

Interventions/programs improving mental health and wellbeing among Indigenous youth living in remote/rural areas: A scoping review of perspectives from Indigenous youth

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Abstract

Compared to the general population, Indigenous people experience disproportionate increases in mental health and addiction issues, particularly among Indigenous youth living in remote/rural areas. Despite urgent calls for support, Indigenous youth continue to face a lack of health services and support. The aim of this study was to review literature focused on interventions/programs on improving mental health and wellbeing in Indigenous youth living in remote/rural areas, through youth's perspectives. Five databases (Web of Science, Embase, CINAHL, the WHO Global Index Medicus, and Medline) were searched, and ten articles met inclusion criteria. Findings revealed several key themes: culture as treatment, storytelling as a powerful culture-based intervention, and Two-eyed Seeing approaches in terms of enhancing mental health and wellbeing among Indigenous youth.

Indigenization Statement

Hua Li is an ethnic minority woman, a mental health nurse, and a researcher at the University of Saskatchewan, Canada. Her research focuses on mental health and wellbeing in Indigenous and non-Indigenous peoples. Alana Glecia is a nehiyaw iskwew (Cree woman) from Flying Dust First Nation, Saskatchewan, and her research focuses on violence against Indigenous women, and mental health and substance use. Disproportionate risk and burdens of mental health and substance use issues among Indigenous people in Canada, especially Indigenous youth has been exacerbated by very limited availability and accessibility of culturally safe and appropriate mental health services, particularly in remote and northern regions. Li and Glecia have planned to conduct research on interventions aimed at improving mental health and wellbeing among Indigenous youth living in northern Saskatchewan. This literature review is part of the preparation for a larger research project.

Introduction

An estimated 476 million Indigenous people live around world, comprising 6% of the global population; yet they account for about 19% of those experiencing abject poverty (World Bank Group, 2023). Indigenous peoples also experience worse health and social outcomes, especially compared to their non-Indigenous counterparts (Anderson et al., 2016). Mental health and addiction (MHA) conditions continue to be a primary concern for many Indigenous peoples in Australia, New Zealand, Canada, and the United States (U.S.). Suicide rates are consistently two to five times higher among Indigenous people than non-Indigenous people (Griffiths et al., 2016; Hunter & Harvey, 2022). Despite disproportionately high marginalization, Indigenous people experience difficulty accessing MHA services, especially those who live in rural and remote regions (McIntyre et al., 2017). Remote and isolated reserves and rural communities have experienced limited access to MHA services and resources due to their location (Oosterveer & Young, 2015). Additionally, colonization and the resulting intergenerational trauma continue to have lasting impacts on Indigenous families (Wilk et al., 2017).

Experiences of trauma have significant implications for the mental health and wellbeing of youth, including increased susceptibility to mental health issues such as depression, anxiety, and substance use (Abraham et al., 2022). Rates of suicide are higher in Indigenous youth, and even higher for those living in remote and rural areas (Allen et al., 2021). For example, the rate of suicide death among Canadian Indigenous boys is four times higher than their non-Indigenous counterparts; on reserve, the rate is 10 times higher for boys (Kumar & Tjepkema, 2019). Among Canadian Indigenous girls between age of 10 and 19, suicide rates are 29.7 times higher than their non-Indigenous counterparts (Troian, 2018). Regarding substance use, binge drinking among Indigenous youth in the U.S. is up to five times higher than non-Indigenous youth

(Troian, 2018), while prevalence of alcohol and marijuana use among Canadian Indigenous youth living on reserve was 23.5% and 14.7%, respectively, which is much higher than urban youth (5.4% and 2.7%, respectively) (Lemstra et al., 2013).

Poor adolescent mental health and wellbeing can have long-lasting psychological and physical impacts (Allen et al., 2021). Development and implementation of programs and interventions (P&I) to support Indigenous youth living in remote/rural areas is crucial to improve their mental health and psychological wellbeing. There is limited research on P&I aiming to improve mental health and wellbeing among Indigenous youth, particularly in rural and remote places (RRP), and even less from the perspectives of Indigenous youth (Etter et al., 2019; Gaudet & Chilton, 2018). Neglecting to include perspectives from participants may leave policymakers with inadequate information on effective P&I design and implementation.

This review seeks to answer the questions: what are the wellbeing outcomes for Indigenous youth who have participated in P&I designed to improve mental health and wellbeing among youth in RRP, according to youth perspectives? In this pursuit, this research aims to identify gaps in knowledge and map essential practices in the development of mental wellness P&I for Indigenous youth in RRP. The findings of this literature review may provide valuable information to help establish innovative programs and improve existing interventions.

Methods

Search strategy and inclusion criteria

There were five databases searched: Web of Science, Embase, the Cumulative Index to Nursing and Allied Health Literature (CINAHL), the WHO Global Index Medicus, and Medline. Search terms included variations of the word 'Indigenous' (e.g., Māori, Inuit), "youth" (e.g.,

adolescent, teen), “interventions” (e.g., program; initiative), “mental health and/or wellness” (e.g., quality of life; well-being), and “RRP” (e.g., isolated, reserve, rural).

Inclusion criteria included peer-reviewed research articles focusing on Indigenous youths perspectives on the efficacy of mental health and wellness interventions meant to improve the wellbeing of Indigenous youth in RRP. Research including youth between ages of 10 and 19 were included. Other inclusion criteria included published in English between January 2004 and March 2025.

Screening and Selection

Titles and abstracts of articles fitting search criteria were reviewed and moved to the full-text review stage if relevant. Those fitting all criteria were selected for extraction. To ensure no relevant articles were missed, article reference lists were also searched, as well as literature reviews (i.e., scoping, systematic, etc.) found in the initial search.

Data extraction/synthesis of results

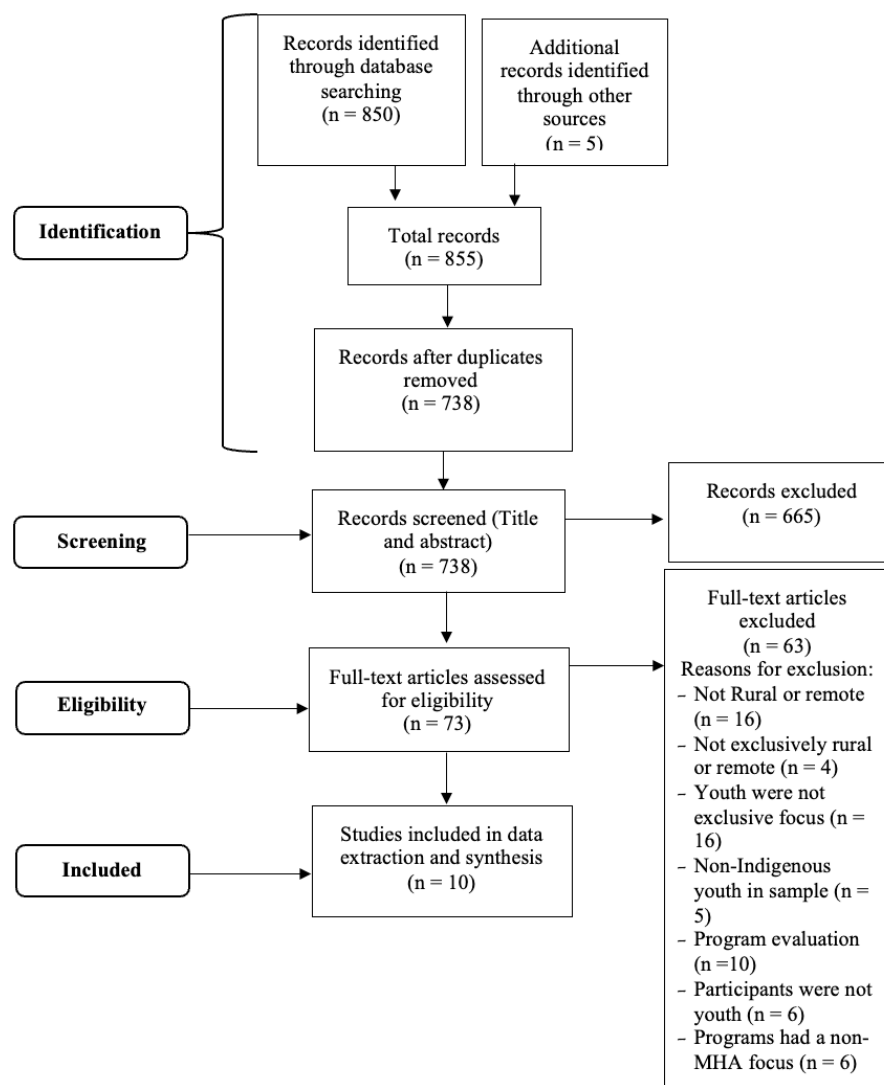
Each article was reviewed, and relevant information was extracted into a standardized table. Extracted data included: Authors (year), setting/country; study design; study aim; sample; intervention; and major findings. We utilized thematic analysis to synthesize and summarize findings. Authors reviewed articles, identified thematic categories, and discussed each theme and subtheme until they reached consensus.

Results

Study Selection

There were 850 articles found through five databases, and five articles found through other sources. Removing duplicates yielded 738 articles for title and abstracts screening; 73 articles were moved to full-text review. Full-text review revealed ten articles meeting inclusion criteria for data extraction. The selection process is detailed in Figure 1.

Figure 1: PRISMA flow diagram showing study selection process



Summary of Study Characteristics

Six studies were conducted in the U.S. (Allen et al., 2018; Barnett et al., 2020; Helm et al., 2015; Philip et al., 2022; Tosa et al., 2018; Wexler et al., 2013). The remaining articles were from Canada (Eskasoni et al., 2023; Lys, 2018; Ritchie et al., 2014; Victor et al., 2022). For the U.S. studies, four of the programs were in Alaska (Allen et al., 2018; Barnett et al., 2020; Philip et al., 2022; Wexler et al., 2013), one in a Hawaiian community (Helm et al., 2015), and one in the Pueblo of Jemez, New Mexico (Tosa et al., 2018). Of the Canadian studies, one was conducted in the Northwest Territories (NWT) (Lys, 2018), while Victor et al.'s (2022) study was situated in Woodland Cree First Nation, northern Saskatchewan. Ritchie et al.'s (2014) study was on the Wikwemikong Unceded Indian Reserve in northern Ontario; and Unama'ki, Nova Scotia, was the location for Eskasoni et al.'s (2023) study.

There were 767 youth between the ages of 10 and 19 who participated in the interventions. Across 10 studies, there were 185 male youth and 182 female youth. Two studies did not include information on participant gender (Eskasoni et al., 2023; Wexler et al., 2013). One study included female youth only (Lys, 2018). A summary of selected articles is presented in Table 1.

Table 1: Summary of selected articles

Authors (year), Setting, Country	Study Design	Study Aim	Sample	Intervention	Major Findings
Allen et al. (2018), U.S..	Cohort study	Effects of the Qungasvik Intervention for prevention of suicide and alcohol use	181 Yup'ik youth aged 12-17 years old	The <i>Qungasvik</i> intervention	<ul style="list-style-type: none"> Community 1 experienced a larger impact and significant growth over time on Reasons for Life ($d = .28, p < .05$) ($d = .43, p < .05$). In Community 2, peer effects grew ($d = .50, p < .01$).

Authors (year), Setting, Country	Study Design	Study Aim	Sample	Intervention	Major Findings
Barnett et al. (2020), U.S.	Pre-post test	Evaluate the efficacy of culture camps to increase wellness	111 Alaskan Native youth aged 13-18 years old	5-day culture camps	<ul style="list-style-type: none"> Significantly higher post-test I-PANAS-SF scores ($\eta^2 p = 0.24, p < .001$). Increased sense of belonging ($\eta^2 p = 0.06, p < .05$). Increased ability to cope with life stressors on the MMS self-subscale ($\eta^2 p = 0.07, p < .05$).
Eskasoni et al. (2023), Canada	Qualitative	Explore Two-eyed Seeing for youth wellness in Indigenous communities	Eight youth aged 14-18 years old	Data analysis workshop using community maps and body maps	Resilience resources required to support the youth <ul style="list-style-type: none"> Relational support Engagement with Indigenous heritage Holistic education
Helm et al. (2015), U.S.	Qualitative	Develop a native Hawaiian model of drug prevention	Ten rural Hawaiian youth, aged 12-18 years	Community-university participatory action; Photovoice	Hawaiian values, beliefs, practices, and ways of knowing are most important in the model of Native Hawaiian drug prevention.
Lys (2018), Canada	Qualitative	Explore strategies for coping and mental health support systems among female adolescents	41 female Indigenous adolescents aged 13-18 years	FOXY workshop; Birds and the Bees & Student-Led Sex ED; Question Box; Myth vs. Truth; Healthy Relationship Charades; Role Playing; Body Mapping	Five major interrelated themes emerged: Grounding through Nature; Strength through Indigenous Cultures; Connection to God and Christian Beliefs; Expression using the arts; Relationships and social supports
Philip et al. (2022), U.S.	Qualitative	Examine a dog-care mushing program aimed improving social and cultural capital	10 middle school youth, 5 high school students	The Frank Attla Youth and Sled Dog Care-Mushing Program (FAYSDP)	Youth reported gaining cultural, social and symbolic capital and shared what these forms of capital mean in their cultural context

Authors (year), Setting, Country	Study Design	Study Aim	Sample	Intervention	Major Findings
Ritchie et al. (2014), Canada	Mixed Method	Examine the impact of an outdoor leadership program on First Nations youth	73 Adolescents aged 12-18 years old	An Outdoor Adventure Leadership Experience (OALE); Sharing Circles; group discussions	Resilience scores increased significantly ($t(45) = -2.64, p = 0.011$) Small-to-medium improvements in mental health ($M = 3.57, ES = 0.40$), balance of emotion, and satisfaction with life were maintained up to 1-year post-intervention
Tosa et al. (2018), U.S.	Mixed Method	Effects of an intensive empowerment program on American Indigenous youth at risk for depression and substance abuse.	55 American Indigenous youth aged 13-17 years old and 5 parents	Quantitative and qualitative methods	Maximum exposure group experienced a significant positive effect on hope or motivational states pre/posttest ($t(12) = 3.650, p = .003$), improved coping ($M = 2.54, SD = .89$), and depressive symptoms ($M = .00, SD = .00$). There were two themes from parents' interviews: 1) Decision-making; 2) Self-expression
Victor et al. (2022), Canada	Qualitative	Explore how Indigenous youth view themselves, their homes, and the meaning of wholistic wellness	9 students aged 14-19 years old.	Photovoice project: voice recording and photo shoot	Four major themes emerged: 1) Belonging in a physical and social space; 2) Belonging to the land; 3) Being with spirit through kituskeenuw (land); 4) Foundations for healthy communities.
Wexler et al. (2013), U.S.	Qualitative	Describe a 3-year digital storytelling project that promotes positive growth and reasons for living in the Alaska Native youth.	432 Native Alaskan youth aged 10-18 years old	Digital Storytelling; Workshops	The digital stories circumvented stereotypes of 'native people' by allowing participants to share their lived experiences, communicating the strengths of their communities and strengthening their relationships.

Synthesis of results

Integration of Indigenous culture was a major component in all P&I among selected articles. We categorized findings into three themes: “culture as treatment”; storytelling as powerful culture-based intervention; and Two-eyed Seeing approaches.

“Culture as treatment”

The effects of intergenerational trauma, stemming from colonization (e.g., residential schools, the 60’s scoop) in Canada have had a profound adverse impact on the physical, mental, and social health, and emotional development in Indigenous people (Heart & Chase, 2016). A variety of strategies have been developed to address mental health and wellbeing among Indigenous people, one of which is “culture as treatment” (Gone, 2013), which offers great promise for healing from MHA conditions among Indigenous people (Walters et al., 2020).

Three quantitative studies (Allen et al., 2018; Barnett et al., 2020; Tosa et al., 2018) utilized Indigenous culture as the main component in their project. Working with three Yup’ik communities in southwest Alaska, U.S., a community-based participatory research (CBPR) project used a cultural engagement intervention. Titled *Qungasvik* – a Yup’ik word for ‘Toolbox’ – the intervention contained 26 modules meant to address and prevent suicide and risky alcohol use among Indigenous youth (Allen et al., 2018). The modules included a focus on individual characteristics (e.g., mastery via engaging with friends and family), family characteristics (e.g., cohesion, conflict), community characteristics (e.g., perceptions of support, opportunities), peer influences (e.g., discouraging substance use as protective factors), reflective processes (e.g., culturally specific negative consequences from drinking), and reasons for life (e.g., culture-specific beliefs and experiences that make life worthwhile). This non-randomized comparison cohort study with 181 participants (61 in community 1 and 120 in community 2) collected data at baseline and at 6 and 12 months post-intervention. Community 1 received the intensive intervention averaging 6.78 modules, while community 2 received a less intensive intervention, averaging 2.34 modules. Findings showed community 1 experienced greater impact on the reasons for life scale ($d = .28, p < .05$), but not the reflective processes scale post-

intervention, meaning the intervention resulted in greater protection from suicide risk, but not alcohol use risk. Compared with community 2, there was significant growth over time in community 1 when it came to reasons for life ($d = .43, p < .05$) and individual mastery ($d = .34, p < .05$), but not reflective process, family, and community levels. For community 2, peer influence grew ($d = .50, p < .01$), but not community and family. The findings indicate more intensive versions of the *Qungasvik* intervention yield significantly greater results compared to lower intensity interventions.

A community-based program in Pueblo of Jemez, New Mexico, U.S., aimed to reduce risk for substance use and depression symptoms while increasing hope, self-efficacy, and pro-social bonding among Indigenous youth through a tribally-driven youth empowerment program (Tosa et al., 2018). This quasi-experimental 55 participant intervention had four major elements: sport activity, Indigenized behavioural-cognitive lessons, cultural mentoring via a tribal research team, and community-based action addressing youth-identified community issues. Both intervention and control groups completed pre-intervention surveys, and immediate post-intervention surveys within one month of the last activity. The intervention group was divided into maximum exposure (i.e., attended 85-100% of the interventions), and minimum exposure (i.e., participated in meetings but not activities; or participated in 2 or less than 2 activities). It was found the maximum exposure group had a significant positive effect on hope or motivational states after intervention ($t(12) = 3.650, p = .003$), while pre/post-tests for other groups were non-significant on the same item. For ANOVA post-hoc tests, compared with the control group ($M = 3.5, SD = 1.2; M = .44, SD = .51$), the maximum exposure group had significantly improved coping ($M = 2.54, SD = .89$), and improved depressive symptoms ($M = .00, SD = .00$), respectively, but no significant difference between maximum and minimum exposure in both

items, which suggests maximum exposure had a significant impact on improved depression symptoms and behavioural disengagement.

Barnett et al. (2020) evaluated the outcomes of culture camps aiming to improve Alaska Native youth wellness and prevent suicide. The 5-day culture camps were developed in two remote regions of Alaska, which provided opportunities for Alaskan Native youth to take part in different activities, learn traditional knowledge and values, and develop new relationships and life skills. The pre/posttests evaluation of 111 participants included evaluations of self-esteem, belongingness, emotional states, mattering to others, and coping skills. Findings showed that after youth participated in the culture camps, they showed significantly improved positive moods ($\eta^2p = 0.24, p < .001$), increased sense of belongingness ($\eta^2p = 0.06, p < .05$), and increased ability to cope with life stressors ($\eta^2p = 0.07, p < .05$).

Philip et al. (2022) explored the effect of the Frank Attla Youth and Sled Dog Care-Mushing Program (FAYSDP) on 15 Alaskan Native youths' cultural and social capital through photovoice and digital storytelling methods. Dog-mushing and handling had a long history in the Huslian community under study, originally used for survival but later used for trapping and dog racing. Their work found the program meant a lot for the youth because it was such a large part of their community's culture, and participating helped connect them to their community, both past and present. Cultural traditions were taught in the context of the program, as elders, mushers, and other community members taught the youth about their history and the role dogs played. Ultimately, the program improved youth wellness, with youth reporting a greater connection to their culture and communities, a sense of pride and accomplishment, and improved discipline and resilience.

Storytelling as a powerful culture-based intervention

Storytelling is a practice in Indigenous cultures that nurtures relationships, passes on knowledge, brings community together, and validates experiences of Indigenous peoples (Fernandez-Llamazares & Cabeza, 2018). There are many different forms of contemporary storytelling including visual media (e.g., painting, video, and photography) to showcase environment, cultural practices, and spiritual connections to the world, which helps individuals express themselves both nonverbally and verbally (Lys, 2018). In this review, there are six studies using storytelling to improve Indigenous youth's wellbeing.

Using photovoice, Helm et al. (2015) conducted a community-university participatory action research project to develop a Native Hawaiian model of drug prevention. A total of 10 youth participated in training, which included discussions of substance use and drug prevention, as well as Hawaiian culture and wellness. They also participated in eight Photovoice focus groups, which established the SHOWED technique: see, happening, our, why, empower, and do, through which the youth could describe what they saw in their photos, verbalize what was happening when the photo was taken, how it affected them, why an issue had arisen, to discuss empowerment, and what kind of social action to take. Several themes emerged: a model of Native Hawaiian drug prevention should include Hawaiian values, beliefs, practices, and ways of knowing; includes talking to Elders to find inspiration and guidance about Native Hawaiian values; relies on identifying strengths and resources in the community and resolving conflict in family based on Hawaiian epistemology.

Victor et al. (2022) also used photovoice to represent positive elements of day-to-day living and share parts of identity-forming lifeworlds among high school students in Woodland Cree First Nation, located in remote and northern Saskatchewan, Canada. The students registered

in a credited course, which was required to complete all course activities for an educational credit. Students were required to complete the photovoice assignment within one week and could choose one of two topics: 'A Sense of Place' or 'A Good Life'. The study included mini-individual interviews, focus groups, and a member-checking session where youth reviewed the researchers' analysis. A total of nine youth participated, and all took photos within their home communities and traditional lands. The study revealed themes focused on sense of belonging, and connection/interconnection within their home space: (1) home was a place youth belonged and was developed through spending time with friends and family or playing team sports; (2) the land represented self-determination and fostered a connection between food and family; (3) being with spirit through *kituskeenuw* (land). The land connected the spiritual and physical self; the land was timeless and demonstrated deep strength and resilience ; and (4) recognition of the strength of youth was essential to building healthy communities.

Using digital storytelling, Wexler et al. (2013) conducted a three-year suicide prevention project that focused on reasons for living among youth in Northwest Alaska, U.S. Employing a positive youth development framework, the project promoted protective factors in the lives of Alaskan Native youth. A total of 432 Native Alaskan youth participated in digital storytelling workshops and produced 566 digital stories, which served as digital 'hope kits' for the youth by identifying and highlighting personal assets, building confidence and self-esteem, and reminding the youth of their personal strengths and their reasons for living. The study found that (1) the workshops gave the youth an opportunity to focus on the positive aspects of their lives, good memories, and personal attributes; (2) finding old photos and videos to integrate into the workshops was an affirmative process for many, allowing them to reflect on their lives and what was important; (3) the project strengthened their relationship with others and encouraged a

reciprocal relationship; (4) a sense of mastery and achievement was reported by the youth, as learning new skills in digital expression provided a sense of accomplishment and opened up more possibilities; and (5) the digital stories circumvented stereotypes about “Native people” by allowing the youth to platform their lived experiences and communicate the strengths of the their communities with non-Natives.

Philip et al. (2022) used both digital storytelling and photovoice in their study focused on the effect of the FAYSDP dog mushing program for youth in their rural community. First, the research team conducted a photovoice training session, after which youth took photos and shared their photos and what the program meant to them. After the photovoice portion, youth attended a digital storytelling session where they created scripts and storyboards for a 3-minute digital story. For these two methods, Philip et al. (2022) utilized a deductive coding approach, developing thematic categories based around two groups: Athabascan Cultural Values and Cultural Capital, which derived from Athabascan cultural values centered around family, community, and personal values/cultural values. The second group of themes, Cultural Capital, were centered around the youth social capital framework developed by Schaefer-McDaniel, which itself was based on Bourdieu’s capital theory. These codes were cultural capital, social capital, all forms of capital, and benefits for health and wellness.

Eskasoni et al. (2023) conducted research on Spaces & Places (S&P), a qualitative participatory action research study through which they partnered with community-based mental health service providers and youth in the community. In this study, eight Indigenous youth took photographs and videos over seven days, focusing on the relational spaces and physical places around them where they felt they did and did not belong. Additional individual interviews and a focus group were conducted regarding their photographs and videos. The youth also participated

in a data analysis workshop, where the youth used facilitation tools including community maps and body maps to aid data analysis. Themes developed included (1) what a happy and healthy young person looked like: reflecting through elements of wellbeing; (2) resilience resources: found in relational support, engagement with Indigenous heritage, holistic education, and reflection on these three elements; and (3) resilience processes: interconnected resilience-promoting resources can have an impact on the youth's positive psychosocial outcomes.

Body mapping was utilized in the study by Lys (2018) to explore self-identified strategies to cope with mental health issues among 41 female youth in NWT, Canada. The youth from six NWT communities participated in FOXY (Fostering Open eXpression among Youth) body mapping workshops. Post workshop, there were in-depth semi-structured interviews relating to the content of their body maps. The FOXY intervention workshops employ visual and performance arts to facilitate education and discussion on the impact of trauma and mental health issues including depression, self-harm, suicide, and substance use. It also centered coping strategies, help-seeking behaviours, and enhancing individual resiliency. The study found five themes related to coping from youth: (1) grounding through nature. Nature represented a source of interpersonal strength and resilience, acting as a refuge from societal negativity; (2) Gaining strength through Indigenous cultures. Indigenous culture represented a core component of who they were, and a coping mechanism; (3) connection to God and Christian beliefs. It provided feelings of safety and strength; (4) expression via arts. Youth see art as a therapeutic tool connecting them to their inner strength, helping with feeling empowered, and inspiring confidence; and (5) relationships and social supports to help youths make healthy decision and improve mental health.

Two-eyed Seeing approach

Only one study (Eskasoni et al., 2023) explicitly indicated using the Two-eyed Seeing framework, meaning viewing the world through an Indigenous lens with one ‘eye’, while the other ‘eye’ sees through a Western lens, bringing together both Indigenous and Western knowledge (Bartlett et al., 2012). However, nearly all reviewed articles utilized components of the Two-eyed Seeing approach, either working with a planning group comprised of Indigenous members of the community in which they conducted research (Helm et al., 2015; Philip et al., 2022; Tosa et al., 2018), consulting with a relevant Indigenous ethical body (Eskasoni et al., 2023; Ritchie et al., 2014), or working with relevant tribal authorities (Allen et al., 2018; Ritchie et al., 2014).

Using a community-based participatory framework, Allen et al. (2018) collaborated with advisory members from the local community to develop 26 intervention modules adhering to Yup’ik cultural protocols. In Eskasoni et al.’s (2023) study, Western-informed resources (including education, welfare, and health and mental wellness) were delivered in ways deferring to traditional cultural values, practices, and teachings by local service providers. The tribally driven youth empowerment program (Tosa et al., 2018) was directed by the Tribal Research Team, which included tribal members who were teachers and role models in the community. They ensured the research honoured community governance, enhanced community strengths and resources, and met community needs. The research adapted traditional Indigenous techniques to collect data (e.g., different forms of storytelling), as well as Western methods, such as semi-structured interviews and focus groups (Eskasoni et al., 2023; Helm et al., 2015; Lys, 2018; Victor et al., 2022; Wexler et al., 2013).

Three research projects had an Indigenous advisory committee that provided cultural context and guidance throughout the research process (Eskasoni et al., 2023; Ritchie et al., 2014) and included study participants of Indigenous youth (Eskasoni et al., 2023) and the tribal research team (Tosa et al., 2018) in data analysis and interpretation.

Finally, two research project combined Indigenous ontological knowledge with western theoretical methodologies. Philip et al. (2022) applied both Indigenous knowledge and Western scientific knowledge in their deductive coding framework, deriving codes from Schaefer-McDaniels' youth social capital framework (inspired by Bourdieu's capital theory) with codes inferred from the 1985 Denakkanaaga Elders Conference, which created a set of Athabaskan Cultural Values through which codes were created. Ritchie et al. (2014) further exemplified Two-eyed seeing in their methodology, utilizing the Indigenous medicine wheel in tandem with the Outward-Bound Process Model to gauge the efficacy of the Outdoor Adventure Leadership Experience (OALE) on the well-being and resilience of Indigenous youth from the Wikwemikong Unceded Indian Reserve. The OALE is a wilderness program lasting 10-days, in which 73 Indigenous youth participated in a canoe expedition where they learned leadership skills, navigated natural challenges, and participated in discussion groups and talking circles. Ritchie et al. (2014) found that the OALE program significantly improved resilience and mental health over the short-term including improved on the resilience scales ($t(45)=-2.64, p = 0.011$). However, these improvements were not maintained one-year post-intervention, with some participants citing recent fatalities in the community, life stressors (e.g., school), and substance use. Overall, participants felt the intervention inspired personal growth and independence.

Discussion

This scoping review aimed to identify and describe what is known about interventions and programs focusing on mental health and wellbeing among Indigenous youth living in remote/rural areas, and the outcomes of these interventions and programs, particularly from youth's perspectives. The findings revealed several themes: "culture as treatment", storytelling as a powerful culture-based intervention, and a Two-eyed Seeing approach.

Identity and cultural identity

While synthesizing the findings of Indigenous culture-focused interventions/programs in the review, identity and cultural identity were highlighted as important components in the culture-based interventions meant to improve wellbeing among Indigenous youth living in remote and rural areas, particularly from youth's perspectives.

Identity development during adolescence has a profound impact on psychological wellbeing (Crocetti, 2018; Mercer et al., 2017). Identity formation struggles in adolescents have been discussed in Erikson's work as identity integration vs. identity diffusion (Erikson, 1963; Erikson, 1968). Establishing an integrated sense of self into a coherent and continuous 'whole' has been associated with greater self-esteem, self-efficacy, better social relationships, and meaning in life (Goth et al., 2012). In contrast, identity diffusion (i.e., lack of ability to commit to goals, values or relationships, and a sense of incoherence of self) has been linked to anxiety, depression, risky behaviours, and overall poorer wellbeing (Schwartz et al., 2015).

Childhood trauma has been suggested to negatively impact identity development (Berman, 2016; Penner et al., 2019). In Penner et al.'s (2019) study, childhood maltreatment and abuse (including emotional and sexual abuse), and physical and emotional neglect have been

significantly associated with identity diffusion, and/or a higher risk for difficulties in identity development. Childhood trauma may lead to adolescents experiencing negative perceptions of self or the future, self-blame, feelings of detachment, or major disruptions in social relationships, all of which may adversely affect identity formation (Scott et al., 2014).

Indigenous people must also contend with intergeneration trauma. Intergenerational trauma for Indigenous people often stems from colonization, which endeavored to suppress and undermine Indigenous cultural identity through genocidal tactics such as residential schools, the 60's scoop, the pass system, and many others (Ross, 1996). These practices have resulted in serious trauma (Ross, 1996), which has manifested in feeling of shame and hopelessness being passed through generations (Dutton & Painter, 1981). When people feel shame, they may demonstrate an array of maladaptive attributes and behaviors, including mental health and addiction issues, high risk behaviors, emotional numbness, loss of trust and faith, inability to accept support, and survivor guilt (Dayton, 2000). One of the most significant impacts of intergenerational trauma for Indigenous families is the elevated rates of family violence (Scrim, 2010), which can have adverse effects on identity development among Indigenous adolescents.

Supporting individual identity development is an important aspect to include in interventions for improving mental health and wellbeing in Indigenous youth. Loss of identity is a result of the attempted cultural genocide of Indigenous people, causing great cultural disruption, cultural identity loss and confusion, and reduced wellbeing (Cherubini, 2008). Cultural identity is defined as attachment to a cultural group, in which values and beliefs are shared, and where members engage in cultural practices and fulfill cultural obligations (Schwartz et al., 2008). Positive cultural identity has been linked with a sense of belonging, self-worth, purpose, strong connections, and social support (Berry, 1994). Research conducted among

Indigenous and non-Indigenous peoples has shown maintaining a strong cultural identity and/or engaging in cultural activities enhances self-esteem, resilience, coping skills, and improves mental health and wellbeing (Dockery, 2010; Fleming & Ledogar, 2008; Hughes et al., 2015). Gray and Cote (2019) suggest cultural connectedness may protect against the effects of intergenerational trauma on the mental health of young Indigenous persons.

All selected articles of this review have a strong emphasis on Indigenous culture, which was integrated into their respective interventions and programs. Indigenous youth who participated in P&I with activities focusing on Indigenous culture, values, beliefs, and practices experienced a more positive cultural identity and enhanced individual identity. This often meant increased feeling of belonging, empowerment, social support, bolstered connection to the land and community, greater sense of purpose and reasons for living, enhanced hope and motivation, better coping skills, and improved self-esteem, confidence, and mental health. Many youth expressed Indigenous culture as a core component of who they were, representing a connection to others and serving as coping mechanism. Therefore, to improve mental health and wellbeing among Indigenous youth living in RRP, P&I should endeavour to connect youth with their Indigenous culture, providing opportunities for cultural immersion and bolstering cultural resources so youth may further develop their positive cultural identity and strengthen cultural connections.

Two-eyed Seeing Approaches

In contrast to Western biomedical approaches, CBPR emphasizes collaborating with Indigenous communities as full and equal partners in all phases of research (Kwiatkowski, 2011). The Two-eyed Seeing approach has gained popularity in research focused on Indigenous people, as it is shown to promote Indigenous peoples' health and wellbeing (Roher et al., 2021).

A relatively recent literature review on the application of Two-eyed Seeing approaches in health-related research revealed several key findings (Jeffery et al., 2021). First, when collaborating with Indigenous communities, principles for study design and procedures are discussed and interpreted among members of the research team and Indigenous community members. Furthermore, the research must forefront the four Rs: respect, relevance, reciprocity, and responsibility, all of which are viewed as essential guiding principles (Kirkness & Barndhardt, 1991). Respect entails creating a research environment which equally empowers both Indigenous and Western views; Relevance means focus on the priorities of the community; Reciprocity means outcomes benefit both the Indigenous community and the research group; and Responsibility entails that Indigenous perspectives and rights to self-determination are respected and supported (Kirkness & Barndhardt, 1991). Second, building trusting relationships and respecting Indigenous knowledge is critical to establishing successful partnerships (Marr et al., 2011). Third, from the beginning and throughout, community guidance is necessary to provide cultural context and ensure true collaboration between the research team and the community. Fourth, Indigenous traditional techniques should be used to gather knowledge, and research must include practices such as sharing circles; this can be in addition to semi-structured interviews, a Western data collection method. Fifth, the Indigenous community participates in data analysis and is guided by Elders and/or an Indigenous advisory committee. Finally, study findings are to be disseminated in a meaningful way, meaning in ways tangibly benefitting the community, as well as appropriately representing them.

Research projects collaborating with Indigenous communities have shown promise in improving Indigenous youth mental health and wellbeing, including the studies selected for this review.

Limitations

There are several limitations to this review. First, limited studies met the inclusion criteria (ten selected articles). Second, the ten reviewed interventions were conducted in the U.S. (six articles) and Canada (four articles). Third, this review only included peer-reviewed articles in English. Therefore, the findings of the review must be generalized with caution due to the limitations.

Implications

The findings of this review have important implications for policy and practice. Many of the articles in the review included some form of community advisory committee in the development and implementation of the wellness programs for youth, with the committee guiding the research from inception to completion (Allen et al., 2018; Helm et al., 2015; Philip et al., 2022; Ritchie et al., 2014; Tosa et al., 2018) or sought ethics approval from tribal authorities or Indigenous ethical bodies (Eskasoni et al., 2023). This supports the notion that, for P&I aiming to improve mental health and wellbeing among Indigenous youth to be successful, the community must be involved in the design and implementation in order to be culturally valid and truly decolonial in nature (Thambinathan & Kinsella, 2021; Walters et al., 2020).

Nearly all the included studies utilized land-based education and cultural connection within their interventions and programs. Historically, western expansion relied on colonial tactics (such as residential school in Canada, Australia's stolen generation) which aimed to remove children from their families, their homelands, and ultimately, their culture (Asamoah, 2021). It makes sense, then, that any intervention focused on improving Indigenous health must further facilitate this connection with the land and culture.

Future Directions for Research

This manuscript joins calls for increased MHA service delivery to populations with disproportionate access to services, specifically Indigenous youth living in RRP. Many of the included manuscripts utilized existing resources (such as access to the land and cultural teachings) because there were little other resources available in the rural and remote settings in which the programs were conducted (Barnett et al., 2020; Eskasoni et al., 2023). Future research should focus on the development and implementation of interventions or policies meant to address this inequitable access to delivery among Indigenous populations in RRP.

Many of the included studies boasted positive short-term effects of interventions on the mental health and wellbeing of the Indigenous youth who participated. However, all but one failed to include whether these effects were maintained long-term or did not include long-term measures of wellness and mental health in the study design. Future research should incorporate long-term measures of success of P&I aimed at improving mental health among Indigenous youth in RRP.

Conclusion

This scoping review focused on peer-reviewed research of P&I aiming to improve mental health and wellbeing among Indigenous youth living in RRP. The findings revealed all P&I have an emphasis on Indigenous culture as treatment, and utilization of the Two-eyed Seeing framework or some components of the Two-eyed Seeing approach. Youth reported improved mental health and wellbeing after participating in the interventions/programs, especially a greater connection to positive cultural identity. The outcomes of this review showed that bolstering

culturally based and appropriate interventions/programs is critical to enhancing mental health and wellness among Indigenous youth living in remote/rural areas.

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