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Review article

The Perspectives of Young Indigenous People on Chronic Disease Prevention Programs: A Systematic Review of Qualitative Studies

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A B S T R A C T

This review explores the perspectives of Indigenous young people aged 10 to 24 on programs aimed at preventing chronic diseases, which are prevalent among Indigenous populations and tend to increase with age. This study synthesizes findings from 13 qualitative studies conducted across Canada, Australia, New Zealand, and the United States, involving 441 participants. The analysis identified four key themes. First, safeguarding food sovereignty emerged as a foundational priority, emphasizing access to traditional foods, nutritional needs, and food security. Second, empowering emerging leaders through the transfer of traditional wisdom and knowledge was recognized as vital for fostering agency and influence within communities. Third, strengthening the sociocultural fabric involved promoting community inclusion, securing community buy-in, and emphasizing the importance of elders and family involvement, alongside integrating cultural practices into health initiatives. Fourth, navigating challenges such as disengagement due to limited health knowledge and ambiguity surrounding health trajectories highlighted barriers that need addressing. The findings suggest that effective programs should involve family members, build community capacity, and foster leadership among Indigenous youth. Culturally appropriate community-developed interventions that actively engage Indigenous youth are essential for meaningful impact. This study highlights the importance of partnership with Indigenous communities to develop tailored programs that respect cultural practices and address specific needs, ultimately aiming to reduce the disproportionate burden of chronic disease in Indigenous populations through culturally sensitive youth-centered approaches.

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IMPLICATIONS AND CONTRIBUTION

Indigenous youth experience higher rates of risk factors that contribute to developing chronic disease. Based on the perspectives, values, and needs of Indigenous youth, health promotion actions should address food security, enhance community capacity and leadership, provide access to culture-based experiences, and involve Elders and family.

Indigenous young people aged 10–24 years [1] have a fundamental right to opportunities that preserve their health and well-being [2]. Through strong connections to their heritage and identity, Indigenous young people can maintain traditional knowledge and participate in cultural activities as a protective factor against chronic disease risk over their

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lifetime [3,4]. However, the ongoing effects of colonization, intergenerational trauma, systemic discrimination and social isolation still impact young Indigenous people today. This has resulted in higher rates of obesity, physical inactivity, hypertension, and dyslipidemia. These rates are higher compared to those in the age-matched general population [5,6]. Beginning in young adulthood, the risk of chronic conditions such as cardiovascular disease, diabetes, and chronic kidney disease increases and becomes more prevalent during adulthood [7–9]. For instance, findings from a prospective cohort study on American Indians in the Strong Heart Study shows the overall prevalence of dyslipidemia to be 70.6% and the association between dyslipidemia and cardiovascular disease to be 9% [10].

Previous research has shown that adolescence and early adult life is a critical transition period for the development for chronic disease [9,11,12]. Health promotion programs for Indigenous young people have been developed to address risk factors for chronic disease, often focusing on behavioral changes, such as diet and physical exercise [13,14]. For example, a scoping review on 71 community-based programs that addressed the modifiable risk factors of chronic disease in Aboriginal and Torres Strait Islander peoples in urban, rural and remote regions of Australia identified that programs targeted: smoking prevention and/or cessation, healthy nutrition, reducing/eliminating alcohol consumption, promoting physical activity, and improving social and emotion wellbeing. This review indicated some programs were designed or adapted for Aboriginal and Torres Strait Islander peoples, though few studies described the program acceptability or cultural appropriateness. The same review found some programs aimed at smoking prevention and/or cessation incorporated local culture and context in the design, though overall there was limited evidence to interpret program effectiveness [13]. The effectiveness of such programs may be limited if they do not address the needs and priorities of young Indigenous people [15,16]. While research in areas such as sexual health has advanced further in studying factors that motivate decision making and health seeking behaviors [17,18], exploring and harnessing these strengths in the context of awareness, prevention and early detection of chronic disease could optimize the acceptability of programs. In addition, many health promotion programs are not culturally sensitive or appropriate and do not involve or engage young Indigenous people in the design and implementation, consequently reinforcing lack of agency and the ongoing impact of colonization [9,19].

Our aim is to describe the experiences and perspectives of Indigenous young people on health programs that were designed to prevent chronic disease. Synthesizing multiple qualitative studies can provide diverse insight spanning different settings, populations, and types of health promotion programs and the findings may inform the development of health promotion programs addressing the needs and priorities of Indigenous young people to prevent chronic disease.

Methods

We used the Enhancing Transparency of Reporting the Synthesis of Qualitative Research framework [20], to ensure comprehensive reporting of our study.

Selection criteria

Qualitative studies that described the experiences and perspectives of young Indigenous Peoples from western countries with similar colonial histories, specifically Canada, Australia, New Zealand, and the United States of America, collectively known as CANZUS nations, were included [21]. Indigenous people were defined using the United Nations criteria as those who "identify themselves and are recognized and accepted by their community as Indigenous; demonstrate historical continuity with precolonial and/or resettled societies; have strong links to territories and surrounding natural resources; have distinct social, economic or political systems; maintain distinct languages, cultures and beliefs; form nondominant groups of society; resolve to maintain and reproduce their ancestral environments and system" [19]. Indigenous groups could include First Nation, Metis and Inuit Canadians, Aboriginal Australians, Māori New Zealanders, Alaskan Natives, and American Indians, who will collectively be referred to respectfully hereafter as Indigenous people. We acknowledge that the definition of youth may include older ages, for example Indigenous youth in Canada is reported as ages 15–30 years [22]. For the purpose of this study we have included participants aged 10–24 years (as defined by the World Health Organization to include adolescents and youth) [1] for international consistency. Health promotion programs were eligible if they reported experience of Indigenous young people as a participant or peer leader in a health promotion program that was designed to address the primary and secondary prevention of chronic disease (including but not limited to diabetes, cardiovascular disease, and chronic kidney disease). We included qualitative studies using interviews, focus groups, workshops and surveys, where Indigenous young people reported their perspective on the content of the health promotion program, the implementation process or the appropriateness of the program delivery. Studies of health programs that targeted mental health, drug and alcohol use were excluded. Studies using structured quantitative surveys, epidemiologic studies, editorials, or reviews were excluded. Non-English studies were excluded to minimize misinterpretation of cultural and linguistic nuances, potentially leading to misinterpretation of study results.

Study search and selection

The search strategy is provided in Supplementary File 1. The search strategy and selection criteria included: "American Indian," "Maori," "First Nation," Native American," "Metis," "Inuit," "Aboriginal," "Indigenous," and "Torres Strait Islander" to ensure we captured Indigenous populations from Canada, Australia, New Zealand, and the United States of America. The search was conducted in MEDLINE, Embase, PsycINFO, and CINAHL from when the databases were established to 17 May 2024. Google Scholar and reference lists of relevant studies were also searched. Authors (VS, TV, MK) screened titles and abstracts and excluded articles that did not meet the selection criteria. Full texts were also assessed independently for eligibility for inclusion. Any discrepancies were resolved though group discussion until consensus was reached.

Appraisal

The comprehensiveness of reporting within the included studies was assessed independently by authors (VS, TV, MK) using the Consolidated Criteria for Reporting Qualitative Health

Research framework, which includes criteria specific to the research team, study methods, study context, method of analyze and interpretation [23]. We also used the CONSolIDated critERia for strengthening reporting of health research involving Indigenous peoples statement, a tool designed to strengthen the practice, reporting, and dissemination of health research involving Indigenous Peoples [24]. Any differences were resolved by discussion until consensus was reached.

Data analysis

Thematic synthesis was used to analyze the data [25]. All participant quotations and text in the results or discussion sections were entered into HyperRESEARCH (version 4.5.4, 2022 ResearchWare Inc) software for qualitative data management. First author VS (of Australian Aboriginal descent) conducted line-by-line inductive coding and grouped concepts into themes and subthemes. These themes were reviewed and discussed among authors VS, MD (Australian Aboriginal descent), and AJ (non-Indigenous) to ensure that the analytical framework reflected the full range and depth of the data and to identify conceptual links to generate a thematic schema.

Results

Literature search and study description

The literature search from the 4 databases yielded 6,982 citations after 1,055 duplicates were removed. Title and abstract screening removed a further 6,850 citations, then a further 119 articles were excluded after viewing their full text, leaving 13 studies eligible for inclusion. The studies were from the following 4 countries: Canada (6), United States of America (5), Australia (1) and New Zealand (1), involving 441 Indigenous participants, including Aboriginal Australians, Māori New Zealanders, Alaskan Natives, American Indians, and First Nations Canadians (Figure 1). Most studies were conducted with Indigenous groups living in rural settings. The participant's gender was reported in 8 (62%) studies, with 145 (44%) identified as male and 183 (56%) identified as female. Study characteristics are provided in Table 1.

Comprehensiveness of reporting

The transparency of reporting of the studies using the Consolidated Criteria for Reporting Qualitative Health Research checklist was variable (Supplementary File 2). For example, 11 studies (85%) described the sampling strategy and sample size. Data saturation was reported in one (8%) study. All 13 studies provided participant quotations to support the findings. Based on the assessment using the CONSolIDated critERia for strengthening reporting of health research statement (Supplementary File 3), all studies were based on priorities identified by Indigenous stakeholders, 6 (46%) studies specified how Indigenous intellectual property and knowledge arising from the research would be protected, 10 studies (77%) used a strengths-based approach to analyze and report the findings, and 8 (62%) studies described the dissemination of research to relevant Indigenous governing bodies.

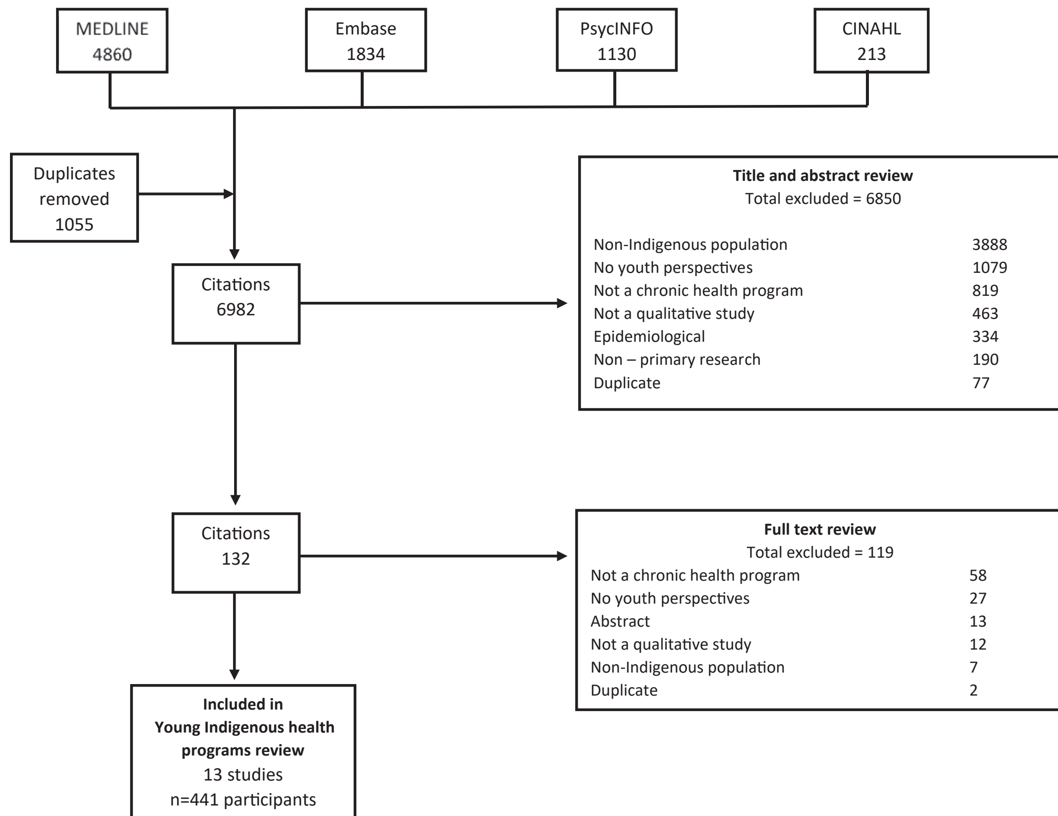

Figure 1. Systematic review search results.

Table 1
Characteristics of included studies

Study	Country	Indigenous nationality	Indigenous participants (n)	Sex M:F	Age (years)	Methodological framework	Data collection	Analysis	Topic
Brown 2008 [26]	United States	Apache, Chickasaw, Chippewa, Choctaws, Navajo, Pee Posh, Yokuts	[a]	[a]	[a]	Grounded Theory	Interviews	narrative inquiry	Youth-led planning and advocacy implementation challenges of a physical activity program
Cueva 2020 [27]	United States	American Indian Alaskan Native	44	23:21	9–11	Participatory action research	Photovoice	thematic analysis	Youth perceptions of cultural connectedness as an obesity prevention strategy
Fletcher 2016 [28]	Canada	First Nations	22	[a]	13–25	Participatory action research	Workshops	[a]	Creating digital stories of healthy lifestyles & connection to community
Gates 2013 [29]	Canada	First Nations	107	48:59	9–18	[a]	Open ended questionnaire	[a]	Impact evaluation of a pilot school snack program
Gillies 2018 [30]	Canada	Cree	20	9:11	[a]	Socioecological framework	Interviews	content analysis	Process evaluation: Perceived barriers and enablers of implementing a School Nutrition Policy
Lopresti 2021 [31]	Canada	[a]	16	9:7	13–18	Community based participatory research	Focus groups & Interviews	inductive content analysis	Describe the key characteristics of implementation as perceived by peer youth mentors and young adult health leaders
Montgomery 2012 [32]	United States	American Indian Alaskan Native	6	[a]	12–15	Community based participatory research	Interviews & survey	phenomenology	Acceptability and feasibility of a comic book intervention
Patten 2009 [33]	United States	Alaska Native Yup'ik, Aleut	49	19:30	11–18	Exploratory model	Focus Groups	content analysis	Youth preferences for a tobacco intervention (iqmik smokeless tobacco and commercial cigarettes)
Pawlowski 2022 [34]	Canada	Inuit	51	26:25	12–18	Community based participatory research	Photovoice	Participatory analysis	Youth perspectives of conceptualizing a health community
Perry 2010 [35]	United States	American Indian	35	[a]	8–18	Community based participatory research	Participatory drawing & focus groups	descriptive analysis	Understanding tribal youths' current patterns of physical activity behaviour and their beliefs and preferences about physical activity

Table 1
Continued

Study	Country	Indigenous nationality	Indigenous participants (n)	Sex M:F	Age (years)	Methodological framework	Data collection	Analysis	Topic
Racicot-Matta 2016 [36]	Canada	First Nations Inuit	9	3:6	16–29	Participatory action research	Focus Groups	content analysis	Fidelity of a radio drama as a health intervention
Seear 2020 [37]	Australia	Aboriginal	32	8:24	16–45	Participatory action research	Focus Groups	content analysis	Youth preferences for a diabetes prevention program
Severinsen 2019 [38]	New Zealand	Māori	50	[a]	[a]	Whanau Ora Framework	Mind maps & (kanohi ki te kanohi) interviews and focus groups	[a]	Formative evaluation of a cultural and physical wellbeing program

[a] - not specified.

Synthesis

We identified the following 4 themes: *Safeguarding food sovereignty;* refers to the greater access to traditional and nutritional food knowledge and practices and the opportunity for food security systems. *Equipping emerging leaders with agency and power;* demonstrates that creating a supportive setting by involving youth in decision making on real-world projects fosters engagement and leadership skills. *Harnessing and strengthening the sociocultural fabric*; emphasizes the importance of accessible guidance that values collective participation provided by local facilities in order to foster inclusion and supportive environments by building relationships and enhance community engagement which incorporates input by Elders and family members. *Navigating obstacles and challenges* includes barriers identified in health programs related to participation and the way health messaging is delivered. The respective subthemes are described below with selected participant quotations to illustrate each theme provided in Table 2. Figure 2 depicts the conceptual links among the themes.

Safeguarding food sovereignty

Access to traditional food as foundational. "Traditional" or "Country" food was regarded as a critical component of health programs and was defined by participants as foods that Indigenous people were able to obtain locally from the natural environment, prepared with traditional knowledge and was part of their cultural ways. Participants in an edible school garden program believed the opportunity to access "traditional foods help us know what is a part of culture" [27]. Participants enjoyed engaging in a radio drama program that provided health education for encouraging healthy lifestyles since it involved Elders as narrators, and they felt "that Elders have the knowledge of country foods" [36].

Addressing nutritional needs. Participants from Canadian Inuit communities noted that Elders were concerned that modern dietary patterns such as consuming "pop [carbonated drinks]" [36] increased the risk of chronic illness and was replacing traditional foods that they felt provided higher nutritional value. Youth sought understanding about nutrition from Elders "cause they know the difference between the nutrients that Country foods have and that store foods have" [36]. They preferred to join in health program that "you can go to, teach you what is healthy, maybe like some cooking lessons or something" [37]. Participants desired cooking demonstrations to broaden their nutritional knowledge and practices and "to know how to prepare healthy meals" [30].

Ensuring food security. Participants recognized that healthy food was often not available in their community – "…[it] is important to have fresh fruits and vegetables available in our community, so we don't have diseases like diabetes" [27]. They believed that food security should be embedded in health programs to facilitate access to healthy foods. For example, in a community lacking availability of nutritious food, participants valued a school snack program to address their fundamental need to access healthy food [27].

Table 2
Selected quotations to support the themes

Theme	Participants' quotations	Contributing studies
Theme 1: Safeguarding food sovereignty		
Access to traditional food as foundational	*"…traditional foods help us know what is a part of culture."* [27] *"…if more Elders spoke about how nutritious the country foods is, then I think that the youth would follow."* [36] *"maybe it's my superstition [concern about fish contamination], I don't know if they keep their lake clean."* [30]	27, 36, 30
Addressing nutritional needs	*"cause they know the difference between the nutrients that country foods have and that store foods have."* [36] *"Something you can go to, teach you what is healthy, maybe like some cooking lessons or something."* [37] *"What I would want to know is how to prepare healthy meals."* [30]	36, 37, 30
Ensuring food security	*"…[it] is important to have fresh fruits and vegetables available in our community, so we don't have diseases like diabetes."* [27] *"…make healthy living flow through it all, from kids to adults…come to think of it…incorporate healthy snacks."* [26] *"I like having food in the morning because I'm hungry."* [29]	27, 26, 29
Theme 2: Equipping emerging leaders with agency and power		
Imparting traditional wisdom and knowledge	*"…great self-esteem builder."* [28] *"It [health project] was fun and I learned a lot."* [32] *[Preference for talking circles or group based interventions] "…it is better to talk in person."* [33]	28, 32, 33
Given a position of influence	*"Young people can make a difference in their community."* [32] *"…put us in the real world, with our own money and responsibilities."* [26] *"…it gives Aboriginal youth a voice…"* [28]	32, 26, 28
Theme 3: Harnessing and strengthening the sociocultural fabric		
Fostering community inclusion	*"I like meeting other people, you get to meet more people. You're not sent off on your own to try and work out how to play it, we do this together, we're a team, we're a community."* [38] *"We need an exercise physiologist at our gym, someone who's well versed in all kinds of illness and can work with people, devise exercise programs for them."* [26] *"…we're trying to get a fitness group [together], like with a bunch of other kids in high school."* [30]	38, 26, 30
Gaining community buy-in	*"…if you can get the families with big influence interested, they'll spread the word…"* [26] *"…when we start talking about diabetes prevention in First Nations, Inuit, Métis children, people stand up and listen, but if you just say, 'oh it's an after school program' they are just like 'oh yeah, whatever'."* [31] *"We need somewhere to go. More activities would be happening for kids who do not attend school."* [34]	26, 31, 34
Centrality of Elders and family involvement	*"…it would be nice to have the parents more involved, so they can ask their kids when they get home 'what did you eat today'?"* [30] *"…the Elders are counting on us."* [27] *"I would tell them I want to quit, my family would be proud of me and say congratulations!"* [33]	30, 27, 33
Integrating cultural ways	*"…the new oral traditional is through digital means … it allows you to take history and adapt it to engage youth."* [28] *"How to break a trail with a firefighting method."* [26] *[Youth preference for first radio drama] "because it's more traditional."* [36]	28, 26, 36
Theme 4: Navigating challenges and obstacles		
Disengagement due to lack of knowledge	*"…when I think of exercise, it's kind of like push-ups and all that crap."* [35] *"…A lot of people don't go to the gym because they don't know what to do."* [26] *"Overall it was very intense, [there was] too much to absorb in a short time frame."* [32]	35, 26, 32
Ambiguity of health trajectories	*"I think there needs to be like resources as such that show, right this is what'll happen if you continue down this path… show them like the severe health problems and how much it, more or less, I guess will ruin your life."* [37] *"…when we go to our health class with [teacher] we mostly talk about social studies … so we never talk about health."* [30]	37, 30

Equipping emerging leaders with agency and power

Imparting traditional wisdom and knowledge. Leveraging storytelling traditions was beneficial in passing on knowledge about health from a traditional perspective to the younger generation. A digital story workshop series in Canada brought together intergenerational knowledge for sharing healthy lifestyles to promote awareness about diabetes, engaging with Elders during the process was described as a "great self-esteem builder" [28]. A comic book (illustrative storyline with pictures of characters) project used native storytelling to empower youth to make decisions about the cessation of tobacco use and participants found this to be engaging and educational — "[it was] fun and I learned a lot" [32]. Participants proposed that health programs should provide opportunities for participants "to talk in person" [33], for example, a smoking cessation program included talking circles with Elders in the community as they were viewed as a trusted and dependable source of support.

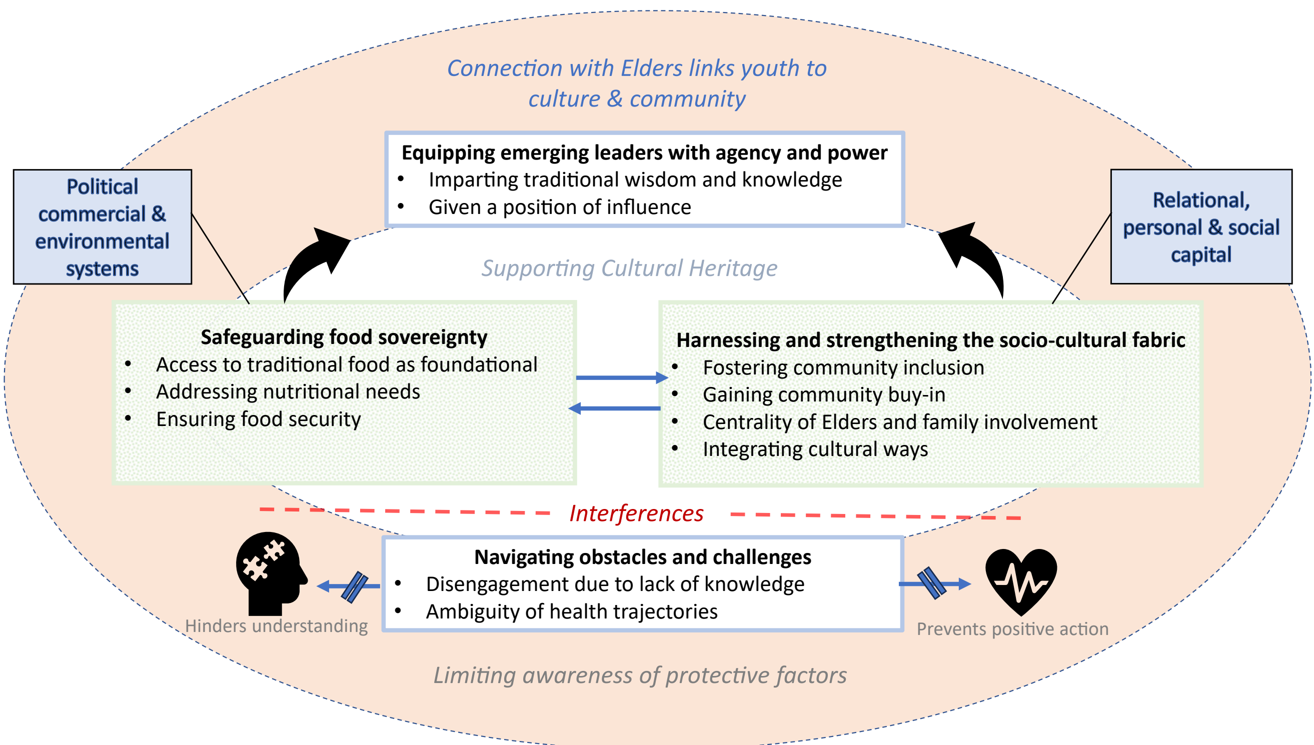

Figure 2. Thematic schema.

Given a position of influence. Youth-led health initiatives gave participants the chance to undertake leadership roles, which encouraged them to participate in initiatives to prevent chronic diseases. Having young people participate in the development, design, and implementation of health programs demonstrated that "young people can make a difference in their community" [32]. In the 'Celebrate Fitness' program, an initiative for everyday living to promote physical activity, tribal youth leaders were given the financial and creative freedom to design active living in communities. This opportunity "put us in the real world, with our own money and responsibilities" [26]. Youth leaders proposed a walking path program to respected Elders and senior advisers, who gave them positive feedback about their ideas. Another example was a program using digital stories, where youth selected health topics relevant to them and were given the opportunity to facilitate workshops which "gives Aboriginal youth a voice. It is a safe way to tell our stories" [28].

Harnessing and strengthening the sociocultural fabric

Fostering community inclusion. The "Rangatahi Tū Rangatira" a national health promotion program in Aotearoa New Zealand aimed to promote cultural and physical wellbeing in young people and their whānau (family). The delivery of the program involved collaboration and shared responsibility which strengthen social bonds, "…you get to meeting more people. You're not sent off on your own to try and work out how to play it, we do this together, we're a team, we're a community" [38]. In a health program for Native American youth in a gym, participants suggested, "we need an exercise physiologist at our gym, someone who's well versed in all kinds of illness and can work with people, devise exercise programs for them" [26] emphasizing the need for guidance and motivation from others. In a Canadian study, young people advocated for local cultural or sporting facilities to build social capital, strengthen community relationships and collective responsibility, saying "We need somewhere to go. More activities…for kids who do not attend school" [34].

Gaining community buy-in. Participants recognized that involving key members of the local community in health programs would promote interest and uptake, saying "if you can get the families with big influence interested, they'll spread the word" [26]. Native American youth participating in a "Celebrate Fitness" program sought approval from influential families, tribal council chairs and chiefs for their efforts. In a Canadian youth mentorship program in schools, the need for clear communication was highlighted in order to promote community investment. For example, "[if] we start talking about diabetes prevention in First Nations, Inuit, Métis children, people stand up and listen, but if you just say 'oh it's an after school program' they are just like 'oh yeah, whatever" [31].

Centrality of elders and family involvement. Participants believed families should be involved in program development to better engage young people. For example, participants thought parents should be involved in a Canadian school-based nutrition program to reinforce learning and provide shared accountability with their child – "[it] would be nice to have the parents more involved, so they can ask their kids when they get home "what did you eat today?" [30] In an American Indian school, participants involved in an edible school garden program for obesity prevention commented that it fostered positive connection with cultural traditions and valuable

interactions with Elders. Participants recognized “the Elders are counting on us” [27], and felt privileged to gain the knowledge passed down to them. Alaskan native youth participating in a tobacco cessation program believed parents had a role in encouraging them to meet their goals by fostering positive communication and empowering them to quit smoking, for example, “I would tell them I want to quit, my family would be proud of me and say congratulations” [33].

Integrating cultural ways. Embedding cultural practices in health promotion was pointed out as critical for information sharing. For example, when Canadian youth were creating digital stories of healthy lifestyles and connection to community they captured and preserved oral traditions using technology – “the new oral tradition is through digital means … it allows you to take history and adapt it to engage youth” [28]. Participants who worked with a Hiawatha National Forest ranger in Michigan to learn “How to break a trail with a firefighting method” [26], were integrating traditional land based practices, addressing fitness with active living, and were motivated to participate in this cultural revitalization approach. Upon listening to a pilot radio drama, Canadian Inuit youth preferred to hear an Elder narrate the health messages “because it’s more traditional” [36] and also to listen to cultural opinions in conversational style.

Navigating obstacles and challenges

Disengagement due to lack of knowledge. Young people explained they would lose motivation to participate in health programs if they did not receive adequate information or guidance. For example, youth participating in a gym based program felt overwhelmed – “…A lot of people don’t go to the gym because they don’t know what to do” [26], or “when I think of exercise, it’s kind of like push-ups and all that crap” [35]. When measuring the feasibility of a comic book project on health messaging a participant remarked, “Overall it was very intense, [there was] too much to absorb in a short time frame” [32], indicating that too many concepts were addressed in too little time.

Ambiguity of health trajectories. Some participants felt health messages were diluted and did not inform them about the risk and severity of chronic diseases, and others felt patronized by health programs that omitted such information – “… there needs to be like resources as such that show, right this is what’ll happen if you continue down this path… show them like the severe health problems and how much it, more or less, I guess will ruin your life” [37].

Discussion

In this systematic review we found that young Indigenous people believe chronic disease prevention programs should address their priorities related to food and nutrition, support their cultural heritage, involve family members and Elders, build capacity and leadership in their communities. Health programs tackling the prevention of chronic disease should include nutrition education and address access to nutritious and traditional food. They also valued programs that built cultural heritage through engagement with trusted Elders where knowledge transfer of cultural ways of knowing, understanding and doing were encouraged. They felt that programs should provide opportunities to empower young people in positions of leadership and enable the involvement of family members. In a few of the programs, Indigenous young people were not motivated to participate because the content seemed irrelevant or were not delivered in an appropriate way, emphasizing that health programs should provide suitable education about health risks and trajectories to foster engagement.

Some differences in perspectives were apparent based on the setting in which the health program was implemented either in school and nonschool settings. Participants who had participated in health programs in the school setting were enthusiastic about initiatives that created supportive environments, including scenarios for family and Elder involvement. They wanted to learn about traditional and nutritional foods, and sustainable approaches for accessing cultural foods such as community gardens. Participants in programs implemented in nonschool settings expressed the importance of youth empowerment through opportunities, for example, to be peer leaders in codesigning and implementing programs. However, in nonschool settings the focus was on strengthening community action and getting community buy-in from people with influence. These differences are likely to be attributable to the unique characteristics of each setting. Schools are vital to the social fabric of their local community, thus have a critical role in cultivating relationships with families and Elders to understand the preferences, values and beliefs of Indigenous youth. School settings provide opportunities for educational curricula and practicing Indigenous knowledge’s and cultural worldviews to meet [39]. Nonschool settings involve youth-led planning, which results in capacity building and leadership skills [26,40]. Recognizing the

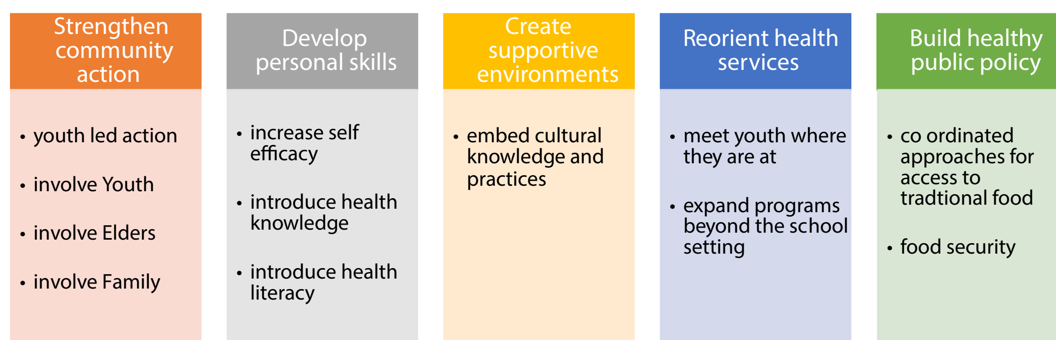

Figure 3. Recommended Indigenous youth health promotion actions.

cultural assets, experiences of colonization, contextual factors and ideology of the local community is essential for chronic disease prevention efforts. Customizing strategies to suit participant needs could enhance program efficacy.

Other studies conducted in Indigenous youth populations have also highlighted the importance of food sovereignty and enhancing knowledge and access to traditional foods to prevent the loss of culture and lifestyle-related chronic disease [41–43]. The recognition of the centrality of culture as fundamental to successful health initiatives has been documented [43,44], and that programs need to foster cultural practices including cocreation and Indigenous leadership and governance so the concept of wellness aligns with community beliefs [43,45,46]. Involving Indigenous youth as codesigners has been found to be particularly important for increasing commitment and target group acceptance of health programs [47,48].

This review involved Indigenous researchers across all stages of the study. We conducted a comprehensive search and used 2 frameworks to assess the reporting of the studies. Investigator triangulation ensured that our findings captured the full range and depth of data reported in the primary studies. However, we acknowledge some potential limitations. We only included articles published in English to avoid misinterpretation. The studies were conducted in high income countries with a similar colonial history with the majority of the studies (85%) conducted in North America. Of the included studies, one reported reaching data saturation. In addition, studies about programs outside of community settings which may include studies that address interactions with traditional healers and western health-care providers were beyond the scope of our review.

Some implications for Indigenous youth health promotion programs can be drawn from our findings (Figure 3). For example, programs ought to include the contribution of young Indigenous people in partnership by providing opportunities to develop leadership capability as underpinned by health promotion actions of the Ottawa Charter [49], which prioritizes community involvement, supportive environments, and the value of empowering individuals to improve public health outcomes. In addition, integrating the cultural practices of the community to strengthen cultural heritage such as focusing on involving Elders and relevant stakeholders and providing wisdom on traditional food sources and preparation methods. Though Indigenous youth tend to express confidence in receiving health education from community Elders, it would be beneficial to determine insights about interactions between youth and (both traditional and allopathic). Exploring these dynamics could deepen understanding on how these interactions influence trust and information dissemination that could further inform education and intervention strategies. We suggest including the priorities based on the cultural values and holistic view of well-being of Indigenous youth and recognizing the important influence of historical effects of colonization in the local specific community context and social determinants on health. The ‘Interplay Wellbeing Framework’ was designed to focus on the interconnected elements that influence individual and community wellbeing while working collaboratively with communities and government in priority areas such as community, culture, empowerment and education, health and employment, this framework could be applied whereby researchers collaborate with Indigenous youth to generate a holistic model [46].

There remains a paucity of evidence the acceptability of health interventions for the primary prevention of chronic disease in Indigenous youth [50]. The majority of qualitative studies conducted in this are tend to concentrate on the experience and perspectives of those living with chronic disease rather than addressing chronic disease prevention in Indigenous youth [51]. We recommend that conducting further studies on the perspectives of youth regarding programs delivered in settings beyond schools and communities could provide valuable insights. We suggest that further Implementation Research is required to codevelop, community-led health interventions that fosters greater involvement of Indigenous youth in the program planning and implementation and to evaluate the process and outcomes, including long-term health outcomes.

Indigenous young people desire traditional cultural ways to be incorporated into chronic disease prevention programs, plus opportunities for leadership and capacity building. A collaborative approach is valued where Indigenous youth and Elders can create supportive environments that strengthen community action and deliver health enhancing programs that are culturally relevant, engaging, and informative.

Declaration of Generative AI and AI-assisted Technologies in the Writing Process

During the preparation of this work the author(s) used CHAT & ASK AI in order to increase the readability. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

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Supplementary Data

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