Author/s:
Patrick, R;Bruges, N;Gunasiri, H;Wang, Y;Henderson-Wilson, C

Title:
Healthy Me, Healthy Planet: Evaluation of a pilot planetary health library program

Date:
2025-01-01

Citation:
Patrick, R., Bruges, N., Gunasiri, H., Wang, Y. & Henderson-Wilson, C. (2025). Healthy Me, Healthy Planet: Evaluation of a pilot planetary health library program. Health Promotion Journal of Australia, 36 (1), https://doi.org/10.1002/hpja.882.

Persistent Link:
https://hdl.handle.net/11343/351115

Received: 24 November 2023 | Revised: 14 May 2024 | Accepted: 17 May 2024

DOI: 10.1002/hpja.882

Health Promotion Journal of Australia | Australian Health Promotion Association | WILEY

RESEARCH ARTICLE

Healthy Me, Healthy Planet: Evaluation of a pilot planetary health library program

Rebecca Patrick[1,2] | Nicole Bruges[1] | Hasini Gunasiri[1] | Yifan Wang[1] | Claire Henderson-Wilson[1]

[1]School of Health and Social Development, Deakin University, Melbourne, Victoria, Australia

[2]Melbourne School of Population and Global Health, Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne, Parkville, Victoria, Australia

Correspondence
Nicole Bruges, School of Health and Social Development, Deakin University, Melbourne, VIC, Australia.
Email: nicole.bruges@deakin.edu.au

Funding information
State Library Victoria; Public Libraries Victoria

Handling editor: Rosie Nash

Abstract

Issue Addressed: The *Healthy Me, Healthy Planet* program was an evidence-informed pilot program conducted by a local libraries to promote the health co-benefits of action on climate change.

Background: An impact evaluation of the *Healthy Me, Healthy Planet* program was conducted using a mixed methods research design including pre-, during, and post-program surveys and online focus groups.

Methods: The evaluation included 136 participants aged 18+ years who were able to understand and communicate in English or simplified Chinese language. Descriptive analyses of the survey data were integrated with thematic analyses of focus group ($N = 2$) data to generate key themes.

Results: Key impacts included individual and organisational capacity building, personal and social well-being, and pro-environmental knowledge, attitudes, and behaviour. Impacts on program participants included increased confidence, motivation, positive feelings, and personal well-being after taking part in the *Healthy Me, Healthy Planet* program. Participants reported enhanced social connections, mental well-being, and environmental benefits such as engaging within the community on environmental issues and feeling inspired to make sustainable lifestyle changes.

Conclusion: Libraries play a key role in promoting the health of people and planet in the community because they are a trusted, safe, and supportive community setting, a curator of credible and reliable evidence-based information on health and planetary topics and a local and free provider for skills and literacy development.

So What: The evaluation of the pilot suggests that participants improved their capacity to practice sustainable living and it is recommended that this program be expanded to other library settings to enhance community connection and support local planetary health initiatives.

KEYWORDS
climate change, healthy environments, libraries, planetary health, program evaluation

1 | INTRODUCTION AND BACKGROUND

Human health is inextricably linked to the life-giving resources and ecological processes of a healthy planet. Humans depend on a healthy planet, interacting with their local natural and built environments daily to access food, fresh water, and for recreational and social needs.[1] Health promotion, a discipline and set of distinct practices in the field of public health, has recognised its role in promoting health of the planet in several significant international declarations.[2] At the 2020 World Health Promotion and Education Conference, the field adopted a planetary health approach—which emphasises place-based, health co-benefits of action on climate change and the need for local and global actions.[3] The core tenets of the planetary health approach resonate clearly with health promoting settings and the importance of local-level engagement and action for global issues.[3]

There is an emerging body of evidence which documents planetary health initiatives in health promotion at the local level. Initiatives featured in the literature include sustainable and healthy food systems (e.g., community gardens) active transport (e.g., walking school bus), climate resilience (e.g., heat health), sustainable schools (e.g., sustainability education), and nature-based interventions (e.g., urban green space).[4–7] Seminal work and empirical research also demonstrate the value of applying a settings-based approach to planetary health.[8–10] However, little research evaluates the co-benefits for planetary health interventions for both human health and the environment.[11]

At the same time, public libraries are showing promise as new frontiers for health promotion and planetary health initiatives. Public libraries are community hubs and program providers which have potential to promote community health and well-being and are trusted reliable sources of information.[12,13] Public libraries are everyday settings and supportive environments which align to health promotion principles and practices, for example, the Ottawa Charter for Health Promotion,[14] with their core business tailored to the needs of their local community.[15]

Public libraries are valuable community resources that can play a crucial role in educating and empowering individuals and communities to take action on planetary health issues, which aligns to the notion of capacity building within health promotion, aligned with the Ottawa Charter for Health Promotion.[14] Working across sectors, libraries can foster and strengthen community action and empower at the organisational level to promote sustainable health behaviours which favours planetary health. For example, in Victoria, Australia 'Libraries Victoria' have explicitly identified their role in promoting health. In 'Libraries for Health and Wellbeing: A strategic framework for Victorian public libraries towards 2024' they identify the roles libraries play in promoting health and well-being of communities and in achieving the United Nations Sustainable Development Goals, including climate action (Goal 13) and sustainable cities and communities (Goal 11). Furthermore, the Australian Library and Information Association (ALIA) also endorses the principles of the United Nations Sustainable Development Goals, particularly 'access to information' (Goal 16) and Goal 13.

As highlighted in the aims of ALIA, Libraries empower, support, and connect communities through information and education programs that build skills and literacy and promote social connections. Libraries play a crucial role in fostering skills and literacy, encompassing various domains such as early years' literacy/reading, digital literacy, health literacy, and financial literacy, thereby empowering individuals across diverse aspects of knowledge and competency. Public libraries are key actors in local community and service partner engagement and are vital in combatting misinformation.[12] They are perceived as credible and trustworthy which is particularly relevant to the issues of climate change and/or health, which are susceptible to misinformation.[16] Therefore, local libraries are well positioned to offer new initiatives for promoting planetary health.

This paper reports on the key findings of an impact evaluation of the Healthy Me, Healthy Planet (HMHP) pilot program delivered in Victoria, Australia from December 2021 to August 2022 (when there were coronavirus (COVID-19) lockdowns). The HMHP program was an evidence-informed health promotion-oriented program designed to promote the health co-benefits of action on climate change, including health and well-being and pro-climate/environmental knowledge and attitudes. Core HMHP program strategies included social marketing campaigns (e.g., social media and information guides); education sessions (e.g., water wise sessions); climate ready challenge (e.g., using less energy); and climate ready champions initiatives (e.g., local partner capacity building). The aims of the Whitehorse Manningham Libraries led program were to increase participants' skills and knowledge, improve participants' personal health and well-being whilst contributing to building a climate ready community.

2 | METHODS

A pragmatic approach, using a mixed methods study design, underpinned the evaluation framework. Impact evaluation is used routinely in the field of health-promotion to measure immediate program effects on participants, partnerships, and capacity building outcomes.[17] Partnerships here refer to collaborative arrangements between librarians and various organisations within the sector, such as council partnerships and the Brickworks Burwood partnership. These collaborations aim to support local health and sustainability initiatives. It involves cooperation and coordination between librarians and external entities to achieve shared goals in community health and sustainability. To ensure relevance of measures and sampling strategy, the program evaluation was co-designed with staff members of Whitehorse Manningham for REVIEW Libraries. The HMHP program and evaluation report was funded by a Victorian State Government Libraries Health and Wellbeing Innovation Grant. The study was implemented with approval from Deakin University FOR REVIEW low-risk Human Research Ethics Committee (Project No: HEAG-H 193_2021).

The HMHP program ran a series of workshops, a couple of examples are sustainable gardening, waste-free living, waterwise gardening, and smarter living, a guide to sustainable food. The session discussed how to grow produce in a small space and how to position trees and vines around the home to reduce urban heat and save money on energy bills.

2.1 | Sampling and recruitment

Participants were recruited via convenience sampling from the geographical catchment areas of Whitehorse and Manningham. Library management partners acted as third-party recruiters. They had the expertise in local community demographics and common languages (English and simplified Chinese) as well as the existing networks to reach and directly contact community members from diverse socio-economic backgrounds. Libraries advertised the study via a three-tiered approach to recruitment of community members across the two geographically defined local government catchment areas to the pre- and post-survey participation, which included:

Option 1: Registration—the library included a customised question in the registration process asking participants if they would like to receive a link to opt-in to the online surveys. If they opted in, they received a link to the survey Plain Language Statement and Consent Form (in English or simplified Chinese) and survey as part of the registration confirmation.

Option 2: Challenge Activity Introduction—the library provided a hyperlink to opt into the online survey/s that included the Plain Language Statement and Consent Form (in English or simplified Chinese) in the challenge introduction. Challenges are activities suggested for participants to engage in or complete. There were 10 monthly challenges, including a challenge to visit two local nature reserves, parklands, or forests that the participant had not previously explored, buy direct from a local bulk store/farmers market or participate in a produce swap, and make a home-made lunch (packed sustainably) twice a week to replace store-bought food.

Option 3: Education Attendance Confirmation—the library included a hyperlink to the online survey (in English or simplified Chinese) that included the Plain Language Statement and Consent Form in the email confirming the community member's event attendance (i.e., participation of the community member in the educational information sessions).

The final sample included 136 survey participants (3 responded in simplified Chinese), were predominately female (92%) and an average age of 51 years.

Recruitment for the program participants focus groups occurred via advertisement of a flyer in the final 2 months of the program (i.e., 'program' refers to all educational sessions and the activities/challenges related to the 'climate ready challenge'). The recruitment flyer contained the email contact of the lead researcher and that the participants could volunteer to participate. Prospective participants were emailed a Plain Language Statement and Consent Form to review. These forms were provided in English and simplified Chinese (a common language spoken by residents of Whitehorse Local Government Area [LGA]). The final sample included four participants (three female, one male) and all were English speaking.

Finally, recruitment for the staff focus groups involved the researchers sending an email to the library managers asking them to promote the staff focus groups to library staff, who could elect into the research by contacting the researchers directly if they were interested in participating. To ensure anonymity, the library managers did not have knowledge of who participated. Once interested individuals contacted the researchers and agreed to be involved, they were emailed the Plain Language Statement and instructed to email their signed Consent Form in English to the research team. They were reminded that participation was voluntary and if they agreed to participate, they were contacted to confirm appropriate times for them to meet for the focus group. The final sample included 3 Females who were English speaking. The terms 'participant' and 'staff' is used in the results below. The participants were community members who were involved within the program, whereas the staff where paid members of the libraries.

2.2 | Data collection

Data collection occurred over three stages: pre-survey, focus groups, and post-survey.

2.3 | Survey

Pre- and post-surveys comprised of quantitative scales—Personal Wellbeing Index (PWI) and Environmental Attitudes Inventory (EAI), self-reported climate change knowledge, feelings, and motivation and demographic data were gathered. Pre-surveys were undertaken from 14 December 2021 to 28 February 2022 and post-surveys were completed from 26 July to 7 August 2022. The pre- and post-surveys were in English and simplified Chinese.

The PWI is a validated scale that measures subjective well-being and contains seven items of satisfaction, with each item corresponding to quality-of-life domains.[18] The items include questions about how satisfied the participants are with their: standard of living, health, achievements, relationships, safety, community connectedness, and future security. The items were rated on a scale of 0 = not satisfied to 10 = completely satisfied and the score was calculated out of 100. The average PWI score is around 75 for Australians.[18]

The EAI[19] is a validated tool that assesses perceptions/beliefs regarding the natural environment, including factors that can affect its quality. The EAI measures perceptions/beliefs across 10 items for up to 12 scales that include: enjoyment of nature; support for interventionist conservation policies; environmental movement activism; conservation motivated by anthropocentric concern; confidence in science and technology; environmental fragility; altering nature; personal conservation behaviour; human dominance over nature; human utilisation of nature; ecocentric concern and support for population growth policies. Our survey used the scales: enjoyment in nature, personal conservation behaviour and ecocentric concern as we felt these were most relevant to the aim of our research and we also did not want to over-burden the participants with 120 questions. The items were rated on a scale of 1 = strongly disagree to 10 = strongly agree.

Questions related to climate change knowledge, feelings, and motivation included the following: Having completed the HMHP program, how does participating in climate change or environmental actions make you feel? Please rate on a scale of 0–10 for each feeling (e.g., optimistic, in control and courageous). Additionally, how confident are you in making changes in each core domain challenge area? These areas included: Increase active travel; Eat more plants; Reduce waste; Use less energy; Connect with nature; and Get climate-ready.

2.4 | Focus group

A focus group was used to explore program participant perspectives from the survey in more depth and conducted at the end of the program (mid-July 2022). The focus group protocol included prompts relating to the most significant change resulting from participation in the program, program satisfaction, and program impacts. Participants were prompted to consider health well-being, sustainability and environment, and interactions with both family members, community members, organisations, and in particular, children.

A second and final focus group involved library staff members and/or HMHP delivery partners in a 1-h online focus group to explore their perspective of the benefits and impacts of the HMHP program on participants, partnerships, and capacity building as well as what worked and what could be improved.

The focus groups were audio recorded and transcribed using Zoom software. Qualitative data analysis was undertaken using thematic analysis techniques combined with inductive and deductive approaches.[20] A member of the research team transcribed the focus group interview data. Transcripts from each focus group interview were then uploaded into NViVO software for coding and analysis. Common themes were found and data with similar codes were collated into subthemes. Next, a deductive analysis which involved the application of themes to the research questions was undertaken. The data set was triangulated and interpreted in relation to existing literature from the fields of climate change impacts, and health promotion.

After analysis of the qualitative components was completed the data from the survey and focus groups were triangulated using thematic and content analysis.[21] The outcome was a representation of the four primary program impacts related to personal health and social well-being, individual capacity building, pro-environmental benefits, and organisational/community capacity. Bar charts, participant and HMHP staff quotes were developed into a narrative.

3 | RESULTS

A total of 38 free public education sessions or workshops were delivered as part of the HMHP program, attended by 779 participants (18–77 years of age) including over 50 young people (18–24 years). A total of 179 community members participated in the climate ready challenge, completing 727 challenge actions. The survey and focus group data revealed four overarching themes—personal health and social well-being, individual capacity building including impacts on participants' confidence, motivation, learnings, and feelings, pro-environmental knowledge, attitudes and behaviour, and organisational/community capacity.

3.1 | Personal health and social well-being

Figure 1 shows responses to the PWI. Means of all categories in both the pre- and post-surveys were above 5. Compared with all categories of life satisfaction in the pre-survey, the post-survey reported higher levels of life satisfaction. Among these, 'your living standard' had the highest mean ($m = 7.48$), while your 'future security' had the lowest mean ($m = 6.35$). Compared with the Australian average 'general life satisfaction' and 'subjective well-being' (Australian Unity 2017) this cohort scored lower than the normative ranges for both.

Focus groups highlighted health and well-being benefits for program participants spanning social connection and inclusion, mental well-being, health living, and general well-being. A consistent theme in the focus group conversations was that the HMHP program promoted social connections with family and the broader community.

Program participants reported:

> Just being involved with other people in the community and feeling very much part of the community, I've really enjoyed that. (P1).

Program staff observed social connection benefits and contextualised these within the impacts of the pandemic:

> Chatting with people and they said they were learning a new skill. Lots and lots of positive feedback on that. So, I think the impact on their health with those sorts of workshops was very, very good. The participants were saying we just loved it. You know we'd love more of this sort of thing because they were coming away feeling really high and positive. (S1).

Program participants shared that being with like-minded people and engaging with the community promoted their mental well-being. For example, a participant reported:

> Like I'm very much one that I do harp on a bit about you know anti waste and at work and, and so it was very nice to be with other people and feel and be reassured that there's other people out there, that are interested as well. (P1).

Similarly, staff members expressed the social benefits the HMHP program provided to enhance participants' well-being:

> Opportunity for social interaction and learning something new together. Some were retired and talked what they can do for their grandchildren and the planet. I remember those sorts of anecdotes as well. (S1).

3.2 | Individual capacity building

3.2.1 | Confidence

Figure 2 shows responses (on a scale of 0–5) on how confident participants were in making changes in each core domain challenge areas such as Increase active travel; Eat more plants; Reduce waste; Use less energy; Connect with nature; and Get climate-ready. Compared with participants' confidence levels in the pre-survey, the post-survey reported higher confidence levels. This was evident in all categories except, 'connecting with nature' (mean [*m*] = 3.95 vs. *m* = 3.87). This may be linked to the seasonal effect of winter and reduced outdoor

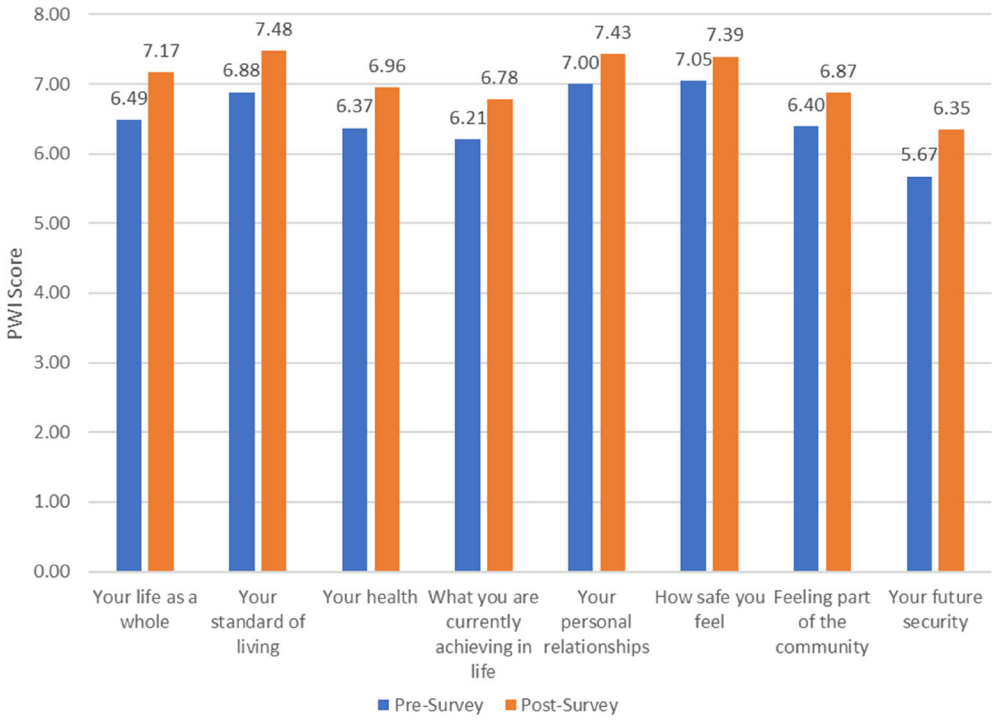


FIGURE 1 Personal Wellbeing Index (PWI).

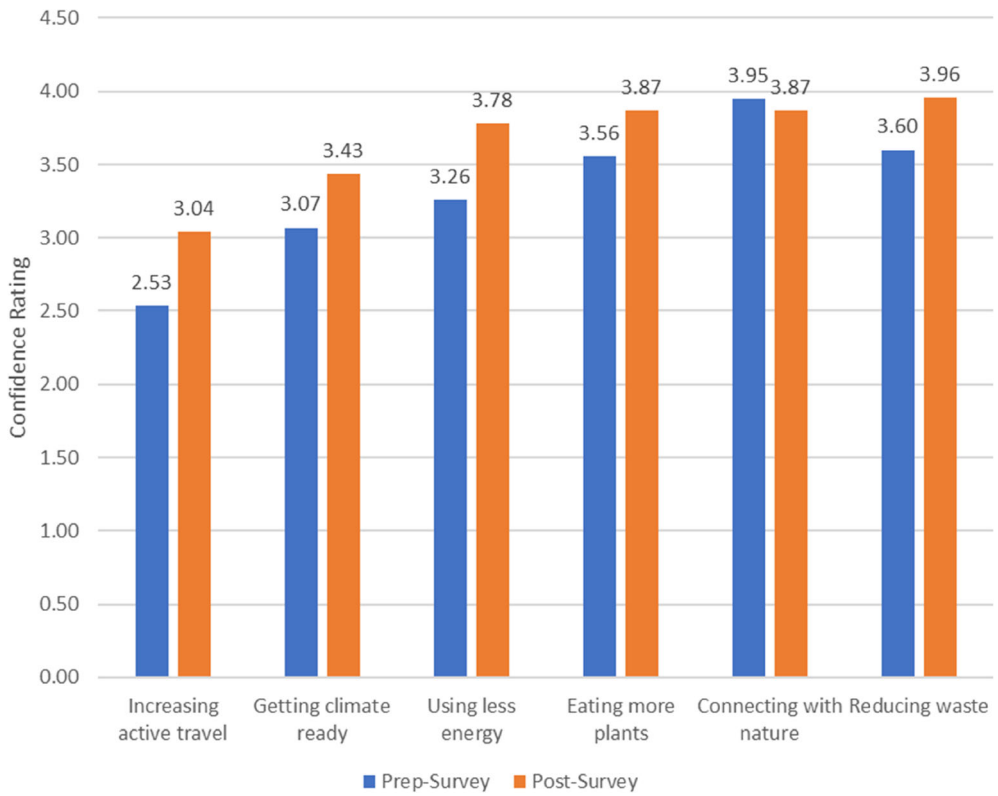


FIGURE 2 Confidence.

activities.[22] The highest level of confidence was reported for 'reducing waste' ($m = 3.96$) whilst the lowest level was 'increasing active travel' ($m = 3.04$). The largest increase in confidence from pre- to post-survey was reported for 'using less energy'. During the program, most of the participants felt that their confidence was at level 3 or above (63/86 = 73%). Twenty participants recorded the highest level of confidence ($N = 5$). Staff member 2 quoted:

> Gave an opportunity to reflect and give confidence on what they are doing and so much more they could do.

3.2.2 | Motivation

Figure 3 shows responses (on a scale of 0–5) on how motivated the participants were in making changes in these core domains of the HMHP challenge areas: Increase active travel; Eat more plants; Reduce waste; Use less energy; Connect with nature; and Get climate-ready. In both the pre- and post-surveys, means of almost all categories related to motivation were 3 or above. However, motivation to 'connect with nature' was lower in the post-survey compared with the pre-survey ($m = 3.96$ vs. $m = 4.23$). During the program, 83% (71/86) of the participants' motivation was at level 3 or above during the program. Twenty-three participants reported the highest level of motivation in the short survey ($N = 5$). Participant 1 mentioned:

> I think I find that sort of somewhat reassuring to know that there's others that are interested in as passionate as I am about things to know that, you know, we're getting there slowly about changing our lifestyles and not being the throwaway society that we've become.

3.2.3 | Feelings

Figure 4 shows responses to *How did participating in this event/challenge make them feel? Rate on a scale of 0–10 for each feeling*? During the program, means of all categories related to feelings were above 5. Among these categories, optimistic feelings had the highest mean ($m = 9.27$), while feeling in control had the lowest ($m = 8.95$).

3.2.4 | Learnings

Overall, the results indicate positive increase in individual capacity building on issues related to environmental sustainability. With all 179 participants demonstrating improved knowledge in 1 of the

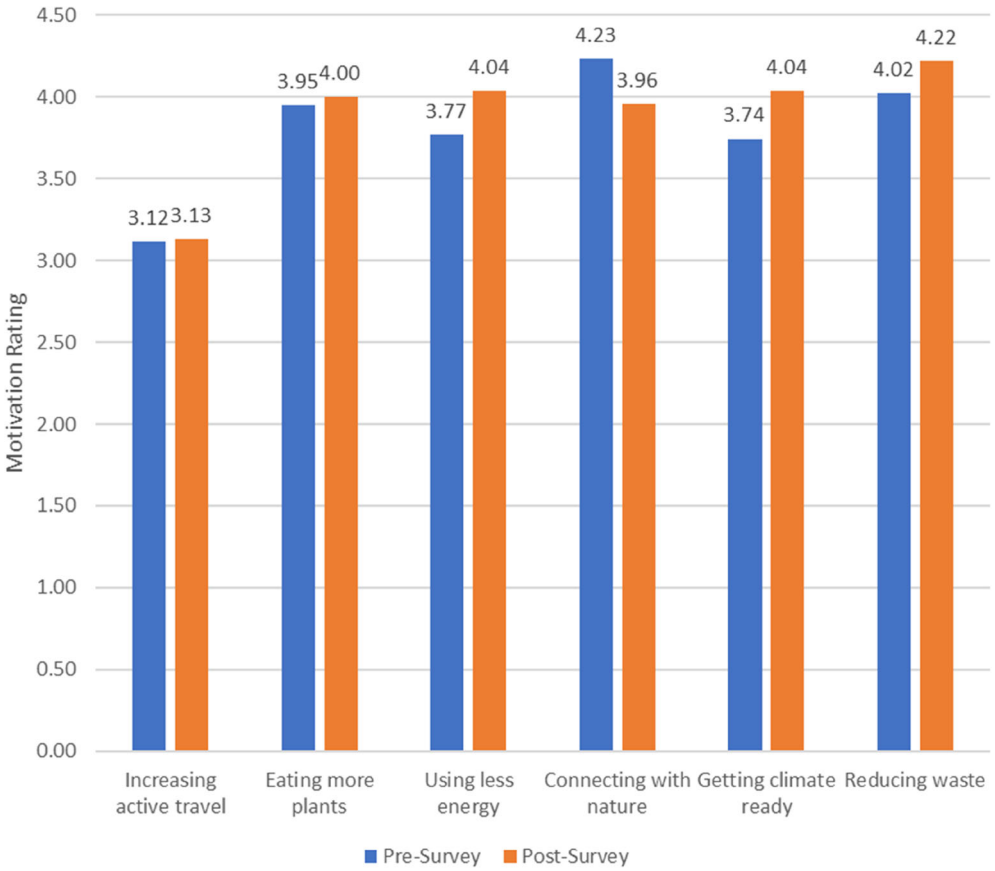
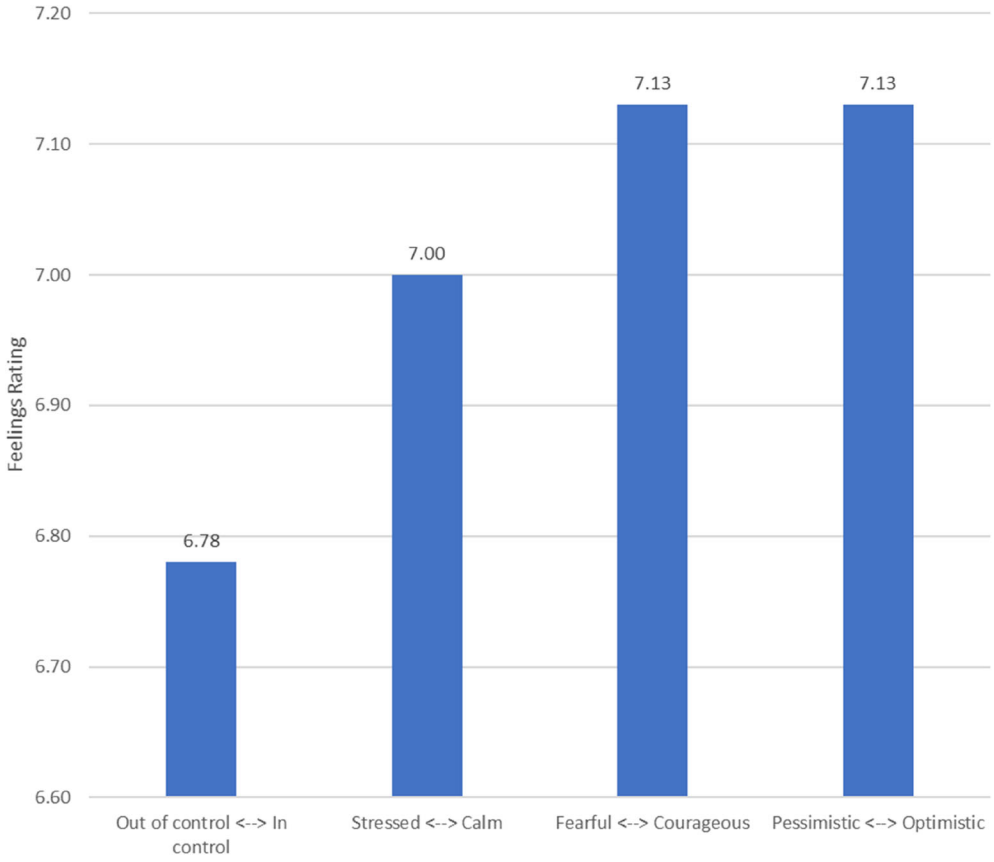


FIGURE 3 Motivation.

FIGURE 4 Feelings.



6 areas of; Increase active travel; Eat more plants; Reduce waste; Use less energy; Connect with nature; and Get climate-ready. This evaluation has yielded some rich insights into the adoption of public education sessions for planetary health within the library setting.

For individuals, the immediate effects included improved health knowledge, attitudes confidence, and motivation, and changes to behavioural intentions. In addition, the knowledge, attitudes, and behavioural outcomes including working together on environmental issues, being inspired to live sustainably, and intergenerational understanding was highlighted through the evaluation. This provides a positive impact on the environment and climate change at a local level.

3.3 | Impacts on environment and climate change

Figure 5 shows responses to the EAI.[19] It demonstrates participants' environmental attitudes and behaviours changed positively in most areas (e.g., switching lights off, taking a short shower) after the program. However, participants' attitudes and behaviours changed negatively in a few areas (e.g., trips to country, finding comfort in nature) after the program. This may be the seasonal effect on outdoor activities during winter. Notably, there was a statistically significant (positive) difference in 'not interested in conserving water and/or power', 'take a short shower—conserve water', 'Drive whenever it suits me', 'Prefer to drive my car even if public transport was more efficient', and 'Protecting the environment is not important', between the two surveys.

Focus groups highlighted pro-environmental and/or climate change knowledge, attitudes and behavioural outcomes including working together in environment issues, being inspired to live sustainably and intergenerational understanding. Working together on environmental issues positively impacted participants in terms of identifying new opportunities to engage within the community on environmental issues. Furthermore, seeing other community members work together on environmental issues made participants feel reassured.

For example, Participant 3 mentioned:

> but I think interaction with family, with community that have that do have impact on me, because of that program I actually asked my family to go for a walk with me. Just to achieve the badge I wanted to do so I actually used it to create more interaction with my family.

3.4 | Organisational/community capacity

The final key theme, generated from the focus groups, indicated that organisational/community capacity was enhanced through collaboration in the HMHP program. For example, a staff member noted the benefit of continuing the program and the role of cross-agency collaboration:

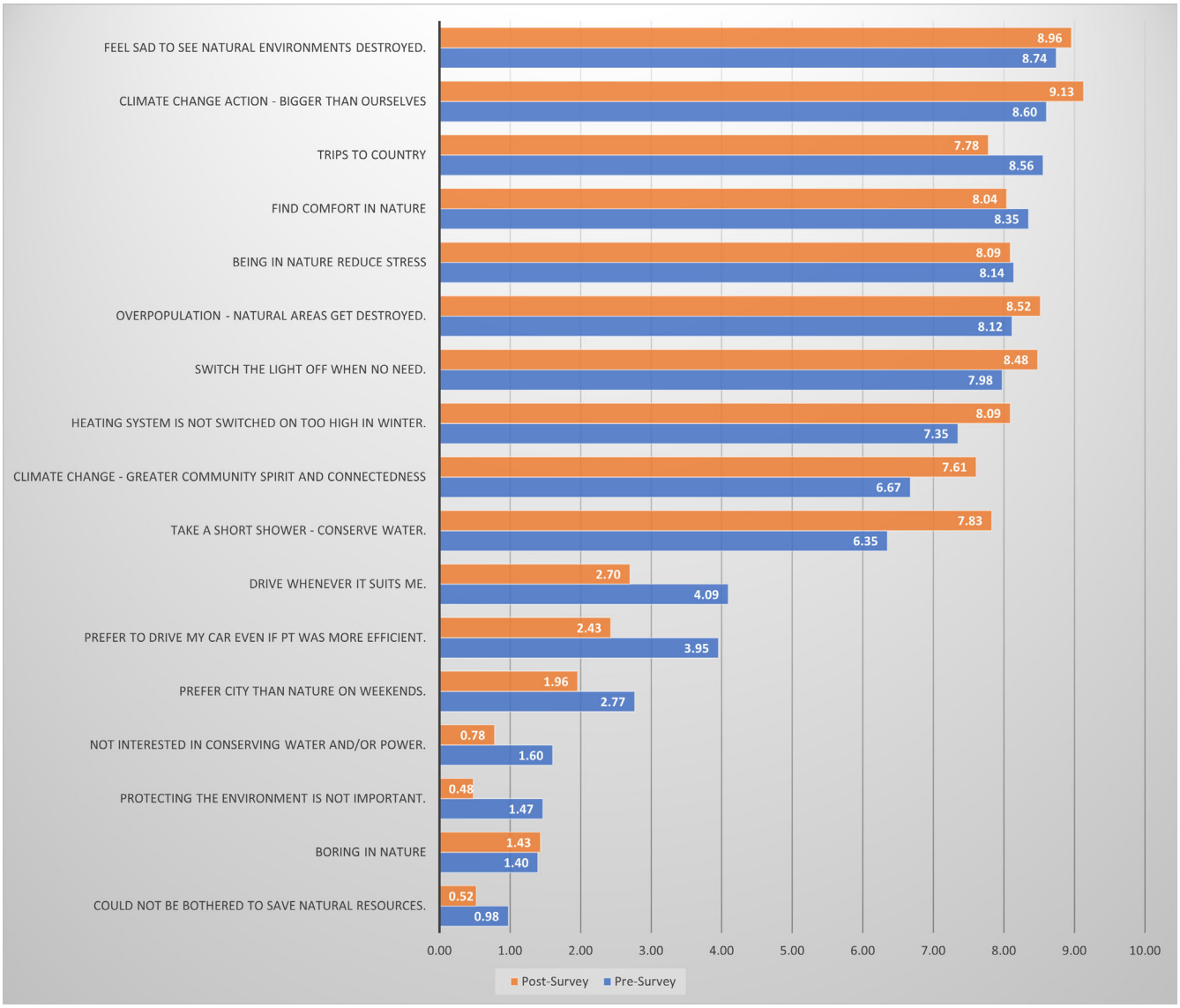


FIGURE 5 Environmental attitudes and behaviour.

> It's actually empowering those people who've got some interest to take those next steps and to share and maybe promote it to somebody else. So, I think, I'd say it'd be great if we could continue to offer it. (S2).

Similarly, a program participant highlighted the expansion of community capacity through continuing the HMHP program:

> I'm really glad that one of the councils did that. I'm really hoping all the councils can, not just from the low price or wherever perspective, but this is just a good program and initiative for people who live in Melbourne and Victoria and even the whole Australia to keep doing and keep healthy. So just to minimise you know the medical problem, and you know all the emergency essential ideas, just to help the whole idea that's all. (P3).

The capacity to build partnerships for local health and sustainability initiatives was another aspect identified in the study. For instance, staff members commented:

> The concept was at the right time for bringing people together. (S3).

> It increased the conversation between myself and other parts of council, so the sustainability team and so forth. It's me actually talking to them about it. But potentially there's more bouncing of ideas and looking at other potential things that can come out of it. So, it's

not necessarily just focus on this particular program it just starts thinking of the nexus. (S2).

4 | DISCUSSION

This article highlights findings from an evaluation of the HMHP program conducted in a Whitehorse and Manningham libraries setting Whitehorse Manningham. The project was run in 2021–2022 when the state of Victoria had ongoing lockdowns which meant many of the initiatives were run online. The results of the study are twofold; (1) the utilisation and opportunity of a library setting to promote personal and social well-being and pro-environmental behaviour and (2) the role of libraries in capacity building (individual and community level) for planetary health.

4.1 | Personal health and social well-being

The potential for libraries to foster good health and well-being can vary from simply providing trustworthy health information to enabling financially accessible social opportunities which help to mitigate social isolation and support good mental health.[23] Libraries provide a sense of belonging to reduce the impact of loneliness and isolation which has negative impacts on the health of communities.[24] The findings from the HMHP program found it was a promotor of meaningful social connections serving as an antidote to the 'loneliness epidemic'.[25] In addition, the evaluation findings found the value in creating social connections with others within the community who share the value and passion for the topic of sustainability and creating healthy environments. The notion of creating connections with others who share the same/similar values, attitudes, and beliefs has been shown to help alleviate loneliness and isolation.[26] This was supported by the local government's municipal public health and well-being plans that had identified 'connected and inclusive communities' and 'social and neighbourhood connections' as a goal.

Another finding of the evaluation was the value of intergenerational connections. Intergenerational programs can be defined as social activities to promote active aging among older adults through contact with other generations.[27] Whilst this program was not focused on reducing ageism and incorporating intergenerational activities, it was an additional finding through the qualitative evaluation. It is argued that educational intergenerational sustainability is a significant opportunity that needs further attention toward a deeper understanding of how successful intergenerational programs work.[28] The HMHP program echoes this viewpoint finding that the ability and opportunity to interact with family members and understand each other's perspectives on issues which have relevance to all generations were improved.

4.2 | Libraries increasing individual and community capacity building

Libraries provide a unique setting at a local level that are trusted, safe and supportive spaces to support and be a curator of credible and reliable information and evidence on health and sustainability.[13] This project demonstrated support for the aims of ALIA (i.e., promoting delivery of quality library and information services through leadership and advocacy) and highlighted the important role of libraries as hubs of community educational knowledge. Research highlights community hubs depend on the creation of a welcoming space where people feel inspired to learn and take action for a healthier planet.[29] The HMHP program facilitated skill development activities at a local level demonstrating its application as a downstream health promotion approach. Furthermore, the inclusion of issues linked to planetary health has been highlighted through this project which has a positive impact for both human health and the environment.

Libraries have a place-based advantage as they know their local community and can tailor practical sustainability initiatives that are context-specific and relatable across the lifespan. In Australia, libraries are well positioned to reach everyone from early life to ageing populations at a local level and are a critical source of reliable information and education on planetary health. Importantly providing resources and education in practical and affordable ways that the local community can achieve place-based practices that will have a positive impact on the environment. Libraries are also known to be strong advocates for open access to health information which helps to ensure equitable access for all people to be adequately and credibly informed about their health.[13]

Health promotion is crucial for partnership development because it fosters collaboration and synergy among various stakeholders, ultimately leading to more effective and sustainable health initiatives. The notion of purposively structuring health promotion interventions around organisational 'places', seeking to draw on their potentially supportive contextual resources, arose initially from the structural ethos of the Ottawa Charter for Health Promotion (WHO, 1986) and was subsequently expressed as the theory and practice of a 'settings' approach.[29] Additionally, libraries, as a community hub from a setting lens, can address inequalities such as accessibility to a range of audiences, leading to the ability to potentially access those with greatest health needs and ultimately address deeper inequalities.[29] The planetary health approach shares principles of collaboration, place-based, and an orientation toward reducing inequalities and promoting equity. Therefore, this study contributes to the understanding of libraries as a setting for both health promotion and planetary health.

4.3 | Pro-environmental behaviour

The evaluation established pro-environmental behaviours of the participants to take actions and make choices aimed to protect and preserve the natural environment. Participants highlighted several key aspects pertaining to pro-environmental and/or climate change knowledge, attitudes, and behavioural outcomes. These encompassed collaborative efforts in addressing environmental issues, fostering inspiration for sustainable living, and promoting intergenerational understanding. Research suggests that changing behaviour to be more environmentally friendly is a complex endeavour.[30,31] Values influence individual's attitudes and behaviours toward environmental actions

and decision-making.[32] The degree to which individual perceptions about others climate values match their actual values is crucial.[32] In addition, the results suggested the collective approach and seeing others taking action to become more sustainable consumers had a positive impact. For instance, one of the participants' interactions with family and community during the program, influenced them, prompting them to involve their family in activities such as going for walks. Additionally, seeing other community members work together on environmental issues instilled a sense of reassurance among participants.

Community events, like those held in the HMHP program, that have a sustainable or environment theme are an affirming mechanism to support engagement in pro-environmental behaviour. Research highlights the importance of social identity in understanding pro-environmental behaviours.[33] Social identity influences the perception of norms within the group and people are more likely to adopt a pro-environmental behaviour if they believe these actions are consistent with the conformity of others. Thus, the collective action through programs like HMHP can help motivate and have a substantial impact on environmental change.[33] The program provided an opportunity for social interaction and collective learning of new skills. Challenges involved participating in or volunteering with local groups or events aimed at environmental improvement, such as community gardening, food or seed swaps, tree planting, and nature identification, which fostered a sense of social identity. Social capital and social trust is an imperative resource that supports collective engagement in environmental issues.[30] Focusing on how individuals and communities make better pro-environmental decisions is important in programs that provide education and awareness to influence behaviour.

Other research suggests creating pro-environment attitudes is the combination of feeling strongly connected to nature in both opposing values of anthropocentric or eco-centric.[34] People with a strong connection to nature, pro-environmental behaviours are not limited to people with eco-centric values. Strongly nature connected people with anthropocentric values more regularly undertake certain pro-environmental behaviours and are just as likely to incorporate these into their daily lives. These findings challenge stereotypes about the environmental commitment of people who are not overtly ecologically minded and has important implications for programs like HMHP in the future.[33]

Therefore, cultivating a more environmentally friendly society is not a straightforward task, but an intricate challenge. By embracing interdisciplinary approaches in different settings, like the library, we can pave the way for more effective strategies to encourage sustainable behaviours and protect our natural environment, that is, planetary health, for future generations.

4.4 | Recommendations

By integrating intergenerational connections into future initiatives, programs can promote active aging but also foster mutual understanding and collaboration across generations. This recommendation aligns with the growing body of research supporting the positive outcomes associated with intergenerational programs.

Empowering communities to take ownership of their health and environmental well-being is crucial which aligns to health promotion theory. Future programs should prioritise community engagement and capacity-building initiatives, enabling individuals and groups to participate in decision-making processes, implement sustainable practices, and advocate for policies that promote both human and planetary health.

Public libraries can play a pivotal role in promoting planetary health within communities. Going beyond their traditional role of information provision, libraries can serve as hubs for knowledge exchange, community engagement, and action on environmental and health issues. Efforts should be made to leverage libraries as trusted sources of evidence-based information on climate change and health, thereby combatting misinformation and promoting informed decision-making.

Planetary health issues are inherently multidisciplinary and require collaboration across sectors and stakeholders. Systems thinking fosters collaboration by encouraging diverse perspectives and promoting a shared understanding of complex issues. Systems thinking helps identify leverage points within complex systems where small changes can have significant impacts. By pinpointing these leverage points, programs can strategically allocate resources and interventions to maximise positive outcomes for both human health and the environment at a community level.

Further research is needed to better understand the effectiveness of settings-based approaches in promoting planetary health, particularly within non-traditional settings such as public libraries. Investing in rigorous evaluation and research will provide valuable insights into best practices, challenges, and opportunities for scaling up and replicating successful programs.

4.5 | Limitations

It is possible the HMHP experienced increased success as it was conducted during the COVID-19 pandemic lockdown when people were staying home and finding ways to stay healthy and try/learn new online experiences to combat loneliness and engage with their local community through online platforms. However, we also acknowledge that the lack of face-to-face workshops may have limited the number of participants taking part in the program as some community members may prefer this mode of delivery. Given the approach to sampling, the sample may not fully reflect the diversity and characteristics of the population nor populations beyond the geographical boundaries of this local government area. Also, the sample size is not generalisable to the wider population.

5 | CONCLUSION

The HMHP program was founded on health promotion practices and the settings-based approach (e.g., Ottawa Charter for Health

Promotion) with the aim of promoting positive environmental and human health impacts for the local communities. Evidently this program provides an opportunity to address the co-benefits of human health and planetary health, building the capacity of local communities to address the largely under-developed agenda of climate change action. The program offers a tested framework for local council health and well-being strategies aligning with the Victorian Government Public Health and Wellbeing Plan 2019–2023 and the four key focus areas, in particular, *Tackling Climate Change*.

The positive impacts as well as risks of a settings-based approach have been well documented in health promotion literature. This study has implications for how the public library system as a setting for health is understood, and consequently priorities for future research and practice. Whilst settings are accepted as part of the global approach to promoting health, there has been little development beyond the education and health sectors.[15]

Health promotion has adopted planetary health which is both a field of inquiry and a practice that seeks to promote the health of humans and the natural environment.[1] The evidence presents the potential in bringing together the interdisciplinary aspects of planetary health, and health promotion utilising a settings-based approach in particular the use of public libraries. Public libraries serve and support their communities traditionally to provide information needs[12]; however, this research suggests a novel method of reimagining and connecting communities for planetary health within a library setting. As curators of credible and reliable evidence-based information on health and environmental topics, libraries have a role in combatting misinformation on both climate change and health.

By making planetary health a priority, the library can become a place that not only empowers individuals with knowledge but also actively contributes to the overall health and well-being of the community and the environment. The inclusion of libraries as partners with other sectors including local government, community health and local businesses should be explored further.[13]

ACKNOWLEDGEMENTS

We would like to thank Katie Norton and Christina Davidson from Whitehorse Manningham Libraries for their collaboration in co-designing this project. Open access publishing facilitated by Deakin University, as part of the Wiley - Deakin University agreement via the Council of Australian University Librarians.

FUNDING INFORMATION

State Library Victoria and Public Libraries Victoria. *Libraries for Health and Wellbeing Innovation Grants*.

CONFLICT OF INTEREST STATEMENT

The authors declare that they have no competing interests.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

HEAG-H 193_2021: *Healthy Me, Healthy Planet: Helping communities to be healthy in a climate impacted world*.

ORCID

Rebecca Patrick https://orcid.org/0000-0002-5537-243X
Nicole Bruges https://orcid.org/0009-0001-9437-3865
Hasini Gunasiri https://orcid.org/0000-0002-3013-5884
Yifan Wang https://orcid.org/0009-0005-8019-5921
Claire Henderson-Wilson https://orcid.org/0000-0001-7826-9788

REFERENCES

1. Patrick R, Henderson-Wilson C, Ebden M. Exploring the co-benefits of environmental volunteering for human and planetary health promotion. Health Promot J Austr. 2022;33(1):57–67. https://doi.org/10.1002/hpja.460
2. Patrick R, Kingsley J. Exploring Australian health promotion and environmental sustainability initiatives. Health Promot J Austr. 2016;27(1):36–42. https://doi.org/10.1071/HE15008
3. Whitmee S, Haines A, Beyrer C, Boltz F, Capon AG, de Souza Dias BF, et al. Safeguarding human health in the Anthropocene epoch: report of the Rockefeller Foundation-lancet commission on planetary health. Lancet. 2015;386(10007):1973–2028. https://doi.org/10.1016/S0140-6736(15)60901-1
4. Kingsley J, Thomas S. Ecosystem approaches to community health and wellbeing: towards an integrated Australian governance framework in response to global environmental change. Ecohealth. 2017;14(2):210–3. https://doi.org/10.1007/s10393-016-1193-x
5. Martinsone B, Di Sano S, D'Elia P, La Salle-Finley T. A conceptual framework for sustainable promotion of a positive school climate: context, challenges, and solutions. J Teach Educ Sustain. 2023;25(1):64–85. https://doi.org/10.2478/jtes-2023-0005
6. Mmako NJ, Capetola T, Henderson-Wilson C, Henderson-Wilson C. Sowing social inclusion for marginalised residents of a social housing development through a community garden. Health Promot J Austr. 2019;30(3):350–8. https://doi.org/10.1002/hpja.225
7. Noy S, Patrick R, Henderson-Wilson C, Nuttman S, Ryan I, Henderson-Wilson C. New frontiers in community initiatives to increase vegetable consumption. Health Promot J Austr. 2019;30:52–61. https://doi.org/10.1002/hpja.207
8. de León EA, Shriwise A, Tomson G, Morton S, Lemos DS, Menne B, et al. Beyond building back better: imagining a future for human and planetary health. Lancet Planet Health. 2021;5(11):e827–39. https://doi.org/10.1016/S2542-5196(21)00262-X
9. Dooris M, Powell S, Parkin D, Farrier A. Health promoting universities: effective leadership for health, well-being and sustainability. Health Educ. 2021;121(3):295–310. https://doi.org/10.1108/HE-12-2020-0121
10. Hancock T. Towards healthy one planet cities and communities: planetary health promotion at the local level. Health Promot Int. 2021;36:i53–63. https://doi.org/10.1093/heapro/daab120
11. Tu'itahi S, Stoneham M, Ratima M, Simpson T, Signal L, Puloka V. Timely and significant call for planetary health promotion. Glob Health Promot. 2019;26(4):100–1. https://doi.org/10.1177/1757975919888174
12. Flaherty MG. Promoting individual and community health at the library. Chicago, IL: ALA Editions; 2018 https://ezproxy.deakin.edu.au/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=1900636&site=eds-live&scope=site
13. Popoola BO. Involving libraries in improving health literacy to achieve sustainable development Goal-3 in developing economies: a literature

review. Health Info Libr J. 2019;36(2):111–20. https://doi.org/10.1111/hir.12255
14. World Health Organization. Ottawa Charter for Health Promotion. Copenhagen: WHO; 1986.
15. Jenkins CL, Sykes S, Wills J. Public libraries as supportive environments for Children's development of critical health literacy. Int J Environ Res Public Health. 2022;19(19):11896. https://doi.org/10.3390/ijerph191911896
16. Gunasiri H, Wang Y, Watkins E-M, Capetola T, Henderson-Wilson C, Patrick R. Hope, coping and eco-anxiety: young People's mental health in a climate-impacted Australia. Int J Environ Res Public Health. 2022;19(9):5528. https://doi.org/10.3390/ijerph19095528
17. Pommier J, Guével M-R, Jourdan D. Evaluation of health promotion in schools: a realistic evaluation approach using mixed methods. BMC Public Health [Internet]. 2010;10(1):1–12. Available from: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=her&AN=48497339&site=ehost-live&scope=site
18. Australian Centre on Quality of Life. Personal Wellbeing Index. 2023. https://www.acqol.com.au/instruments#measures
19. Milfont T, Duckitt J. The Environmental Attitudes Inventory: a valid and reliable measure to assess the structure of environmental attitudes. J Environ Psychol. 2010;30(1):80–94. https://doi.org/10.1016/j.jenvp.2009.09.001
20. Roberts K, Dowell A, Nie J-B. Attempting rigour and replicability in thematic analysis of qualitative research data; a case study of codebook development. BMC Med Res Methodol. 2019;19(1):66. https://doi.org/10.1186/s12874-019-0707-y
21. Creswell JWA, Poth CN. Qualitative inquiry & research design: choosing among five approaches. 4th ed. Los Angeles, CA: International student edition [Non-fiction] SAGE; 2017. https://ezproxy.deakin.edu.au/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=cat00097a&AN=deakin.b3581417&site=eds-live&scope=site
22. Wagner AL, Keusch F, Yan T, Clarke PJ. The impact of weather on summer and winter exercise behaviors. J Sport Health Sci. 2019;8(1):39–45. https://doi.org/10.1016/j.jshs.2016.07.007
23. Wynia Baluk K, McQuire S, Gillett J, Wyatt D. Aging in a digital society: exploring how Canadian and Australian public library systems program for older adults. Public Library Q. 2021;40(6):521–39. https://doi.org/10.1080/01616846.2020.1811612
24. Bergenäs E, Dorthé L. Why the simple act of listening will help us design strong and sustainable post pandemic library services. Liber Quarterly. 2021;31(1):1–8. https://doi.org/10.18352/lq.10931
25. Australian Institute of Health and Welfare. Social isolation and loneliness. 2023. [cited 18 Nov 2023]. Available from: https://www.aihw.gov.au/reports/australias-welfare/social-isolation-and-loneliness
26. Versfeld J, Graham MA, Ebersöhn L. Time to flock: time together strengthens relationships and enhances trust to teach despite challenges. Teach Teach. 2023;29(1):70–104. https://doi.org/10.1080/13540602.2022.2145279
27. Jarrott SE, Scrivano RM, Leedahl SN, Shovali TE, De Fries C, Hasche L, et al. Intergenerational programming during the pandemic: transformation during (constantly) changing times. Journal of Social Issues. 2022;78(4):1038–65. https://doi.org/10.1111/josi.12530
28. Azevedo C, Sánchez M. Pathways to sustainable intergenerational programs: lessons learned from Portugal. Sustainability. 2019;11(23):6626. https://doi.org/10.3390/su11236626
29. Whitelaw S, Coburn J, Lacey M, McKee MJ, Hill C. Libraries as 'everyday' settings: the Glasgow MCISS project. Health Promot Int. 2017;32(5):891–900. https://doi.org/10.1093/heapro/daw021
30. Atshan S, Bixler RP, Rai V, Springer DW. Pathways to urban sustainability through individual behaviors: the role of social capital. Environ Sci Policy. 2020;112:330–9. https://doi.org/10.1016/j.envsci.2020.07.005
31. Mair J, Laing JH. Encouraging pro-environmental behaviour: the role of sustainability-focused events. J Sustain Tour. 2013;21(8):1113–28. https://doi.org/10.1080/09669582.2012.756494
32. Zhang Y, Du J, Boamah KB. Green climate and pro-environmental behavior: addressing attitude-behavior gaps towards promoting sustainable development. Sustain Dev. 2023;31(4):2428–45. https://doi.org/10.1002/sd.2520
33. Schulte M, Bamberg S, Rees J, Rollin P. Social identity as a key concept for connecting transformative societal change with individual environmental activism. J Environ Psychol. 2020;72:101525. https://doi.org/10.1016/j.jenvp.2020.101525
34. Sockhill NJ, Dean AJ, Oh RRY, Fuller RA. Beyond the ecocentric: diverse values and attitudes influence engagement in pro-environmental behaviours. People Nat. 2022;4(6):1500–12. https://doi.org/10.1002/pan3.10400

How to cite this article: Patrick R, Bruges N, Gunasiri H, Wang Y, Henderson-Wilson C. Healthy Me, Healthy Planet: Evaluation of a pilot planetary health library program. Health Promot J Austral. 2024. https://doi.org/10.1002/hpja.882