



Creating a safe space for First Nations youth to share their pain

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Abstract

Introduction: Indigenous children and youth may be quiet about the way they express their pain and hurt which is in contrast to how health professionals are trained to assess it.

Objectives: The aim was to understand how youth from 4 First Nation communities express pain using narratives and art-based methods to inform culturally appropriate assessment and treatment.

Methods: This qualitative investigation used a community-based participatory action methodology to recruit 42 youth between 8 and 17 years of age to share their perspectives of pain using ethnographic techniques including a Talking Circle followed by a painting workshop. Physical pain perspectives were prominent in circle conversations, but emotional pain, overlapping with physical, mental, and spiritual pain perspectives, was more evident through paintings. Art themes include causes of pain and coping strategies, providing a view into the pain and hurt youth may experience. Youth were more comfortable expressing emotional and mental pain through their artwork, not sharing verbally in conversation.

Results: Circle sessions and artwork data were themed using the Indigenous Medicine Wheel. Content of the circle conversations centered on physical pain, whereas paintings depicted mainly emotional pain (eg, crying or loneliness; 74% n = 31) with some overlap with physical pain (eg, injuries; 54%), mental pain (eg, coping strategies; 31%), and spiritual pain (eg, cultural symbols; 30%). Common threads included hiding pain, resilience, tribal consciousness, persistent pain, and loneliness.

Conclusion: Once a safe space was created for First Nation youth, they provided a complex, culturally based understanding of the pain and coping experience from both an individual and community perspective. These engaging, culturally sensitive research methods provide direction for health providers regarding the importance of creating a safe space for young people to share their perspectives.

Keywords: Indigenous, Youth, Pain, Innovation, Art, Cultural safety

1. Introduction

The term *Indigenous* or *Aboriginal* is an inclusive term, referring to First Nations, Inuit and Métis people. Each of these groups has unique histories, cultural traditions, languages and beliefs.⁴⁵ The

term *Indigenous* is an internationally recognized term and is our preferred terminology. Indigenous children are the fastest growing cohort in Canada, yet they have the most profound health conditions interfering with their optimal healthy development. All dimensions of hurt and distress (mental, physical, spiritual and emotional) are more prevalent for Indigenous children and youth, and can interfere with all aspects of development.^{19,28,39,70} Indigenous children have a higher prevalence of chronic disease-related pain and dental pain and are less likely than non-Indigenous children to be treated for it.^{46,47,52,58} The First Nations Regional Health Survey (FNRHS²⁸) indicated that youth with at least one physical health condition also reported depression, anxiety and suicidal ideation. Community-level data from one First Nation community in Atlantic Canada demonstrated that 58% of surveyed youth reported “levels of psychological distress that are indicative of a serious mental health problem.” (ACCESS Open Minds Eskasoni, 2018. Unpublished data).

Canada’s history with Indigenous people is marred with forced assimilation efforts, colonization, and countless forms of abuse. The Truth and Reconciliation Commission⁶⁷ documented narratives of children in the Indian Residential “schools” who were physically, sexually, emotionally, and spiritually abused. There are

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an estimated 80,000 people alive today who experienced these forced assimilation efforts. According to the Legacy of Hope Foundation,⁴⁸ all Indigenous people living in Canada were exposed to either the reality or the threat of residential schools between 1930 and 1996, with an estimated 180,000 Indigenous children taken from their homes and placed in the schools. This was an estimated 75% of the Indigenous child population of Canada.⁹

Indigenous scholars have proposed that the concept of *historical trauma*^{12,13} highlights the idea that the accumulation of collective stressors and trauma that began in the past may contribute to increased risk of negative health and social outcomes among contemporary Indigenous peoples.⁶⁸ The legacy of abuse and suffering endured has been linked to higher rates of suicide, depression, addictive behaviours, stress, and subsequent maladaptive coping strategies that have been identified to pass from generation to generation.^{9,10} It is believed that psychological or emotional trauma can predispose individuals to disability, substance abuse, and other adverse outcomes associated with untreated pain, whether nociceptive (tissue damage), nociplastic, neuropathic (nerve damage), or a combination. For instance, the International Association for the Study of Pain defines nociplastic pain as “pain that arises from altered nociception despite no clear evidence of actual or threatened tissue damage causing the activation of peripheral nociceptors or evidence for disease or lesion of the somatosensory system causing the pain.”³⁷ Indigenous peoples’ experiences of historical trauma, coupled with contemporary hurt and suffering, is believed to manifest as chronic pain, including mental and physical pain and overwhelming issues related to addiction. Among the many examples of health impacts, in a recent report from Alberta, Canada, First Nations people were reported to be twice as likely to be prescribed, and 3 times more likely to die from, opioids.³ The individual experiences of First Nations people impact communities, likely resulting in untreated pain at epidemic levels.

For Indigenous peoples, the increased risk to experience chronic pain is catalyzed by historical trauma that resulted in intergenerational cycles of poor health and social outcomes. Addressing these widespread problems requires unique and culturally specific approaches to healing.^{8–10} Unfortunately, the intergenerational cycles are being perpetuated by a lack of access to culturally safe services within mainstream health care.⁴ The Health Council of Canada’s landmark document “Empathy Dignity and Respect: Creating Cultural Safety for Indigenous People in Urban Health Care” reported that Indigenous people feel fearful, disrespected, and are reluctant to seek care in the Canadian health care system.³¹ This is problematic because of the high rates of all types of pain conditions^{28,46} coupled with reports of Indigenous people seeking their chronic pain care in the emergency department¹⁴ and feeling unwelcome and unheard in mainstream health care settings.^{31,45}

Community-led research has shown that First Nations children and youth express pain differently and are socialized to “be brave” and “hold in” their pain rather than overtly expressing their pain (eg, crying and grimacing), cues typically used in Western-based pain assessment tools.⁴⁵ Elders explained that children and youth “were taught by their own parents to be tough and learned as children to take the hurt inflicted in residential schools.” (Ref. 45, p. E135). Further evidence has demonstrated racial disparities in pain assessment^{21,34} and treatment,^{29,34,55} with evidence suggesting that health clinicians appraise pain with lower intensity for patients with different ethnic characteristics than their own.^{5,17} Individual self-reports and documented health utilization data⁴⁶ reveal that First Nations community members, including youth, make repeated

trips for the same health issues and are referred less often for specialized health treatment from chronic pain conditions.⁴⁶ These circumstances may lead to underassessment, lack of treatment, and consequently chronic untreated pain conditions that impede the optimal spiritual, mental, physical, and emotional health development as a people.

Given this context of health care delivery and the vulnerability of youth experiencing pain, the purpose of this research was to understand how First Nation youth from 4 communities express, illustrate, and manage their pain using culturally relevant, knowledge-seeking methods such as the Talking Circle and art-making. The results presented in this article are part of a larger study.

2. Methods

2.1. Design

This investigation used a community-based participatory action methodology with ethnographic techniques⁵⁹; a circle-based focus group (Talking Circle), followed by an art workshop. Two-Eyed Seeing, which brings together different ways of knowing, Indigenous and non-Indigenous,³⁸ guided this research. Two-Eyed Seeing is a co-learning and integrative process that provided the study with a counterbalancing process to purposely and conscientiously include Indigenous perspectives during all stages of the research. It is an attestation of co-learning and co-leadership in research. In this study, Two-Eyed Seeing is the foundation of the method, data collection and analysis and knowledge translation, allowing for consideration of different perspectives that are believed to complement the knowledge and outcomes being sought; taken together, this leads to a comprehensive and relevant understanding of the issue.

2.2. Setting and sample recruitment

The study was conducted in 4 Maritime First Nation communities in the Mi’kmaq and Wolastoqey regions (3 Mi’kmaq and 1 Wolastoq) with populations ranging from 450 to 4500 community members. The Maritime region of Canada refers to the provinces of Nova Scotia, New Brunswick, and Prince Edward Island. The communities are located within 100 to 500 km from the region’s tertiary pediatric health centre located in Halifax, Nova Scotia. A collaborative relationship between community Elders, Community Health directorate, health centre staff, members of each community and the clinical research team was established to facilitate the research. A convenience sample using word-of-mouth and signs placed in the schools and health centres was used to recruit the youth (8–17 years of age) living in each community. There were no exclusion criteria; all those who chose to participate and were available on the workshop date were included. Participants were provided with a gift card to acknowledge their participation.

2.3. Procedure and methods

Ethics approval was granted from 2 provincial Indigenous ethics boards and the affiliated pediatric health centre. In addition, approval was granted from each of the 4 participating Community Health Boards that are represented by Elders, band council members, and health staff. A formal consent form was used and explained to all participants and their legal guardian(s) before commencing the knowledge gathering and data collection process. A half-day workshop took place in each of the

communities, lasting 4 to 6 hours and included healthy snacks for the youth. To ensure the creation of safe spaces, community health workers (ie, nurse, social worker) were in attendance at each session to support youth in the event they felt distressed. Workshop sessions were conducted in English and were audio and video recorded. With consent from the participating youth and parents/guardians, a First Nation cinematographer captured film footage of the workshops for knowledge translation purposes. Each session began with a Talking Circle^{40,54,66} and was followed by an art workshop.

2.4. Data collection and analysis

Three forms of data were collected and analyzed: (1) demographic surveys; (2) Talking Circle narrative transcripts; and (3) completed artwork and accompanying video narrative explaining their art (if provided by youth).

2.4.1. Demographics

The demographic survey gathered participant information pertaining to age, sex, cultural identity, frequency of missed school due to pain and pain condition history. Open- and closed-ended questions such as “place an ‘x’ if you have aches or hurt from the body parts below” with common examples provided such as “earaches, headaches, and toothaches,” as well as “What are the things that cause your pain or hurt?” and “What do you do to manage your pain or hurt?” were included. Demographic data were analyzed using SPSS Version 17.0.⁶²

2.4.2. Talking Circles

Talking Circles were used to gather youth narratives regarding their pain expression, management and experiences. In the Indigenous culture, circles have a powerful influence on health and healing. This format has been used to teach culture and traditions¹⁵ for advancing health education and promotion,^{32,33,64} as well as a method for research.^{54,66} The strong symbolism of the circle means no beginning and with no one person in a position of power, so members can speak honestly in a safe space.

To create a safe cultural space for youth, the Talking Circles were held in familiar locations in each of the 4 communities, such as high schools and cultural centres. Talking Circle guidelines used were: only one person speaks at a time, speak from the heart, listen respectfully, and what is said in the circle stays in the circle, with the understanding that collectively the knowledge would be shared as part of this study. To start, 2 team members (J.R.S. and M.L.) introduced the facilitator/artist (A.S.), and the study aim and process were reviewed. J.R.S. and M.L. then removed themselves from the group leaving the artist to begin the Circle with the youth. The artist shared with the youth that the purpose of the art-making was to paint their perspectives of pain so health clinicians could learn how Indigenous people experience it, stating *“I am here today because I am part of team who are interested to know about your experiences with pain and hurt and ways you cope and access help. We want to get some ideas from you about how someone would know if you (or other Indigenous children and youth) were in pain so we can help health professionals know how to help. Does anyone have a story to share about a pain experience?”* The artist facilitator used open-ended questions to establish trust and told stories of his past pain and hurt experiences to allow the children/youth to feel comfortable telling their own stories. The Circle lasted between 45 and 60

minutes and then the artist invited youth to the art-making setting. Talking Circle sessions were transcribed verbatim for analysis.

Each session was analyzed using thematic analysis¹¹ by 2 investigators. Thematic analysis is considered a foundational approach that draws on different epistemologies to identify, analyze, organize and report themes. Braun and Clarke’s 6-phase method¹¹ was used and involves an iterative and reflective approach moving back and forth in the data to identify and organize the themes. Lincoln and Guba’s⁴⁹ trustworthiness criteria were used to establish rigour, including credibility and confirmability. Credibility was established by data triangulation, prolonged engagement with participants and member checking.

2.4.3. Artwork/art narratives

After completing the Talking Circle, youth participated in the art-making process. In the same manner, the use of art as a medium was chosen because this is considered one traditional way the Indigenous people share their perspectives in a visual manner.²⁵ Previous research has also shown children are able to effectively express their thoughts through their drawings with the use of colour, size, and shapes reflecting emotions, worries and even pain.^{16,25,41,42,60}

The artist (A.S.) guided the process through open discussion and examples of his own artwork. Youth were provided with painting supplies and some background information on various styles and textures as well as basic painting instructions. A.S. invited participants to draw or paint how pain would look and feel. After the art-making session, youth were invited to describe their piece to the group and artist facilitator, or privately to the facilitator. Some youth chose not to provide their interpretation on video, so they were audiotaped or only their painting was interpreted. Art narratives were transcribed verbatim.

The 4 dimensions of the Medicine Wheel were used to analyze the art as a relevant concept to Indigenous people and health. The (Sacred) Medicine Wheel^{20,27} is meant to convey wholeness and balance in a continuum, and the quadrants represent the 4 dimensions of well-being: physical, mental, emotional and spiritual. There are no boundaries between the dimensions, and they overlap in a blurred, uninterrupted movement that represents the cycle of life. The Medicine Wheel is recognized by most Indigenous people in North America to represent the natural order within the circle of life.⁶⁹ Each Nation has its own understanding of the Medicine Wheel, and the colours, order, and teachings that they convey, but the concept is universal. The 4 directions or dimensions of the Mi’kmaw Medicine Wheel are: (1) East: Red-Spiritual, (2) South: Black-Emotional, (3) West: Yellow-Physical, and (4) North: White-Mental.¹⁷ The figure of the Medicine Wheel included (**Fig. 1**) outlines how each of the dimensions is conceptualized to represent balance, connectedness, wholeness and relationships. When dimensions are out of balance, the whole sphere of wellness is affected negatively or expressed as a state of unbalance. **Figure 1** provides one interpretation of many conceptualizations among Indigenous groups.

For the artwork analysis we drew on the Medicine Wheel concept and categorized pain and hurt using the 4 concepts of medicine wheel (mental, emotional, physical and spiritual). The **mental** or **mind** direction leads to actions (ie, coping and visioning), **emotions** are expressed feelings (ie, crying and sadness), **physical** or body (ie, body location) and **spiritual** influences values and cultural beliefs (ie, higher purpose). The team came to an understanding about what each dimension represented before analyzing the themes and if youth named the dimension (ie, emotional) it would be coded that way. Paintings

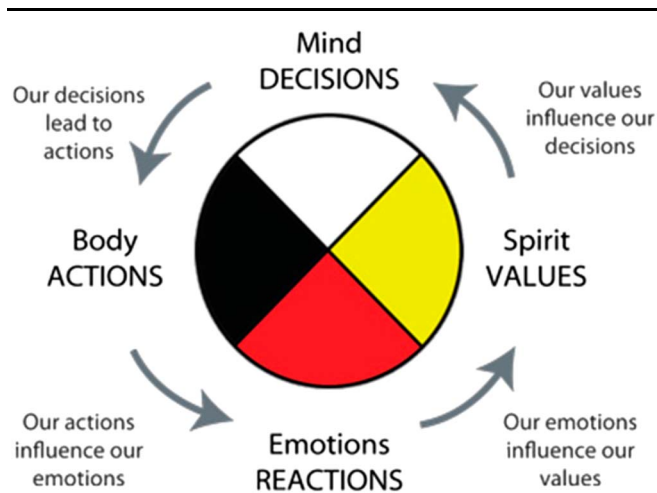


Figure 1. Medicine Wheel used to guide analysis.

were themed as *Physical* if the youth identified a body part or said “physical” and themed as *Emotional* if there was a description of a feeling or emotion related to pain such as sadness, crying, sobbing or loneliness. The distinction with *Mental* pain was that the youth described a cognitive behaviour they use to cope with the pain, such as the acronym “HOPE” for “hold on pain ends” (P11) and envisioning—“birds is like the pain going away.” Spiritual pain was coded for those paintings that had some representation of culture and beliefs; these paintings often did not have a narrative but included Indigenous symbols such as curvilinear motifs.

Using the Two-Eyed Seeing philosophy, art pieces and narratives were analyzed using both a Western-based clinical and an Indigenous cultural lens. One of the Principal Investigators (M.L.), the First Nation’s Community Research Coordinator (J.R. S.) and a First Nations Nurse Research Coordinator (J.F.) reviewed the transcripts and paintings first individually and then meeting together, using open coding and the iterative thematic analysis process described by Braun and Clarke.¹¹ Concept areas emerged under the established Medicine Wheel dimensions of Emotional, Physical, Mental and Spiritual quadrants. Once all data were analyzed, team members shared the results with each individual community’s participants for their review, feedback and confirmability.

3. Results

The project resulted in a convenience sample of 42 youth ranging in age from 8 to 17 years with more females ($n = 29$, 69%) than males choosing to participate. Group sizes ranged from 7 to 10 youth per community workshop. Three types of results were captured: (1) Demographic Data, (2) Talking Circle Narrative Themes, and (3) Artwork and Art Narratives

3.1. Demographic data

Youth reported commonly experiencing painful aches such as stomachaches (52%, $n = 22$), toothaches (50%, $n = 21$), and joint aches (41%, $n = 17$), with headaches and muscle aches being reported most frequently ($n = 26$, 62%, $n = 27$, 64% respectively). Earaches were reported by 26% of youth. Almost 40% ($n = 16$) of the youth indicated that pain routinely kept them from participating in school or other activities, and 45% ($n = 19$) said that they “hide their pain.” When prompted to indicate how

they managed their pain, strategies included a combination of telling someone (48%, $n = 20$), laying down (52%, $n = 22$), distraction (38%, $n = 16$), taking medication such as nonsteroidal anti-inflammatories (48%, $n = 20$), smudging (33%, $n = 14$) and applying counter pressure on injury or rubbing (62%, $n = 26$). Half of the youth (50%, $n = 21$) indicated that they seek pain care from a doctor or nurse. Less common strategies were traditional sweats, isolating oneself and yoga.

3.2. Talking Circle narrative themes

The artist facilitator listened carefully and took the time to reflect to each youth about their circle contributions. Initially, youth were quiet and their body language and behaviour indicated some were shy and withdrawn. As the youth became more engaged in the circle, their comfort and trust was reflected in their upright sitting postures; confident intonation and their fluid language use was evident from story to story.

The main theme in the Talking Circles was stories of all types of pain experiences in the *Physical* dimensions (dental, earaches, tonsillitis, appendicitis and fractures) and injuries (falls, burns and cuts) from play and sports (baseball, hockey, trampoline, snowboard and sled) plus how youth responded to these experiences. The most common Talking Circle narrative responses to experiencing pain were (1) hide it and/or (2) try and cope with it on their own.

3.2.1. Hide pain

After describing physical pain events, participants often told stories of how they hid their pain from parents and peers. One participant (P2) described their response to an injury: “didn’t cry and don’t want to cry in front of parents.” Another youth (P4) also described a similar response:

“I have a really hard time describing, it’s not that I don’t know how to describe my pain, it’s just I don’t want to. I feel embarrassed or wimpy if I do. I feel like I could deal with it on my own if I just let it go ... I know that’s how I feel towards my parents. Like if they ever see me get hurt, and I want to cry really bad, I won’t. I can’t cry in front of them.”

Participant 5 said:

“That’s what happened to me once. I was sledding at my friends, and like I hit this big tree and it was about that big and it hit my shin. I wanted to cry really bad. Then I held it in for like ten minutes, then I said ‘hey do you guys want to see me fake cry? I know how.’ Then they were like ‘ok!’ So then I started bawling my eyes out, and it was like real tears too. And they were like, ‘that was cool, you really know how to cry, man.’ And I was like, ‘yeah I do.’”

3.2.2. Cope on their own

Youth often described coping with their pain on their own and, finding a way to manage it. This included things such as lying down, ignoring the pain and rubbing the painful location.

Participant 11 said:

“That’s something that I don’t like, is whenever I’m sick or if I get hurt and if I keep thinking about it, then I put it in my head and I’m alright but it’s there in my head. Like, I don’t like babying myself. It’s like as soon as I feel better, even the littlest

bit, though I am hurt, I try to keep going. Just living like every day normally like how I normally would."

In both the demographic questionnaires and the Talking Circles, the pain reported by participants was predominantly physical pain. There was little said about the emotional, mental, or spiritual dimensions of their pain.

3.3. Artwork and art narratives

Youth painted 42 pieces of art that they designated as representing some aspect of pain. The most common colours used were blue, red, black and white with less use of gray, orange and yellow. Analysis of the art narratives revealed that unlike the stories shared in the Talking Circles, most of the artwork illustrated *Emotional* pain with overlapping of the other 3 dimensions of pain (physical, mental and spiritual). When analyzed considering just one dimension, 8 paintings were themed solely in the *Emotional* dimension, 7 represented only *Physical* and 2 as *Spiritual* alone.

Common threads from the artwork and narratives were also noted such as the persistent nature of the pain and hurt experience and a sense of darkness, sadness and/or loneliness juxtaposed with happiness. The *Mental* pain dimension had the most distinct subthemes highlighting ways of coping such as "hiding it," "tribal consciousness," "resilience" and "hope" (see **Table 1** for examples of each dimension). Many youth also explained their colour choices and what each colour meant to them. Dark colours such as black, gray, and blue were used to depict sadness, whereas red often indicated hurt. Blue was also often associated with emotional pain (see **Table 2** for examples of art pieces linked to specific colours through participant narratives).

When the art was analyzed considering all dimensions of the Medicine Wheel together, *Emotional* pain was represented in 74%, (n = 31) in various combinations with *Mental* (52%, n = 22), *Physical* (55%, n = 23) and *Spiritual* (12%, n = 5) (**Table 3**). The *Emotional* subthemes of crying, loneliness, sadness and happiness were evident in the artwork and narratives. Of the 5 paintings that illustrated crying with tears, only one participant verbalized this concept in their narrative. *Emotional* pain was represented in the narratives with youth describing "feel so lost and alone in the dark" (P5) and "emotional pain, like how her loneliness, and how this represents how far she is from her happiness" (P2), with one youth painting a single creature and identifying loneliness as pain (**Fig. 1**). Happiness was strived for and some described it as the emotion necessary to overcome the pain, "happiness will always overcome pain" (P9).

The artwork coded in the *Mental* dimension illustrated the ways youth coped with pain, such as resilience. One example of resilience from a youth—"white kind of atmosphere and it separates it from her pain" (P1). Tribal consciousness, stoicism and empathy were also evident and intermingled with the notion of being aware of others' experience of pain. For example, "when she had her heart attack, and how much it hurt her and hurt me and hurt all the other people who knew her too" (P10) and "pain that everyone goes through and how bad, and that no matter what, it's always going to be there" (P37). Youth also painted ways they mentally cope with pain by using colour and images to *hide it* and *cope with it*—"and this blue part is the emotional pain, like crying and sobbing, and like you're trying to hide your pain." (P27) and another youth described their art "black represents how she feels inside." (P1), whereas another youth said, "I did this painting on hope because pain does not last forever and it stands

for 'hold on pain ends,' and the birds is the pain going away, like flying away. And, pain takes place all around the world" (P11). The message that pain is persistent and just part of life was a common thread—"And it's also representing what's already happened. And, the reason why I left the bottom part white was because for the accidents that haven't happened yet" (P12). There was a juxtaposition of needing to be stoic and hide pain and the pain occurring from loneliness, while other paintings acknowledged a connectedness or consciousness of collective pain as Indigenous people (ie, tribal consciousness).

The *Physical* pain dimension contained artwork that depicted specific physical/body part injuries. Some youth chose not to provide a narrative but the injury and emotional pain were evident, such as a crying girl with a facial bruise. The *Spiritual* dimension contained pieces that represented aspects of culture and beliefs such as Indigenous symbols (i.e., curvilinear motifs and language symbols). Overall, there were common themes in the Talking Circles, art and narrative data, and the majority of paintings represented overlapping themes from each of the Medicine Wheel dimensions.

4. Discussion

In this study with 42 youth from 4 First Nation communities, the predominant theme discussed in the Talking Circle sessions was physical pain, consistent with common physical pain experiences that youth self-report on national surveys²⁸; however, when given the chance to interact with an Indigenous artist and paint their pain in a culturally safe space, emotional pain was more prominently conveyed, often overlapping with physical, spiritual and mental pain. The overlapping dimensions of the Medicine Wheel illustrates the complexity of the pain and hurt youth experience but also their awareness of the overlap of these dimensions of health from a cultural perspective. Certainly, the findings that First Nation youth experience a high degree of physical pain is consistent with other studies that have demonstrated that Indigenous children and youth have the highest rates of injury²⁸ and chronic health-related issues such as ear and dental pain.^{28,46} In addition, there is evidence that First Nation youth have high rates of mental health issues with suicide rates 5 to 7 times the national average,³⁰ yet reports indicate that 56% of First Nations youth with mental health issues do not access treatment.²⁸ There is a serious disconnect between high rates of poor mental health and treatment.

In this study, within the *mental* health dimension of pain, *hiding pain* and *stoicism* were common threads in both the Talking Circle and artwork narratives. This nonexpressive behaviour may relate to findings that pain in Indigenous youth may go undetected. This culturally influenced expression has been reported elsewhere.^{26,36,45,65} Fenwick and Stevens²⁶ noted that Indigenous people from Australia display "stoicism" and silence when in pain in an effort to remain reserved and be respected in their culture. Honeyman and Jacobs³⁶ also reported that Indigenous people suppress pain behaviours and are reluctant to discuss their pain experience with others. Pain studies with Indigenous people in the United States indicate that participants report pain only when severe and use vague descriptions such as "ache" to express pain.^{22,44} Stoicism was also reported as a common pain response by First Nation community members in Canada.⁴⁵ Although stoicism could also be a trait of non-Indigenous patients it is possible, given the published evidence in Indigenous people, that a clinician may have more difficulty appraising an Indigenous person's pain due to preconceived notions of Western society's

Table 1**Examples of artwork depicting each dimension of pain**







Dimension	Narrative	Painting
Emotional “Loneliness” “Darkness”	Well, it’s basically about emotional pain, like how her loneliness, and how this represents how far away she’s away from her happiness. And she’s kind of all by herself, just swinging, and all like the grey represents the darkness and stuff. (P2)	
Physical “On my body, this is where it hurts on my shoulder”	Well, I chose to like, do this side, like pink. Because on my body, this is where it hurts on my shoulder, from sports or whatever. So, this is supposed to be like more cool, and calm. So, this part is [inaudible] the part that hurts. (P26)	
Mental “The birds is the pain going away, like flying away.”	... I did this painting on hope because pain does not last forever and it stands for “hold on pain ends,” and the birds is the pain going away, like flying away. And, pain takes place all around the world. (P11)	
Spiritual “Cultural beliefs and symbols”	No narrative (P32). Image: Curvilinear motif	

Table 2
Examples of how colours were used to convey emotion


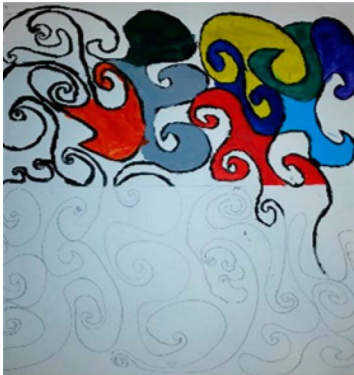

Colour	Narrative	Painting
<p>Blue <i>Sadness</i> Red <i>Hurt/pain</i> Green <i>Sick</i> Gray <i>Having a bad day</i></p>	<p>Well, the blue on my painting is to represent sadness. And the red is to represent hurt and pain and all the other colors are for mixed emotions. And the green is for when you're sick. And the gray is for whenever you are having a bad day. (P36)</p>	
<p>Blue <i>Emotional pain, Hide your pain</i></p>	<p>Well, this picture is kind of like this right here, and out here is like the pain inside. And this blue part is the emotional pain, like crying and sobbing, and like you're trying to hide your pain. (P27)</p>	
<p>Yellow, Red, Orange <i>Equating colours to emotions</i></p>	<p>... the person got injured and like, these are the scrapes... I was thinking more like yellow plus red equals orange but like, sadness plus pain equals, does not equal happiness. And that's what it basically represents. (P29)</p>	
<p>Blue <i>Sad/painful, Dark</i></p>	<p>I painted this piece because pain is what is felt within our, I was thinking that blue is a very sad and painful color to me when I think about pain and also I made it a little darker because I think pain is kind of dark inside. (P24)</p>	

pain behaviours, rather than a collective, culturally based understanding.

Canadian Hospital Accreditation Guidelines dictate that children receive a pain assessment using a validated tool on admission to the hospital and before any painful procedure.^{2,45} Further to this, Western-trained health clinicians are taught to use self-report tools and to observe body and behavioural cues.^{18,24,63} The emphasis on this quantifiable approach to overt pain signs for assessment, in contrast to Indigenous patients'




stoicism and mistrust, may lead to miscommunication and an unsatisfactory health care encounter. Indigenous patients may prefer to tell the story of their pain, but the story of pain is not quantifiable and requires a careful listening approach. The story in this study, told through art and narrative, is an oral and visual tradition from thousands of years of knowledge sharing.⁶ One's lived experience through story is natural and congruent to one's own knowledge about an experience, such as pain. In a recent compilation of cultural understandings describing how

Table 3**Examples of paintings depicting overlapping dimensions of pain**

Dimension	Narrative	Painting
<p>Emotional <i>"The emotional pain that she has"</i> Mental <i>"White kind of atmosphere ... separates it from her pain"</i></p>	<p>My painting is about pain and the black represents how she feels inside. But she has like this, white kind of atmosphere and it separates it from her pain, because we can't see their pain like through our eyes. So this is just her, and this is how we see her, but when we look outside of it, which is you know, her perspective, there is the pain and cracks ... represent her pain through her heart. It's like, when you're hurt, but then you get better, there is always going to be that you know what happened, and you're always going to know that how you felt. So it's there even though it's gone, it's still there. So yeah, and the cloud—it represents her emotional, it's like the inside, the bubble inside her head. The emotional pain that she has. (P1)</p>	
<p>Emotional <i>"when you get hurt, you don't really know how to express your pain"</i> Physical <i>"accidents that haven't happened yet"</i></p>	<p>Top part is expressing like, when you get hurt, you don't really know how to express your pain. And it's also representing what's already happened. And the reason why I left the bottom part white was for the accidents that haven't happened yet. (P12)</p>	
<p>Emotional <i>"alone in the dark"</i> Mental <i>"pretend to laugh, and have a fake smile"</i></p>	<p>I drew 2 sides of one story, it's like about emotional pain. They can put on like a smile throughout the day and pretend to laugh, and have a fake smile, but really on the inside they feel so lost and alone in the dark. And, they're just trying to avoid being that way. But they can't help it. (P5)</p>	

(continued on next page)

Table 3 (continued)**Examples of paintings depicting overlapping dimensions of pain**

Dimension	Narrative	Painting
Emotional <i>"it hurt her and hurt me"</i> Physical <i>"had a heart attack"</i> Tribal consciousness <i>"hurt all the other people who knew her too"</i>	Well this painting is about my friend who had a heart attack. It's just kind of, I don't know. I thought about her when I was painting. I was thinking about when she had her heart attack, and how much it hurt her and hurt me and hurt all the other people who knew her too. (P10)	
Emotional <i>"like stress or whatever"</i> Mental <i>"like flying away"</i> Resilience <i>Mentalizing "a happy place"</i> Tribal consciousness <i>"the pain that everyone goes through"</i>	... red and orange color, at the top here, just that symbolizes the pain that everyone goes through and how bad and that no matter what, it's just going to always be there. And this thing here is like a person that is just like flying away I guess. It's blue to show that no matter what like, you're always going to feel like pain mentally. So that can be like stress or whatever. Around here shows ... a happy place you can always go to. That's why there are a lot of colors, cause it could be symbolized as the good things in life. (P37)	
Emotional <i>Tears</i> Physical <i>Bruised face</i>	No narrative (P25)	

Indigenous knowledge is translated through the collective memory and consciousness, Gail MacKay, an Anishinabe-Metis scholar, wrote about "learning to listen to a quiet way of telling" (Ref. 44, p. 356) as key to understanding Cree epistemology and ways of knowing. The cultural context of listening as a collaborative and active mechanism is the listener's responsibility.⁵⁰ Through their collective knowledge, themed together, the youth in this study conveyed the importance of listening to their quiet way of telling. This is essential in creating a meaningful relationship, safe space and effective health care encounter.

Community-based researchers suggest that a muted pain response may stem from coping mechanisms developed in response to the horrific abuses suffered by Indigenous people during the residential school era.⁴⁵ A quiet or stoic pain response may result from a cultural valour about pain or a learned behaviour from traumatic colonization experiences. Being aware and able to recognize that this may be a person's pain expression is important for health clinicians who are conducting assessments and wanting to understand the pain story. One's story of pain is also understood through *tribal consciousness*, another thread in this research. Mi'kmaw Elder Marshall⁵¹ told the World Indigenous People's

Conference on Education that traditional knowledge is a reflection of tribal consciousness. Traditional knowledge is shared through stories, daily dialogue, behaviour, songs and oral traditions. One example of traditional knowledge and tribal consciousness is reflected in the words of Elder Charlie Labrador from Mi'kmaki who said "If you look beneath the forest floor you will see the trees of all different species all holding hands." Tribal consciousness is the cultural netting that connects communities together and strengthens their well-being. The notions of tribal consciousness and connectedness in paintings and narratives are essential for clinicians to understand as determinants of all dimensions of health for First Nations people. In 1997, McCormick⁵³ interviewed 50 First Nation community members who shared an overarching notion of connectedness as important to healing, specifically connecting with family, friends, community, culture and nature. This connectedness among the First Nation people also contextualizes the understanding of other's pain, which is inherent through their lived experiences. These experiences have created a collective sense of empathy, defined in the Merriam-Webster Dictionary as being aware and sensitive to the experience of another.²³ Evidence of empathy was present in the narratives with youth who said



Figure 2. “It’s a creature that is lonely because he has no other friends because he’s the only creature of his kind.” (P13).

“everyone goes through it, no matter what,” and another youth’s description “the hurt that everyone went through,” about a loved one who had a heart attack.

In contrast to the theme of connectedness, the themes of loneliness and sadness were also present in the results. In addition to the direct and indirect exposure to the impact of intergenerational trauma, these youth are growing up in an era of technology and exposed to the same challenges as all youth, although we acknowledge Indigenous youth in Canada have some of the lowest rates of Internet access.⁷ This has been called the most connected but isolated generation due to social media and phone technology. In a meta-analysis of more than 3.4 million participants, social isolation, living alone, and loneliness were linked with about a 30% higher risk of early death.³⁵ In one study examining the most central symptoms of depression for a racially diverse sample of adolescents (13–19 years), U.S. researchers report that self-hatred, loneliness, sadness, and pessimism are the most central symptoms of depression.⁵⁶ The youth’s paintings reflected loneliness (one lonely creature image—**Fig. 2**), sadness (the swinging girl “this represents how far away she’s away from her happiness, and she’s kind of all by herself, just swinging”—**Table 1**, P2).

Youth demonstrated their resilience in the mental dimension describing their own techniques to cope and manage their pain through cognitive behaviour strategies (“hold on pain ends”) and connectedness with nature (“birds taking the pain away”). We draw on the concept of resilience in this context, as it focuses on strengths, rather than weaknesses. Although the authors raise some concern that First Nations youth *need* to rely on their resiliency to manage their pain due to an absence of adequate resources to provide health support (psychologist, psychiatrist, healers, etc.), the authors recognize the strength in the attribute of resiliency for these youths. The Canadian Oxford Dictionary defines resilience as “the capacity to readily recover quickly from difficulties; toughness.”⁵⁷ Resilience factors known to relate to positive mental health in Indigenous youth include a high level of general problem-solving ability, emotional stability, self-esteem, sense of meaning, having many reasons for living, positive family attention and cohesion, positive attitudes toward school, good peer relations and positive cultural identity.¹ Further to this, in resilience research with First Nation’s youth, engaging with their culture and having a voice about pathways to their own well-being

was found to be significant.⁶¹ Tapping into these resilience factors and enabling youth to acknowledge them in their lives may be a useful strategy for health professionals and a way to build relationship with them in a health care encounter.

One of the key factors enabling youth to share their perspectives in this study format was the trust and relationship-building phase, embedded in the methods. The facilitators knew how to establish trust based on sense of place and kinship, which is part of the interconnectedness³⁸ and a key element for youth to share their own stories with others in the circle. The facilitators took the time to build a relationship with the youth, having snacks, eating together, sharing their own experiences, asking them about their interests, age, and school grade before wading into discussion about pain. A definite progression of comfort level was evident, with youth arriving and displaying shy behaviours (sweatshirt hoods pulled up) and being quiet, progressing to openly expressing all dimensions of pain perspectives in the art sessions. Fanian et al.²⁵ found that their creative arts programming for Indigenous youth was an effective way to build resiliency, form relationships, and stimulate discussions for community change. The methods and the resulting themes provide a glimpse into what is required to create a safe space for youth to share their perspectives, the scope of youth’s perspectives and how each dimension of culture is reflected in balancing health. Clinical techniques reflecting this knowledge can support health professionals to work more effectively with First Nation youth.

This study reflects the nature of the TRC Calls to Action,⁶⁷ which aims to understand the health care disparities and deficits among Indigenous populations. In doing so, the process of truth finding also captures the voice of the Indigenous community, which is often referenced, but not addressed. The narratives from the community are also voices of advocacy and knowledge about the truths concerning Indigenous children’s pain. Revelations about pain stories from the community are the first-hand knowledge from participating youth. The pain narratives provide a clearer understanding of pain expressions and capture the hope and resilience of youth and children who look at pain as part of reality but also understand that there are ways to live and move forward. Their stories are expressions of cultural knowledge and consciousness that life continues. There are examples of children who express not only how pain affects them individually but also as a collective, which the health care industry does not yet know how to address.

5. Rigour

Trustworthiness or rigour was established using Lincoln and Guba’s⁴⁹ approach by triangulating multiple data points such as demographics, narratives and art pieces. In addition, 3 people were included in the analysis, 2 from community and 1 from the Western-based clinical perspective, and one of the community team members was also clinically focused. This method also embodied the Two-Eyed Seeing philosophy, which strengthens the validity of the results for both the community and the clinical perspective. Member checking⁴⁹ was used as the results were taken back to community participants for their review and feedback. The strategy of an iterative approach with constant comparison of different types of knowledge and perspectives was considered collectively, and confirmability was determined when results were shared with various community members.

6. Limitations

One of the limitations of the methods was that anonymity was not guaranteed as youth were together when they shared their

perspectives and may have withheld some details or not fully disclosed their experiences. Although this “shared experience” may have been also a strength, having peers know your experiences with pain may have meant that youth had more to tell. In addition, although different methods were used to gather knowledge (paper-based, conversation and art), the fact that all 3 data points were collected at the same time may have influenced the interconnectedness of the themes.

7. Concluding reflections

This study was the first of its kind to understand how First Nation youth express their pain using culturally appropriate approaches such as art and a Talking Circle. One distinct issue is that Indigenous cultures often conceptualize health issues very differently from Western medicine, demonstrating that from an Indigenous health perspective, all dimensions of health need to be in balance and cannot be parceled out individually. The results of this study highlight this notion. Cultural beliefs and colonizing historical events may influence youth’s conceptualization and socialization to “be brave” or “to cope,” which may result in muted pain expression and behaviours such as hiding their pain when seeking care, or not seeking care at all. Youth reported high rates of physical pain and missed school due to pain, but primarily shared emotional and mental pain experiences in their artwork. Care was taken to create a safe space for youth to share their perspectives. Better health care experiences and outcomes will result if clinicians build relationships and trust in a safe space, tapping into the cultural characteristics of connectedness and resilience, and listening to the “quiet way of telling.”

Disclosures

The authors have no conflict of interest to declare.

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References

- [1] Aboriginal Healing Foundation. Suicide among aboriginal people in Canada. 2007. Available at: www.ahf.ca/downloads/suicide.pdf. Accessed March 10, 2018.

- [2] Accreditation pain standard: making it happen! Oshawa: Canadian Pain Society, 2005. Available at: https://c.ymcdn.com/sites/www.canadianpainsociety.ca/resource/resmgr/docs/accreditation_manual.pdf. Accessed June 4, 2018.
- [3] Alberta Health. Opioids and substance measures among First Nations people in Alberta: Alberta report. 2017. Available at: <https://open.alberta.ca/dataset/cb00bdd1-5d55-485a-9953-724832f373c3/resource/31c4f309-26d4-46cf-b8b2-3a990510077c>. Accessed March 31, 2018.
- [4] Allan B, Smylie J. First peoples, second class treatment: the role of racism in the health and well-being of indigenous peoples in Canada. Toronto: The Wellesley Institute, 2015.
- [5] Anderson KO, Mendoza TR, Valero V, Richman SP, Russell C, Hurley J, DeLeon C, Washington P, Palos G, Payne R, Cleeland CS. Minority cancer patients and their providers: pain management attitudes and Practice. *Cancer* 2000;88:1929–38.
- [6] Battiste, M. Maintaining aboriginal identity, language, and culture in modern society. In: M Battiste, editor. *Reclaiming Indigenous voice and vision*. Vancouver and Toronto: UBC Press, 2009. p. 191–208.
- [7] Blake S, McMahon R, Williams D. A guide to federal funding for indigenous broadband in Canada. First mile connectivity consortium. 2016. Available at: <http://firstmile.ca/wp-content/uploads/FMCC-Guide-to-Federal-Funding-for-Indigenous-Broadband-in-Canada.pdf>. Accessed April 1, 2018.
- [8] Bombay A, Matheson K, Anisman H. Appraisals of discriminatory events among adult offspring of Indian residential school survivors. *Cultur Divers Ethnic Minor Psychol* 2013;20:75–86.
- [9] Bombay A, Matheson K, Anisman H. The intergenerational effects of Indian Residential Schools: implications for the concept of historical trauma. *Transcult Psychiatry* 2014;51:320–38.
- [10] Bombay, A, Matheson, K, Anisman, H. Psychological perspectives on intergenerational transmission of trauma. In: A Blume, editor. *Social issues in living color: challenges and solutions from the perspective of ethnic minority psychology*. Santa Barbara: Praeger Books, 2017. p. 171–198.
- [11] Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3:77–101.
- [12] Brave Heart, MYH. Oyate Ptayela: rebuilding the Lakota nation through addressing historical trauma among Lakota parents. *J Hum Behav Soc Environ* 1999;2:109–26.
- [13] Brave Heart MYH, De Bruyn L. The American Indian holocaust: healing historical unresolved grief. *Am Indian Alsk Native Ment Health Res* 1998; 8:56–78.
- [14] Browne AJ, Smye VL, Rodney P, Tang SY, Mussell B, O’Neil J. Access to primary care from the perspective of Aboriginal patients at an urban emergency department. *Qual Health Res* 2011;21:333–48.
- [15] Cesario SK. Care of the Native American woman: strategies for practice, education, and research. *J Obstet Gynecol Neonatal Nurs* 2001;30: 13–19.
- [16] Cheung MMY, Saini B, Smith L. Using drawings to explore patients’ perceptions of their illness: a scoping review. *J Multidiscip Healthc* 2016; 9:631–46.
- [17] Cleeland CS, Gonin R, Baez L, Loehrer P, Pandya KJ. Pain and treatment of pain in minority patients with cancer. *Ann Intern Med* 1997;127: 813–16.
- [18] Cohen LL, Lemanek K, Blount RL, Dahlquist LM, Lim CS, Palermo TM, McKenna KD, Weiss KE. Evidence-based assessment of pediatric pain. *J Pediatr Psychol* 2008;33:939–55.
- [19] Cooper P, Kohler M, Blunden S. Sleep and academic performance in Indigenous Australian children from a remote community: an exploratory study. *J Paediatr Child Health* 2012;48:122–7.
- [20] Doucette, J, Bernard, B, Simon, M, Knockwood, C. The medicine wheel: health teachings and health research. PowerPoint presentation. 2004. Available at: <http://www.integrativescience.ca/uploads/articles/2004June-Doucette-Bernard-Simon-Knockwood-Medicine-Wheel-Indigenous-health-Integrative-Science.pdf>. Accessed February 25, 2018.
- [21] Drwecki BB, Moore CF, Ward SE, Prkachin KM. Reducing racial disparities in pain treatment: the role of empathy and perspective-taking. *PAIN* 2011;152:1001–6.
- [22] Elliott BA, Johnson KM, Elliott TE, Day JJ. Enhancing cancer pain control among American Indians (ECPAL): a study of the Ojibwe of Minnesota. *J Cancer Educ* 1999;14:28–33.
- [23] Empathy. 2018. Available at: <https://www.merriam-webster.com/dictionary/empathy>. Accessed April 5, 2018.
- [24] Fanciullo GJ, Cravero JP, Mudge BO, McHugo GJ, Baird JC. Development of a new computer method to assess children’s pain. *Pain Med* 2007;8(suppl 3):S121–128.
- [25] Fanian S, Young SK, Mantla M, Daniels A, Chatwood S. Evaluation of the Kots’iitla (“we light the fire”) project: building resiliency and connections

- through strengths-based creative arts programming for Indigenous youth. *Int J Circumpolar Health* 2015;74:27672.
- [26] Fenwick C, Stevens J. Post-operative pain experiences of Central Australian Aboriginal women: what do we understand? *Aust J Rural Health* 2004;12:22–7.
- [27] Fiedelvey-Van Dijk C, Rowan M, Dell C, Mushquash C, Hopkins C, Fornssler B, Hall L, Mykota D, Farag M, Shea B. Honoring Indigenous culture-as-intervention: development and validity of the Native wellness assessment. *J Ethn Subst Abuse* 2016;16:181–218.
- [28] First Nations Information Governance Centre. First Nations regional health survey (RHS) phase 2 (2008/10): Ontario region final report. 2012. Available at: http://fnigc.ca/sites/default/files/docs/first_nations_regional_health_survey_rhs_phase_2_08-10_ontario_region_final_report_12nov01v8.pdf. Accessed November 8, 2017.
- [29] Goyal MK, Kuppermann N, Cleary SD, Teach SJ, Chamberlain JM. Racial disparities in pain management of children with appendicitis in emergency departments. *JAMA Pediatr* 2015;169:996–1002.
- [30] Health Canada. Suicide prevention. 2016. Available at: <https://www.canada.ca/en/health-canada/services/first-nations-inuit-health/health-promotion/suicide-prevention.html>. Accessed February 25, 2018.
- [31] Health Council of Canada. Empathy, dignity and respect: creating cultural safety for indigenous people in urban health care. 2012. Available at: https://healthcouncilcanada.ca/files/Indigenous_Report_EN_web_final.pdf. Accessed November 23, 2017.
- [32] Hodge FS, Fredericks L, Rodriguez B. American Indian women's Talking Circle: a cervical cancer screening and prevention project. *Cancer* 1996;78(suppl 7):1592–7.
- [33] Hodge FS, Pasqua A, Marquez CA, Geishirt-Cantrell B. Utilizing traditional storytelling to promote wellness in American Indian communities. *J Transcult Nurs* 2002;13:6–11.
- [34] Hoffman KM, Trawalter S, Axt JR, Oliver MN. Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites. *Proc Natl Acad Sci U S A* 2016;113:4296–301.
- [35] Holt-Lunstad J, Smith TB, Baker M, Harris T, Stephenson D. Loneliness and social isolation as risk factors for mortality: a meta-analytic review. *Perspect Psychol Sci* 2015;10:227–37.
- [36] Honeyman PT, Jacobs EA. Effects of culture on back pain in Australian aboriginals. *Spine* 1996;21:841–3.
- [37] International Association for the Study of Pain. IASP terminology. Available at: <http://www.iasp-pain.org/Education/Content.aspx?ItemNumber=1698>. Accessed June 13, 2018.
- [38] Iwama M, Marshall M, Marshall A, Bartlett C. Two-Eyed Seeing and the language of healing in community-based research. *Can J Native Educ* 2009;32:3–23.
- [39] Jackson SL, Vann WF, Kotch JB, Pahel BT, Lee JY. Impact of poor oral health on children's school attendance and performance. *Am J Public Health* 2011;101:1900–6.
- [40] Khayyat Kholghi M, Bartlett G, Phillips M, Salsberg J, McComber A, Macaulay A. Evaluating an Indigenous health curriculum for diabetes prevention: engaging the community through Talking Circles and knowledge translation of results. *Fam Pract* 2018;35:80–7.
- [41] Kirkham JA, Smith JA, Havsteen-Franklin D. Painting pain: an interpretative phenomenological analysis of representations of living with chronic pain. *Health Psychol* 2015;34:398–406.
- [42] Kortelasma RL, Punamaki RL, Nikkonen M. Hospitalized children drawing their pain: the contents and cognitive and emotional characteristics of pain drawings. *J Child Health Care* 2008;12:284–300.
- [43] Kovach M. Indigenous methodologies: characteristics, conversations, and contexts. Toronto: University of Toronto Press, 2009.
- [44] Kramer BJ, Harker JO, Wong AL. Arthritic beliefs and self-care in an urban American Indian population. *Arthritis Care Res* 2002;47:588–94.
- [45] Latimer M, Finley GA, Rudderham S, Inglis S, Francis J, Young S, Hutt-MacLeod D. Expression of pain in Mi'kmaq children from one Atlantic Canadian community: a qualitative study. *CMAJ Open* 2014;2:E133–8.
- [46] Latimer M, Rudderham S, Lethbridge L, MacLeod E, Harman K, Sylliboy J, Filiaggi C, Finley A. Examining health care utilization rates of pain and hurt in First Nation youth: tracking the data to improve knowledge and resource allocation. *CMAJ* 2018. Under-review.
- [47] Leake J, Jozzy S, Uswak G. Severe dental caries, impacts and determinants among children 2–6 years of age in Inuvik Region, Northwest Territories. *Can J Can Dent Assoc* 2008;74:519.
- [48] Legacy of Hope Foundation. Available at: <http://legacyofhope.ca/about-us/>. Accessed December 12, 2016.
- [49] Lincoln YS, Guba EG. *Naturalistic inquiry*. Newbury Park: Sage Publications, 1985.
- [50] Mackay, G. "Learning to listen to a quiet way of telling": a study of Cree counselling discourse patterns in Maria Campbell's halfbreed. In: N McLeod, editor. *Indigenous poetics in Canada*. Wilfrid Laurier Univ Press, 2015.
- [51] Marshall M. On tribal consciousness: the trees that hold hands. 2005. Available at: <http://www.integrativescience.ca/uploads/articles/2005November-Marshall-WIPCE-text-On-Tribal-Consciousness-Integrative-Science.pdf>. Accessed April 5, 2018.
- [52] Mauldin, J, Cameron, HD, Jeanotte, D, Solomon, G, Jarvis, JN. Chronic arthritis in children and adolescents in two Indian health service user populations. *BMC Musculoskelet Disord* 2004;5:30.
- [53] McCormick R. Culturally appropriate means and ends of counselling as described by the First Nations people of British Columbia. *Int J Adv Couns* 1996;18:163–72.
- [54] Mehl-Madrona L, Mainguy B. Introducing healing circles and talking circles into primary care. *Perm J* 2014;18:4–9.
- [55] Mills AM, Shofer FS, Boulis AK, Holena DN, Abbuhl SB. Racial disparity in analgesic treatment for ED patients with abdominal or back pain. *Am J Emerg Med* 2011;29:752–6.
- [56] Mullarkey MC, Marchetti I, Beever CG. Using network analysis to identify central symptoms of adolescent depression. *J Clin Child Adolesc Psychol* 2018. doi: 10.1080/15374416.2018.1437735. [Epub ahead of print].
- [57] Resilience. 2018. Available at: <https://en.oxforddictionaries.com/definition/resilience>. Accessed April 9, 2018.
- [58] Rhee H. Prevalence and predictors of headaches in US adolescents. *Headache* 2000;40:528–38.
- [59] Roper JM, Shapira J. *Ethnography in nursing research*. California: Sage Publications, 2000.
- [60] Sinquin, A. Our voices, our stories: First Nations, Metis and Inuit stories. 2009. Available at: <http://www.collectionscanada.gc.ca/stories/020020-1000-e.html>. Accessed April 11, 2018.
- [61] Spaces & places. Available at: www.youthspacesandplaces.org. Accessed June 4, 2018.
- [62] SPSS Inc. *SPSS statistics for Windows, Version 17.0*. Chicago: SPSS Inc, 2008.
- [63] Stevens BJ, Harrison D, Rashotte J, Yamada J, Abbott LK, Coburn G, Stinson J, Le May S; CIHR Team in Children's Pain. Pain assessment and intensity in hospitalized children in Canada. *J Pain* 2012;13:857–65.
- [64] Strickland CJ, Chrisman NJ, Yallup M, Squeoch MD. Walking the journey of womanhood: Yakima Indian women and Papanicolaou (Pap) test screening. *Public Health Nurs* 1996;13:141–50.
- [65] Strong J, Nielsen M, Williams M, Huggins J, Sussex R. Quiet about pain: experiences of Aboriginal people in two rural communities. *Aust J Rural Health* 2015;23:181–4.
- [66] Struthers R, Hodge FS, Beishirt-Cantrell B, Cora LD. Participant experiences of talking circles on type 2 diabetes in two northern plains American Indian tribes. *Qual Health Res* 2003;13:1094–115.
- [67] Truth and Reconciliation Canada. Honouring the truth, reconciling for the future: summary of the final report of the Truth and Reconciliation Commission of Canada. Winnipeg: Truth and Reconciliation Commission of Canada, 2015.
- [68] Walters KL, Mohammed SA, Evans-Campbell T, Beltrán RE, Chae DH, Duran B. Bodies don't just tell stories, they tell histories. *Du Bois Rev* 2011;8:179–89.
- [69] Youngblood-Henderson, J. Ayukpachi: empowering aboriginal thought. In: M Battiste, editor. *Reclaiming indigenous voice and vision*. Vancouver and Toronto: UBC Press, 2009, p. 248–78.
- [70] Zumach A, Gerrits E, Chenault M, Anteunis L. Long-term effects of early life otitis media on language development. *J Speech Lang Hear Res* 2010;53:34–43.