, Lemon E, Stoyles S, Tadesse R, et al. Feasibility study of student-led fall prevention care management: Reducing fall risks in assisted living facilities. *Gerontology & Geriatrics Education* 2023; **44(1):** 59-74. DOI link, PMid:34465276

12 Reach Accès Zhibbi. *Our mission/Notre mission.* 2018. Available: web link (Accessed 16 September 2024).

13 World Health Organization. *Ottawa Charter for Health Promotion, 1986.* 1986. Available: web link (Accessed 1 September 2024).

14 Prestes Vargas J, Smith M, Chipchase L, Morris ME. Impact of interprofessional student led health clinics for patients, students and educators: A scoping review. *Advances in Health Sciences Education* 2024; **6 June.** DOI link, PMid:38842784

15 Suen J, Attrill S, Thomas JM, Smale M, Delaney CL, Miller MD. Effect of student-led health interventions on patient outcomes for those with cardiovascular disease or cardiovascular disease risk factors: A systematic review. *BMC Cardiovascular Disorders* 2020; **20(1):** 332. DOI link, PMid:32652933

16 Patel A, Cadet VE. Free clinic educational interventions for patients with chronic disease. *Journal of Compassionate Health Care* 2017; **4(1):** 11. DOI link

17 Stuhlmiller CM, Tolchard B. Developing a student-led health and wellbeing clinic in an underserved community: Collaborative learning, health outcomes and cost savings. *BMC Nursing* 2015; **14(1):** 32. DOI link, PMid:26085815

18 Wilson OW, Broman P, Tokolahi E, Andersen P, Brownie S. Learning outcomes from participation in student-run health clinics: a systematic review. *Journal of Multidisciplinary Healthcare* 2023; **16:** 143-157. DOI link, PMid:36700175

19 Chawlowska E, Staszewski R, Jóźwiak P, Lipiak A, Zawiejska A. Development and validation of a health behaviour scale: exploratory factor analysis on data from a multicentre study in female primary care patients. *Behavioral Sciences* 2022; **12(10):** 378. DOI link, PMid:36285947

20 Centers for Disease Control and Prevention. *Simply put: A guide for creating easy-to-understand materials.* 3rd ed. Atlanta: US Department of Health and Human Services, 2009. Available: web link (Accessed 6 February 2025).

21 Canadian Interprofessional Health Collaborative. *CIHC Competency Framework for Advancing Collaboration.* 2010. Available: web link (Accessed 6 January 2025).

22 Adams-Carpino G. Student and community insights on interprofessional health education. [Laurentian University doctoral thesis]. 2023. Available: web link (Accessed 6 January 2025).

23 Harrington CN, Borgos-Rodriguez K, Piper AM. Engaging low-income African American older adults in health discussions through community-based design workshops. *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* 2019; **593:** 1-15. DOI link

24 Ahsin S, Imran M, Fahim A, Hussain L. Student led outreach workshops to promote basic life support. *The Journal of the Pakistan Medical Association* 2021; **71(7):** 1761-1767. DOI link, PMid:34410242

25 Palis AG, Quiros PA. Adult learning principles and presentation pearls. *Middle East African Journal of Ophthalmology* 2014; **21(2):** 114-122. DOI link, PMid:24791101